

FINAL REGISTRATION REPORT

Part B

Section 3

Efficacy Data and Information

Concise summary

Product code: GLOB2021dF

Product name(s): Pirlanko

Chemical active substance:

Prothioconazole, 156 g/L

Boscalid, 156 g/L

Central Zone

Zonal Rapporteur Member State: Poland

CORE ASSESSMENT

(authorization)

Applicant: Globachem N.V.

Submission date: November 2023

zRMS Assessment : 31/01/2025

Following commenting period: 15/05/2025

Final Report : 26/06/2026

Version history

When	What
January 2025	zRMS evaluation
May 2025	Update following cMS requests. 3.2.1 and 3.5.1
May 2025	Following commenting period
June 2026	Final report

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3 Efficacy Data and Information (including Value Data) on the Plant Protection Product (KCP 6)

Transformation of the dRR (applicant version) into the RR (zRMS version)

The process chosen by the zRMS to transform the dRR into a RR should be explained. Options are to rewrite the document (with track change or not) or to use commenting boxes such as the following:

Comments of zRMS:	The commenting boxes are filled-in by the zRMS. They are usually placed at the end of each chapter. Commenting boxes should be understandable alone and refer very precisely to the text commented. The main advantage of their use is to distinguish easily between the applicant and the zRMS text.
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3.1 Summary and conclusions of zRMS on Section 3: Efficacy (KCP 6)

Abstract

GLOB2021dF contains 156 g/L of the active substance prothioconazole and 156 g/L of the active substance boscalid. It is formulated as a suspension concentrate (SC). It is intended for use as a fungicide in cereals and oilseed rape.

Preliminary range finding tests

Based on the results obtained, the applicant states that the ratio of 156+156 g/L to be applied at 0.8 L/ha represents the best compromise of the selected active substances.

Minimum effective dose

On oilseed rape, the test product GLOB2021dF was applied according to the GAP table at the maximum rates of 0.8 L/ha (100%) and 0.48 L/ha (60% of the full rate). Alternatively, an equivalent amount of the previous formulation, GLOB2021aF, was used, for which a bridging trials between both formulations was presented in section '*Preliminary range finding tests*'. The applicant submitted relevant data on oilseed rape targeting LEPTMA, SCLESC, and ALTEBA. However, the amount of trials presented is limited. In the trials, the application of GLOB2021dF at the lower rate of 0.48 L/ha resulted in less consistent and more variable disease control compared to the 0.8 L/ha rate. However, in some maritime zone trials there were no visible dose-response effects.

On cereals, GLOB2021dF was also applied according to the GAP table at the maximum rates of 0.8 L/ha (100%) and 0.48 L/ha (60% of the full rate). The applicant submitted relevant data from two applications on winter wheat (targeting FUSACU, SEPTTR, PUCCSI) and winter barley (targeting PYRNTE, RHYNSE, RAMUCC). According to the results, the proposed dose rate of 0.8 L/ha of GLOB2021dF provided optimal overall control and should be considered effective against foliar and ear diseases.

Efficacy tests

A total of 44 efficacy trials were submitted to demonstrate the effectiveness of GLOB2021dF on oilseed rape across the Maritime zone (23 trials), North-East zone (11 trials), and South-East EPPO zone (10 trials). Additionally, 103 efficacy trials were conducted for cereals in the Maritime zone (47 trials), North-East zone (40 trials), and South-East zone (16 trials).

For all intended uses, evaluations should be confirmed by the relevant cMS, considering their experience with similar substances and national extrapolation criteria. Regardless of EPPO zones, most requested uses lacked sufficient trials or were conducted over one year, which does not conform to EPPO standard

PP 1/226 (3). Summarized results and conclusions are provided in the comment boxes under section ‘3.2.3 Efficacy Tests’.

Yield and Yield parameters

The data summarized across all EPPO climatic zones confirmed that GLOB2021dF, applied at the proposed label rate of 0.8 L/ha with a maximum of two applications per season, had no adverse effect on cereal and oilseed rape yield or yield quality parameters.

Information on possible occurrence of the development of resistance

The applicant addresses all points of EPPO Standard PP 1/213 in the dRR status to evaluate the actual resistance risk of GLOB2021dF. Based on the combination of two active substances with different modes of action, prothioconazole and boscalid, the overall resistance risk is considered acceptable if the product is used in accordance with the management strategy and label recommendations.

Phytotoxicity to host crop

Phytotoxicity symptoms in crops tested caused by the application of GLOB2021dF were not observed in any of the efficacy trials reported by the applicant.

Adverse effects on succeeding or adjacent crops

GLOB2021dF had no adverse effects on the crops tested as observed vegetative vigour tests with any of the plant species. GLOB2021dF does not pose a risk to succeeding or adjacent crops and justifies the recommendation of no restrictions on succeeding or adjacent crops when using GLOB2021dF.

Table 3.1-1: Acceptability of intended uses (and respective fall-back GAPs, if applicable)

Central zone:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. (e)	Mem- ber state(s)	Crop and/ or situa- tion (crop des- tination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I	Pests or Group of pests controlled (additionally: developmen- tal stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g saf- ener/synergist per ha (f)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & sea- son	Max. number a) per use b) per crop/ sea- son	Min. in- terval be- tween ap- plications (days)	L product / ha a) max. rate per appl. b) max. to- tal rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
Zonal uses (field or outdoor uses, certain types of protected crops)														
1	PL, CZ, DE, HU, RO, SK	Oilseed rape (win- ter) [BRSNW]	F	<i>Plenodomus lingam</i> (LEP- TMA)	Normal down- ward spraying	BBCH 14-18	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	Max.1 applica- tion in autumn.	
						BBCH 21-59	a) 1 b) 2							
2	PL, CZ, DE, HU, RO, SK	Oilseed rape (win- ter and spring) [BRSNW and BRSNS]	F	<i>Alternaria brassicae</i> (ALTEBA) and <i>Sclerotinia sclerotiorum</i> (SCLESC)	Normal down- ward spraying	BBCH 60 - 69	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
3	PL, CZ, DE, HU, RO, SK	Winter wheat (TRZAW), Spring wheat (TRZAS), Winter du- rum (TRZDW) Spring du- rum (TRZDS), Winter bar- ley (HORVW), Spring bar- ley (HORVS),	F	<i>Fusarium</i> sp. (FUSASP)	Normal down- ward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. (e)	Mem- ber state(s)	Crop and/ or situa- tion (crop des- tination / purpose of crop)	F, Fn, G, Gn, Gpn or I	Pests or Group of pests controlled (additionally: developmen- tal stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g saf- ener/synergist per ha (f)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & sea- son	Max. number a) per use b) per crop/ sea- son	Min. in- terval be- tween ap- plications (days)	L product / ha a) max. rate per appl. b) max. to- tal rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
		Winter rye (SECCW), Spring rye (SECCS), Winter trit- icale (TTLWI), Spring trit- icale (TTLSO), Spelt (TRZSP), Winter oats (AVESW), Spring oats (AVESP)												
4	PL, CZ, DE, HU, RO, SK	Winter wheat (TRZAW), Spring wheat (TRZAS)	F	<i>Zymoseptoria tritici</i> (SEPTTR), <i>Parastagonospora nodorum</i> (LEPTNO), <i>Puccinia striiformis</i> (PUCCST), <i>Puccinia triticina</i> (PUCCRT),	Normal down- ward spraying	BBCH 25 - 69	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
5	PL, CZ, DE, HU, RO, SK	Winter wheat (TRZAW), Spring wheat (TRZAS)	F	<i>Blumeria graminis</i> (ERYSGR)	Normal down- ward spraying	BBCH 25 - 69	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
6	PL, CZ, DE, HU, RO, SK	Winter bar- ley (HORVW), Spring bar- ley	F	<i>Puccinia recondita</i> (PUCCRE), <i>Puccinia striiformis</i> (PUCCST), <i>Puccinia hordei</i>	Normal down- ward spraying	BBCH 25 - 69	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. (e)	Mem- ber state(s)	Crop and/ or situa- tion (crop des- tination / purpose of crop)	F, Fn, G, Gn, Gpn or I	Pests or Group of pests controlled (additionally: developmen- tal stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g saf- ener/synergist per ha (f)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & sea- son	Max. number a) per use b) per crop/ sea- son	Min. in- terval be- tween ap- plications (days)	L product / ha a) max. rate per appl. b) max. to- tal rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
		(HORVS)		(PUCCHD), <i>Ramularia collocygni</i> (RAMUCC)										
7	PL, CZ, DE, HU, RO, SK	Winter barley (HORVW), Spring barley (HORVS)	F	<i>Pyrenophora teres</i> (PYRNTE), <i>Rhynchosporium secalis</i> (RHYNSE), <i>Blumeria graminis</i> (ERYSGR)	Normal down- ward spraying	BBCH 25 - 69	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
8	PL, CZ, DE, HU, RO, SK	Winter rye (SECCW), Spring rye (SECCS)	F	<i>Rhynchosporium secalis</i> (RHYNSE), <i>Blumeria graminis</i> (ERYSGR)	Normal down- ward spraying	BBCH 25 - 69	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
9	PL, CZ, DE, HU, RO, SK	Winter rye (SECCW), Spring rye (SECCS)	F	<i>Puccinia recondita</i> (PUCCRE), <i>Puccinia striiformis</i> (PUCCST), <i>Zymoseptoria tritici</i> (SEPTTR), <i>Parastagonospora nodorum</i> (LEPTNO)	Normal down- ward spraying	BBCH 25 - 69	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
10	PL, CZ, DE, HU, RO, SK	Winter trit- icale (TTLWI), Spring trit- icale (TTLSO)	F	<i>Puccinia recondita</i> (PUCCRE), <i>Puccinia striiformis</i> (PUCCST), <i>Puccinia triticina</i> (PUCCRT), <i>Zymoseptoria tritici</i> (SEPTTR), <i>Parastagonospora</i>	Normal down- ward spraying	BBCH 25 - 69	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. (e)	Mem- ber state(s)	Crop and/ or situa- tion (crop des- tination / purpose of crop)	F, Fn, G, Gn, Gpn or I	Pests or Group of pests controlled (additionally: developmen- tal stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g saf- ener/synergist per ha (f)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & sea- son	Max. number a) per use b) per crop/ sea- son	Min. in- terval be- tween ap- plications (days)	L product / ha a) max. rate per appl. b) max. to- tal rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
				<i>nodorum</i> (LEPTNO)										
11	PL, CZ, DE, HU, RO, SK	Winter trit- icale (TTLWT), Spring trit- icale (TTLSO)	F	<i>Rhynchosporium secalis</i> (RHYNSE) <i>Blumeria graminis</i> (ER- YSGR)	Normal down- ward spraying	BBCH 25 - 69	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
12	PL, CZ, DE, HU, RO, SK	Spelt (TRZSP)	F	<i>Zymoseptoria tritici</i> (SEPTTR), <i>Parastagonosporanodorum</i> (LEPTNO), <i>Puccinia striiformis</i> (PUCCST), <i>Puccinia triticina</i> (PUCCRT)	Normal down- ward spraying	BBCH 25 - 69	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
13	PL, CZ, DE, HU, RO, SK	Spelt (TRZSP)	F	<i>Rhynchosporium secalis</i> (RHYNSE), <i>Blumeria graminis</i> (ERYSGR)	Normal down- ward spraying	BBCH 25 - 69	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
14	PL, CZ, DE, HU, RO, SK	Winter oats (AVESW), Spring oats (AVESP)	F	<i>Parastagonospora nodorum</i> (LEPTNO), <i>Blumeria graminis</i> (ERYSGR), <i>Puccinia coronata</i> var. <i>avenae</i> (PUCCCA), <i>Pyrenophora chaetomi- oides</i>	Normal down- ward spraying	BBCH 25 - 69	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	

17	HU	Winter oats (AVESW)	F	<i>Fusarium</i> sp. (FUSASP)	Normal down-ward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
18	CZ, HU	Spring oats (AVESP)	F											
19	RO	Winter rye (SECCW),	F											

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. (e)	Mem- ber state(s)	Crop and/ or situa- tion (crop des- tination / purpose of crop)	F, Fn, G, Gn, Gpn or I	Pests or Group of pests controlled (additionally: developmen- tal stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g saf- ener/synergist per ha (f)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & sea- son	Max. number a) per use b) per crop/ sea- son	Min. in- terval be- tween ap- plications (days)	L product / ha a) max. rate per appl. b) max. to- tal rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
20	PL, RO, SK	Spring rye (SECCS)	F	<i>Rhynchosporium secalis</i> (RHYNSE), <i>Blumeria graminis</i> (ERYSGR)	Normal down- ward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
21	PL, RO, SK	Spring rye (SECCS)	F	<i>Puccinia recondita</i> (PUCCRE), <i>Puccinia striiformis</i> (PUCCST), <i>Zymoseptoria tritici</i> (SEPTTR), <i>Parastagonospora</i> <i>nodorum</i> (LEPTNO)	Normal down- ward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
22	RO	Winter rye (SECCW),	F	<i>Rhynchosporium secalis</i> (RHYNSE), <i>Blumeria graminis</i> (ERYSGR)	Normal down- ward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250	100 - 300	N/A	/	
23	RO	Winter rye (SECCW),	F	<i>Puccinia recondita</i> (PUCCRE), <i>Puccinia striiformis</i> (PUCCST), <i>Zymoseptoria tritici</i> (SEPTTR), <i>Parastagonospora</i> <i>nodorum</i> (LEPTNO)	Normal down- ward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. (e)	Mem- ber state(s)	Crop and/ or situa- tion (crop des- tination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I	Pests or Group of pests controlled (additionally: developmen- tal stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g saf- ener/synergist per ha (f)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & sea- son	Max. number a) per use b) per crop/ sea- son	Min. in- terval be- tween ap- plications (days)	L product / ha a) max. rate per appl. b) max. to- tal rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
24	RO	Winter trit- icale (TTLWI), Spring trit- icale (TTLSO)	F	<i>Puccinia recondita</i> (PUCCRE), <i>Puccinia striiformis</i> (PUCCST), <i>Puccinia triticina</i> (PUCCRT), <i>Zymoseptoria tritici</i> (SEPTTR), <i>Parastagonospora</i> <i>nodorum</i> (LEPTNO)	Normal down- ward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
25	RO	Winter trit- icale (TTLWI), Spring trit- icale (TTLSO)	F	<i>Rhynchosporium secalis</i> (RHYNSE) <i>Blumeria graminis</i> (ERYSGR)	Normal down- ward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
26	CZ, HU, RO, SK	Spelt (TRZSP)	F	<i>Zymoseptoria tritici</i> (SEPTTR), <i>Parastagonospora</i> <i>nodorum</i> (LEPTNO), <i>Puccinia striiformis</i> (PUCCST), <i>Puccinia triticina</i> (PUCCRT)	Normal down- ward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
27	CZ, HU, RO, SK	Spelt (TRZSP)	F	<i>Rhynchosporium secalis</i> (RHYNSE), <i>Blumeria graminis</i> (ERYSGR)	Normal down- ward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	

* Use number(s) in accordance with the list of all intended GAPs in Part B, Section 0 should be given in column 1.

** F: professional field use, Fn: non-professional field use, Fpn: professional and non-professional field use, G: professional greenhouse use, Gn: non-professional greenhouse use, Gpn: professional and non-professional greenhouse use, I: indoor application

Column 15: zRMS conclusion.

A	Acceptable
R	Acceptable with further restriction
C	To be confirmed by cMS
N	Not acceptable / evaluation not possible
n.r.	Not relevant for section 3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. (e)	Member state(s)	Crop and/ or situation (crop desti- nation / purpose of crop)	F, Fn, G, Gn, Gpn or I	Pests or Group of pests con- trolled (additionally: developmental stages of the pest or pest group)	Application Method / Kind	Timing / Growth stage of crop & sea- son	Max. number a) per use b) per crop/ season	Min. inter- val between applications (days)	Application rate L product / ha a) max. rate per appl. b) max. total rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max	PHI (days)	Remarks: e.g. g saf- ener/synergist per ha (f)	zRMS Conclusion (efficacy)
Zonal uses (field or outdoor uses, certain types of protected crops)														
1	PL, CZ, DE, BE , HU, RO, SK	Oilseed rape (win- ter) [BRSNW]	F	<i>Plenodomus lingam</i> (LEPTMA)	Normal downward spraying	BBCH 14 -18	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	Max.1 applica- tion in autumn.	PL DE BE CZ, HU, RO, SK
2	PL, CZ, DE, BE , HU, RO, SK	Oilseed rape (winter and spring) [BRSNW and BRSNS]	F	<i>Alternaria brassicae</i> (ALTEBA) and <i>Sclerotinia sclerotiorum</i> (SCLESC)	Normal downward spraying	BBCH 60 - 69	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	PL:SCLESC, ALTEBA DE: SCLESC - BRSNW DE: ALTEBA BE: SCLESC - BRSNW & BRSNS BE: ALTEBA CZ, RO, SK, HU,
3	PL, CZ, DE, BE , HU, RO, SK	Winter wheat (TRZAW),	F	<i>Fusarium sp.</i> (FUSASP)	Normal downward spraying	BBCH 61 - 69	a) 1 b) ~~2~~	~~21~~	a) 0.8 L/ha b) ~~1.6 L/ha~~	a) Prothioconazole : 0.125 Boscalid : 0.125	100 - 300	N/A	/	PL: TRZAW PL: TRZAS, TRZDW, TRZDS, HORVW, HORVS, SECCW,

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. (e)	Member state(s)	Crop and/ or situation (crop destination / purpose of crop)	F, Fn, G, Gn, Gpn or I	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g saf- ener/synergist per ha (f)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & sea- son	Max. number a) per use b) per crop/ season	Min. inter- val between applications (days)	L product / ha a) max. rate per appl. b) max. total rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
		Spring wheat (TRZAS), Winter du- rum (TRZDW) Spring durum (TRZDS), Winter barley (HORVW), Spring barley (HORVS), Winter rye (SECCW), Spring rye (SECCS), Winter triti- cale (TTLWI), Spring triti- cale (TTLSO), Spelt (TRZSP), Winter oats (AVESW), Spring oats (AVESP)								b) Prothioconazole : 0.250 Boscalid : 0.250				SECCS ,TTLWI, TTLSO, TRZSP, AVESW, AVESWP DE: TRZAW DE: TRZAS, TRZDW,TRZDS, HORVWHORVS, SECCW,SECCS, TTLWI,TTLSO, TRZSP,AVESW, AVESP BE: TRZAW, TRZAS, SECCW, SECCS, TTLWI, TTLSO, TRZSP, TRZDS, TRZDW HU RO, SK, CZ
4	PL, CZ, DE, BE , HU, RO, SK	Winter wheat (TRZAW), Spring wheat (TRZAS)	F	<i>Zymoseptoria tritici</i> (SEP- TTR), <i>Parastagonospora nodorum</i> (LEPTNO), <i>Puccinia striiformis</i> (PUCCST), <i>Puccinia triticina</i> (PUCCRT),	Normal downward spraying	BBCH ~~25~~ — ~~69~~ 30-59	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	PL: TRZAW SEPTTR PL : LEPTNO,PUCCST PUCCRT DE: SEPTTR - TRZAW DE: LEPTNO, PUCCST PUCCRT

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. (e)	Member state(s)	Crop and/ or situation (crop desti- nation / purpose of crop)	F, Fpn G, Gn, Gpn or I	Pests or Group of pests con- trolled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g saf- ener/synergist per ha (f)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & sea- son	Max. number a) per use b) per crop/ season	Min. inter- val between applications (days)	L product / ha a) max. rate per appl. b) max. total rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
5	PL, CZ, DE, BE , HU, RO, SK	Winter wheat (TRZAW), Spring wheat (TRZAS)	F	<i>Blumeria graminis</i> (ERYSGR)	Normal downward spraying	BBCH ~~25—69~~ 30-59	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	PL DE BE CZ, HU, RO, SK
6	PL, CZ, DE, BE , HU, RO, SK	Winter bar- ley (HORVW), Spring bar- ley (HORVS)	F	<i>Puccinia recondita</i> (PUCCRE), <i>Puccinia striiformis</i> (PUCCST), <i>Puccinia hordei</i> (PUCCHD), <i>Ramularia collocygni</i> (RAMUCC)	Normal downward spraying	BBCH ~~25—69~~ 30-59	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	PL DE: BE: CZ, HU, RO, SK
7	PL, CZ, DE, BE , HU, RO, SK	Winter bar- ley (HORVW), Spring bar- ley (HORVS)	F	<i>Pyrenophora teres</i> (PYRNTE), <i>Rhynchosporium secalis</i> (RHYNSE), <i>Blumeria graminis</i> (ERYSGR)	Normal downward spraying	BBCH ~~25—69~~ 30-59	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	PL : HORVW PYRNTE, RHYNSE PL: ERYSGR DE BE CZ, HU, RO, SK
8	PL, CZ, DE, BE , HU, RO, SK	Winter rye (SECCW), Spring rye (SECCS)	F	<i>Rhynchosporium secalis</i> (RHYNSE), <i>Blumeria graminis</i> (ERYSGR)	Normal downward spraying	BBCH ~~25—69~~ 30-59	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125	100 - 300	N/A	/	PL:SECCW RHYNSE PL: ERYSGR

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. (e)	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn, G, Gn, Gpn or I	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g saf-ener/synergist per ha (f)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/season	Min. interval between applications (days)	L product / ha a) max. rate per appl. b) max. total rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
9	PL, CZ, DE, BE , HU, RO, SK	Winter rye (SECCW), Spring rye (SECCS)	F	<i>Puccinia recondita</i> (PUCCRE), <i>Puccinia striiformis</i> (PUCCST), <i>Zymoseptoria tritici</i> (SEPTTR), <i>Parastagonospora nodorum</i> (LEPTNO)	Normal downward spraying	BBCH ~~25—69~~ 30-59	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	PL DE BE: SEPTTR BE: PUCCRE, PUCCST, LEPTNO CZ, HU, RO, SK
10	PL, CZ, DE, BE , HU, RO, SK	Winter triticales (TTLWI), Spring triticales (TTLSO)	F	<i>Puccinia recondita</i> (PUCCRE), <i>Puccinia striiformis</i> (PUCCST), <i>Puccinia triticina</i> (PUCCRT), <i>Zymoseptoria tritici</i> (SEPTTR), <i>Parastagonospora nodorum</i> (LEPTNO)	Normal downward spraying	BBCH ~~25—69~~ 30-59	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	PL : TTLWI SEPTTR PL: PUCCRE PUCCST PUCCRT LEPTNO DE: SEPTSP DE: PUCCRE, PUCCST, PUCCRT, LEPTNO BE: SEPTTR BE: PUCCRE, PUCCST, PUCCRT, LEPTNO CZ, HU, RO, SK
11	PL, CZ, DE, BE , HU, RO, SK	Winter triticales (TTLWI),	F	<i>Rhynchosporium secalis</i> (RHYNSE) <i>Blumeria graminis</i> (ERYSGR)	Normal downward spraying	BBCH ~~25—69~~ 30-59	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250	100 - 300	N/A	/	PL DE BE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. (e)	Member state(s)	Crop and/ or situation (crop destination / purpose of crop) Spring triticale (TTLSO)	F, Fn, G, Gn, Gpn or I	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g saf- ener/synergist per ha (f)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & sea- son	Max. number a) per use b) per crop/ season	Min. inter- val between applications (days)	L product / ha a) max. rate per appl. b) max. total rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
										Boscalid : 0.250				CZ, HU, RO, SK
12	PL, CZ, DE, BE , HU, RO, SK	Spelt (TRZSP)	F	<i>Zymoseptoria tritici</i> (SEPTTR), <i>Parastagonosporanodorum</i> (LEPTNO), <i>Puccinia striiformis</i> (PUCCST), <i>Puccinia triticina</i> (PUCCRT)	Normal downward spraying	BBCH ~~25—69~~ 30-59	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	PL DE BE: SEPTTR BE: LEPTNO, PUCCST, PUCCRT CZ, HU, RO, SK
13	PL, CZ, DE, BE , HU, RO, SK	Spelt (TRZSP)	F	<i>Rhynchosporium secalis</i> (RHYNSE), <i>Blumeria graminis</i> (ERYSGR)	Normal downward spraying	BBCH ~~25—69~~ 30-59	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	PL DE BE CZ, HU, RO, SK
14	PL, CZ, DE, BE , HU, RO, SK	Winter oats (AVESW), Spring oats (AVESP)	F	<i>Parastagonospora nodorum</i> (LEPTNO), <i>Blumeria graminis</i> (ERYSGR), <i>Puccinia coronata var.</i> <i>avenae</i> (PUCCCA), <i>Pyrenophora chaetomioides</i> (PYRNAV)	Normal downward spraying	BBCH ~~25—69~~ 30-59	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	PL: AVESP PUCCCA PYRNAV PL: LEPTNO, ERYSGR DE BE CZ, HU, RO, SK
15	PL, CZ, DE, BE , HU, RO, SK	Winter du- rum (TRZDW) Spring du- rum (TRZDS)	F	<i>Zymoseptoria tritici</i> (SEPTTR), <i>Parastagonospora nodorum</i> (LEPTNO), <i>Puccinia striiformis</i> (PUCCST), <i>Puccinia triticina</i> (PUCCRT),	Normal downward spraying	BBCH ~~25—69~~ 30-59	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	PL DE BE: TRZDW & TRZDS: SEPTTR CZ, HU, RO, SK

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. (e)	Member state(s)	Crop and/ or situation (crop desti- nation / purpose of crop)	F, Fn, G, Gn, Gpn or I	Pests or Group of pests con- trolled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g saf- ener/synergist per ha (f)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & sea- son	Max. number a) per use b) per crop/ season	Min. inter- val between applications (days)	L product / ha a) max. rate per appl. b) max. total rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
16	PL, CZ, DE, BE, HU, RO, SK	Winter du- rum (TRZDW) Spring du- rum (TRZDS)	F	<i>Blumeria graminis</i> (ERYSGR)	Normal downward spraying	BBCH 25—69 30-59	a) 2 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	PL DE BE CZ, HU, RO, SK
Minor uses according to Article 51 (zonal uses)														
17	HU	Winter oats (AVESW)	F	<i>Fusarium</i> sp. (FUSASP)	Normal downward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
18	CZ, HU	Spring oats (AVESP)	F											
19	RO	Winter rye (SECCW),	F											
20	PL, RO, SK	Spring rye (SECCS)	F	<i>Rhynchosporium secalis</i> (RHYNSE), <i>Blumeria graminis</i> (ERYSGR)	Normal downward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. (e)	Member state(s)	Crop and/ or situation (crop desti- nation / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I	Pests or Group of pests con- trolled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g saf- ener/synergist per ha (f)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & sea- son	Max. number a) per use b) per crop/ season	Min. inter- val between applications (days)	L product / ha a) max. rate per appl. b) max. total rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
21	PL, RO, SK	Spring rye (SECCS)	F	Puccinia recondita (PUCCRE), Puccinia striiformis (PUCCST), Zymoseptoria tritici (SEP- TTR), Parastagonospora nodorum (LEPTNO)	Normal downward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
22	RO	Winter rye (SECCW),	F	Rhynchosporium secalis (RHYNSE), Blumeria graminis (ERYSGR)	Normal downward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole :	100 - 300	N/A	/	
23	RO	Winter rye (SECCW),	F	Puccinia recondita (PUCCRE), Puccinia striiformis (PUCCST), Zymoseptoria tritici (SEP- TTR), Parastagonospora nodorum (LEPTNO)	Normal downward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
24	RO	Winter triti- cale (TTLWI), Spring triti- cale (TTLWO)	F	Puccinia recondita (PUCCRE), Puccinia striiformis (PUCCST), Puccinia triticina (PUCCRT), Zymoseptoria tritici (SEPTTR), Parastagonospora nodorum (LEPTNO)	Normal downward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. (e)	Member state(s)	Crop and/ or situation (crop desti- nation / purpose of crop)	F, Fn, G, Gn, Gpn or I	Pests or Group of pests con- trolled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g saf- ener/synergist per ha (f)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & sea- son	Max. number a) per use b) per crop/ season	Min. inter- val between applications (days)	L product / ha a) max. rate per appl. b) max. total rate per crop/season	kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
25	RO	Winter triti- cale (TTLWI), Spring triti- cale (TTLZO)	F	Rhynchosporium secalis (RHYNSE) Blumeria graminis (ER- YSGR)	Normal downward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
26	CZ, HU, RO, SK	Spelt (TRZSP)	F	Zymoseptoria tritici (SEP- TTR), Parastagonospora nodorum (LEPTNO), Puccinia striiformis (PUCCST), Puccinia triticina (PUCCRT)	Normal downward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	
27	CZ, HU, RO, SK	Spelt (TRZSP)	F	Rhynchosporium secalis (RHYNSE), Blumeria graminis (ERYSGR)	Normal downward spraying	BBCH 61 - 69	a) 1 b) 2	21	a) 0.8 L/ha b) 1.6 L/ha	a) Prothioconazole : 0.125 Boscalid : 0.125 b) Prothioconazole : 0.250 Boscalid : 0.250	100 - 300	N/A	/	

3.2 Efficacy data (KCP 6)

Introduction

This document summarises the information related to the efficacy of the plant protection product GLOB2021dF containing the active substances Prothioconazole (156 g/L) and Boscalid (156 g/L).

Poland is considered to be the zonal Rapporteur Member State (zRMS) of this of this submission for the Central zone, while France is considered to be the zRMS for the Southern zone and Lithuania is considered to be the zRMS for the Northern zone according to the Regulation No. 1107/2009. At the time of submission, Poland, Czech Republic, Germany, Hungary, Romania and Slovakia are included as concerned Member States (cMS) for the Central zone, while France, Bulgaria, Spain, Croatia and Italy are included as concerned Member States (cMS) for the Southern zone. Lithuania, Estonia, Latvia, Denmark, Finland, Sweden are cMS for the Northern zone.

Trials included in the core Biological Assessment Dossier were performed across all climatic zones, including the Maritime, North-East, South-East and Mediterranean EPPO Zones according to the EPPO standard PP1/241.

Description of active substances

Prothioconazole

Prothioconazole was included into Annex I of Directive 91/414 (2008/44/EC), amended by the Annex Commission Implementing Regulation (EU) No. 540/2011. The Annex I Inclusion Directive for Prothioconazole (2008/44/EC) provides specific provisions under Part B which need to be considered by the applicant in the preparation of their submission and by the MS prior to granting an authorisation:

For the implementation of the uniform principles of Annex VI, the conclusions of the review report on prothioconazole, and in particular Appendices I and II thereof, as finalised in the Standing Committee on the Food Chain and Animal Health on 22 January 2008 shall be taken into account. In this overall assessment there are however no efficacy related concerns.

Boscalid

Boscalid (formerly nicobifen) was included into Annex I of Directive 91/414 (2008/44/EC), amended by the Annex Commission Implementing Regulation (EU) No. 540/2011. The SANCO report for boscalid (SANCO/3919/2007 rev 5 – 21 January 2008) and the SANCO report for prothioconazole (SANCO/3923/2007-final) are considered to provide the relevant information on the evaluation or a reference to where such information can be found.

For the implementation of the uniform principles of Annex VI, the conclusions of the review reports on the active substance boscalid, and in particular Appendices I and II thereof, as finalised in the Standing Committee on the Food Chain and Animal Health on 22 January 2008, shall be taken into account. Consideration of active substance for Annex I inclusion does not include an evaluation of efficacy. Therefore, there are no concerns to address arising from the inclusion directive of boscalid relating to efficacy.

The approval of both prothioconazole and boscalid was last extended by Commission Implementing Regulation (EU) 2022/708 of May 5th, 2022.

Mode of action

Prothioconazole is a fungicide belonging to DMI subgroup, sterol demethylation (ergosterol biosynthesis) inhibitors of the SBI (Sterol Biosynthesis Inhibitors) class triazoles (FRAC group 3). It is applied foliarly and exhibits penetrant, local and acropetal systemicity, having both a protective and curative action and controls a wide range of foliar diseases in many crops as cereals and other field crops. DMI fungicides have long been known to exhibit some plant growth regulative activity such as thickening of leaves, stunting and darkening of leaf colour.

Boscalid is a systemic fungicide that belongs to the class of the pyridine-carboxamides. It is absorbed through the leaves and inhibits succinate-dehydrogenase (FRAC code C2), thereby disturbing energy production in fungi.

Table 3.2-1: Details of the active substances

Active substance	Prothioconazole	Boscalid
Concentration (Unit: g/kg or g/L...)	156 g/L	156 g/L
Chemical group	Triazoles	Pyridine-carboxamides
Mode of action	Systemic fungicide	Inhibition of succinate dehydrogenase
Biological action	Inhibition of sterol demethylation	Inhibition of energy production
FRAC code	3	C2

Description of the plant protection product

Information on the detailed composition of GLOB2021dF can be found in the confidential dossier of this submission (Registration Report - Part C).

GLOB2021dF contains 156 g/L of the active substance Prothioconazole and 156 g/L of the active substance Boscalid. It is formulated as a suspension concentrate (SC). It is to be used as a fungicide in cereals and oilseed rape.

Its technical characteristics are acceptable for a suspension concentrate formulation, no particular problems are to be expected when GLOB2021dF is used as recommended. More information can be found in Part B1, B2 and B4 of this submission.

The classification proposal for GLOB2021dF according to Regulation (EC) 1272/2008 (CLP Regulation) can be found in Part A of this submission.

Table 3.2-2: Simplified table of requested uses for GLOB2021dF

Uses		Member State	Requested rate(s)	Comments / Other relevant details on GAPs
Crop(s)	Target(s)			
Oilseed rape (BRSNW and BRSNS)	Root rot (SCLESC) Black spot of rape (ALTEBA) Black leg of crucifers (LEPTMA)	Central zone: PL, CZ, DE, HU, RO, SK	Max. 0.8 L/ha	2 applications with min. 21 days interval BBCH 14-69 according to disease (LEPTMA: max 1 autumn + 1 spring appl. Other diseases: apply in spring)
Cereals (winter and spring wheat, winter and spring barley, winter and spring rye, winter and spring triticale, spelt, oats)	Different diseases (eg. Fusarium (FUSASP), speckled leaf blotch of wheat (SEPTTR), glume blotch of wheat (LEPTNO), Stripe/yellow rust (PUCST/PUCCSI), brown rust of cereals (PUCCRE), brown rust of wheat (PUCCRT), brown rust of rye (PUCRR), dwarf leaf rust of barley (PUCCHD), crown rust of oats (PUCCCA), leaf blotch of oat (PYRNAV), net blotch of barley (PYRNTE), leaf spot of barley (PYRNTM), ramularia leaf spot of barley (RAMUCC), leaf blotch of cereals (RHYNSE), Powdery mildew (ERYSGR)	Central zone: PL, CZ, DE, HU, RO, SK	Max. 0.8 L/ha	Max. 2 applications with min. 21 days interval FUSASP: BBCH 61-69 (only 1 application) Other diseases: BBCH: 30-69

Further details are in the table “All intended uses” in Part B - Section 0.

Description of the target pests

GLOB2021dF is used as a fungicide in cereals and oilseed rape.

Table 3.2-3: Glossary of pests mentioned in the dossier.

EPPO code	Scientific name	Common name
ERYSGA	<i>Blumeria graminis f. sp. Avenae</i>	powdery mildew of oat
ERYSGH	<i>Blumeria graminis f. sp. hordei</i>	powdery mildew of barley
ERYSGR	<i>Blumeria graminis</i>	Powdery mildew
ERYSGT	<i>Blumeria graminis f. sp. tritici</i>	powdery mildew of wheat
ERYSGR	<i>Blumeria graminis</i>	Powdery mildew
FUSACU	<i>Fusarium culmorum</i>	culm rot of cereals
FUSASP	<i>Fusarium sp.</i>	Fusarium ear blight of cereals
GIBBZE	<i>Fusarium graminearum</i>	head blight of cereals
LEPTNO	<i>Parastagonospora nodorum</i>	glume blotch of wheat
PUCCCA	<i>Puccinia coronata var. avenae</i>	crown rust of oats
PUCCHD	<i>Puccinia hordei</i>	Dwarf leaf rust of barley

EPPO code	Scientific name	Common name
PUCCRE	<i>Puccinia recondita</i>	Brown rust of cereals
PUCCRR	<i>Puccinia recondita f. sp. Recondita</i>	brown rust of rye
PUCCRT	<i>Puccinia triticina</i>	brown rust of wheat
PUCCSI	<i>Puccinia striiformis f. sp. tritici</i>	yellow rust of wheat
PUCCST	<i>Puccinia striiformis</i>	Stripe rust
PYRNAV	<i>Pyrenophora chaetomioides</i>	leaf blotch of oat
PYRNTE	<i>Pyrenophora teres</i>	Net blotch of barley
PYRNTM	<i>Pyrenophora teres f. sp. maculata</i>	leaf spot of barley
PYRNTR	<i>Pyrenophora tritici-repentis</i>	Yellow leaf blotch of wheat
RAMUCC	<i>Ramularia collo-cygni</i>	ramularia leaf spot of barley
RHYNSE	<i>Rhynchosporium secalis</i>	Leaf blotch of cereals
SEPTTR	<i>Zymoseptoria tritici</i>	Speckled leaf blotch of wheat

Table 3.2-4: Major / minor status of intended uses in the Central zone (for all cMS and zRMS).

Crop and/or situation	Crop status		Pests or group of pests controlled	Pest status	
	Major (at least one crop in the group)	minor		Major	minor
Spring and winter Cereals	PL, CZ, DE, HU, RO, SK	CZ: spelt, spring oats PL: spring rye HU: oat, spelt RO: spelt, rye, triticale SK: spring rye spelt	Foliar and ear diseases on cereals	PL, CZ, DE, HU, RO, SK	-
Oilseed rape (spring and winter)	PL, CZ, DE, HU, RO, SK	-	LEPTMA, SCLESC, ALTEBA	PL, CZ, DE, HU, RO, SK	-

Compliance with the Uniform Principles

All data submitted in this Biological assessment dossier are in compliance with the Uniform Principles.

Information on trials submitted (3.1 Efficacy data)

The following tables aim to give an overview of submitted trials.

Table 3.2-5: Presentation of trials used exclusively on preliminary section

Crop*	Target(s)	Country	Years	Type of trial**	Number of trials			GEP, non-GEP, official***	Comments (any other relevant information)
					Marit. zone	North-East zone	Medit. zone		
Oilseed rape	LEPTMA SCLESC	CZ	2020	P	1			GEP	-
		FR	2020	P	1			GEP	-
		PL	2020	P		3		GEP	-
Barley	RHYNSE	IT	2024	P			2	GEP	-
Wheat	PUCCRE SEPTTR	IT	2024	P			2	GEP	-
Total			2020	-	2	3	4	-	All zones: 9

* According to the GAP table. Timing of the application(s) can be added if relevant (e.g. Pre-mergence vs post-emergence, spring vs autumn). ** P = preliminary trial, MED = minimum effective dose, E = efficacy trial.

*** GEP: Good Experimental Practices. Official: carried out by a national official organisation.

Table 3.2-6: Presentation of efficacy trials on oilseed rape

Target(s)	Country	Years	Type of trial**	KCP	Number of trials				GEP, non-GEP, official***	Comments (any other relevant information)
					Marit. zone	North-East zone	Medit. zone	South-East zone		
ALTEBA	BE	2022	E+MED	KCP 6.2-19	1				GEP	
	BG	2021	E+MED	KCP 6.2-44				1	GEP	
	CZ	2022	E+MED	KCP 6.2-14	1				GEP	
			E+MED	KCP 6.2-16	1				GEP	
			E+MED+P	KCP 6.2-22	1				GEP	
			E+MED+P	KCP 6.2-23	1				GEP	
	DK	2021	E+MED	KCP 6.2-08	1				GEP	
			E	KCP 6.2-09	1				GEP	
	HR	2021	E+MED	KCP 6.2-45				1	GEP	
		2022	E+MED+P	KCP 6.2-38		1			GEP	
			E+MED	KCP 6.2-40		1			GEP	
	HU	2021	E+MED	KCP 6.2-46				1	GEP	
	IT	2021	E+MED	KCP 6.2-36		1			GEP	
		2022	E+MED	KCP 6.2-34		1			GEP	
			E+MED+P	KCP 6.2-35		1			GEP	
			E+MED	KCP 6.2-41		1			GEP	
			E+MED	KCP 6.2-42		1			GEP	
	LT	2021	E+MED	KCP 6.2-25			1		GEP	
	LV	2021	E+MED	KCP 6.2-26			1		GEP	
			E+MED	KCP 6.2-43			1		GEP	
		2022	E+MED+P	KCP 6.2-29			1		GEP	
			E+MED+P	KCP 6.2-32			1		GEP	
	NL	2022	E+MED	KCP 6.2-17	1				GEP	
	PL	2021	E+MED	KCP 6.2-27			1		GEP	
		2022	E+MED+P	KCP 6.2-30			1		GEP	
			E+MED	KCP 6.2-31			1		GEP	
			E+MED+P	KCP 6.2-33			1		GEP	
	RO	2022	E+MED+P	KCP 6.2-49				1	GEP	
			E+MED+P	KCP 6.2-53				1	GEP	
	SE	2022	E+MED	KCP 6.2-18	1				GEP	
	UK	2021	E	KCP 6.2-11	1				GEP	
ALTEBA Total					10	7	9	5		
LEPTMA	BL	2021	E+MED	KCP 6.2-44				1	GEP	
	CZ	2021	E+MED	KCP 6.2-02	1				GEP	
			E+MED	KCP 6.2-03	1				GEP	
			E+MED	KCP 6.2-04	1				GEP	
		2022	E+MED+P	KCP 6.2-14	1				GEP	
			E+MED+P	KCP 6.2-15	1				GEP	
	DE	2021	E+MED	KCP 6.2-05	1				GEP	
			E+MED	KCP 6.2-06	1				GEP	

Target(s)	Country	Years	Type of trial**	KCP	Number of trials				GEP, non-GEP, official***	Comments (any other relevant information)
					Marit. zone	North-East zone	Medit. zone	South-East zone		
	DK	2021	E+MED	KCP 6.2-01	1				GEP	
			E+MED	KCP 6.2-08	1				GEP	
			E	KCP 6.2-09	1				GEP	
	EE	2021	E+MED	KCP 6.2-24			1		GEP	
	HR	2021	E+MED	KCP 6.2-45				1	GEP	
			E+MED	KCP 6.2-50				1	GEP	
	HU	2021	E+MED	KCP 6.2-46				1	GEP	
	IT	2021	E+MED	KCP 6.2-36		1			GEP	
			E+MED	KCP 6.2-37		1			GEP	
		2022	E+MED+P	KCP 6.2-34		1			GEP	
			E+MED	KCP 6.2-41		1			GEP	
			E+MED+P	KCP 6.2-42		1			GEP	
	LT	2021	E+MED	KCP 6.2-25			1		GEP	
	LV	2021	E+MED	KCP 6.2-26			1		GEP	
			E+MED	KCP 6.2-43			1		GEP	
		2022	E+MED+P	KCP 6.2-29			1		GEP	
			E+MED+P	KCP 6.2-32			1		GEP	
	PL	2021	E+MED	KCP 6.2-27			1		GEP	
			E+MED	KCP 6.2-28			1		GEP	
		2022	E+MED+P	KCP 6.2-30			1		GEP	
	RO	2021	E+MED	KCP 6.2-47				1	GEP	
			E+MED	KCP 6.2-51				1	GEP	
	SE	2021	E	KCP 6.2-10	1				GEP	
	UK	2021	E	KCP 6.2-11	1				GEP	
LEPTMA Total					12	5	9	6		
SCLESC	BE	2022	E+MED	KCP 6.2-19	1				GEP	
	BL	2022	E+MED+P	KCP 6.2-48				1	GEP	
	CZ	2022	E+MED+P	KCP 6.2-12	1				GEP	
			E+MED+P	KCP 6.2-13	1				GEP	
			E+MED+P	KCP 6.2-14	1				GEP	
			E+MED+P	KCP 6.2-15	1				GEP	
			E+MED	KCP 6.2-16	1				GEP	
			E+MED+P	KCP 6.2-22	1				GEP	
			E+MED+P	KCP 6.2-23	1				GEP	
	DK	2021	E	KCP 6.2-09	1				GEP	
	GR	2022	E+MED	KCP 6.2-39		1			GEP	
	HR	2022	E+MED+P	KCP 6.2-38		1			GEP	
			E+MED	KCP 6.2-40		1			GEP	
	HU	2022	E+MED+P	KCP 6.2-52				1	GEP	
	IT	2021	E+MED	KCP 6.2-36		1			GEP	
			E+MED	KCP 6.2-37		1			GEP	
		2022	E+MED+P	KCP 6.2-34		1			GEP	
			E+MED+P	KCP 6.2-35		1			GEP	
			E+MED	KCP 6.2-41		1			GEP	
			E+MED+P	KCP 6.2-42		1			GEP	
	LV	2021	E+MED	KCP 6.2-43			1		GEP	
			E+MED+P	KCP 6.2-29			1		GEP	
		2022	E+MED+P	KCP 6.2-32			1		GEP	
	NL	2022	E+MED	KCP 6.2-17	1				GEP	
			E+MED	KCP 6.2-20	1				GEP	
			E+MED	KCP 6.2-21	1				GEP	
	PL	2021	E+MED	KCP 6.2-27			1		GEP	
			E+MED	KCP 6.2-28			1		GEP	
		2022	E+MED+P	KCP 6.2-30			1		GEP	
			E+MED	KCP 6.2-31			1		GEP	
			E+MED+P	KCP 6.2-33			1		GEP	
	RO	2021	E+MED	KCP 6.2-47				1	GEP	
			E+MED+P	KCP 6.2-49				1	GEP	
		2022	E+MED+P	KCP 6.2-53				1	GEP	
	SE	2021	E	KCP 6.2-10	1				GEP	
		2022	E+MED	KCP 6.2-18	1				GEP	
	UK	2021	E+MED	KCP 6.2-07	1				GEP	
SCLESC Total					15	9	8	5		

** P = preliminary trial, MED = minimum effective dose, E = efficacy trial.

*** GEP: Good Experimental Practices. Official: carried out by a national official organisation.

Table 3.2-7: Presentation of efficacy trials on cereals

Target(s)	Crop	Country	Years	Type of trial**	KCP	Number of trials				GEP, non-GEP, official***	Comments (any other relevant information)
						Marit. zone	North-East zone	Medit. zone	South-East zone		
FUSACU	TRZAW	CZ	2023	E	KCP 6.2-135	1				GEP	
					KCP 6.2-133	1				GEP	
				E+MED	KCP 6.2-134	1				GEP	
					KCP 6.2-132	1				GEP	
			2022	E+MED	KCP 6.2-56	1				GEP	
					KCP 6.2-57	1				GEP	
		EE	2023	E+MED	KCP 6.2-159		1			GEP	
			2022	E	KCP 6.2-73		1			GEP	Low Incid.
		HR	2022	E	KCP 6.2-89			1		GEP	
					KCP 6.2-90			1		GEP	
		LV	2023	E	KCP 6.2-160		1			GEP	
			2022	E	KCP 6.2-74		1			GEP	
		PL	2023	E	KCP 6.2-162		1			GEP	
					KCP 6.2-161		1			GEP	
			2022	E	KCP 6.2-69		1			GEP	
					KCP 6.2-70		1			GEP	
					KCP 6.2-71		1			GEP	
					KCP 6.2-72		1			GEP	
		SI	2023	E+MED	KCP 6.2-196				1	GEP	
		RO	2023	E+MED	KCP 6.2-195				1	GEP	
		HU	2023	E+MED	KCP 6.2-194				1	GEP	
	TRZDW	SE	2023	E	KCP 6.2-130	1				GEP	
		BE	2022	E+MED	KCP 6.2-55	1				GEP	
		NL	2022	E+MED	KCP 6.2-58	1				GEP	
		IT	2022	E	KCP 6.2-83			1		GEP	
					KCP 6.2-84			1		GEP	
		GR	2023	E	KCP 6.2-178			1		GEP	
			2022	E	KCP 6.2-92			1		GEP	Low Sever.
		PT	2023	E+MED	KCP 6.2-179			1		GEP	
	TTLWI	PL	2023	E	KCP 6.2-167		1			GEP	
GIBBZE	TRZAW	SE	2023	E+MED	KCP 6.2-131	1				GEP	
FUSASP Total						10	11	7	3	-	
SEPTTR	TRZAW	CZ	2023	E	KCP 6.2-127	1				GEP	
					KCP 6.2-125	1				GEP	
				E+MED	KCP 6.2-128	1				GEP	
					KCP 6.2-126	1				GEP	
					KCP 6.2-124	1				GEP	
			2022	E+MED	KCP 6.2-57	1				GEP	Supportive (1 late appl. for FUSASP)
					KCP 6.2-59	1				GEP	
					KCP 6.2-60	1				GEP	
					KCP 6.2-62	1				GEP	
		EE	2023	E+MED	KCP 6.2-159		1			GEP	
		GR	2022	E+MED	KCP 6.2-85			1		GEP	
		HR	2022	E+MED	KCP 6.2-86			1		GEP	
					KCP 6.2-87			1		GEP	
		LV	2023	E	KCP 6.2-154		1			GEP	
				E+MED	KCP 6.2-156		1			GEP	
		PL	2023	E	KCP 6.2-155		1			GEP	
					KCP 6.2-158		1			GEP	
					KCP 6.2-157		1			GEP	
			2022	E	KCP 6.2-70		1			GEP	
					KCP 6.2-68		1			GEP	
		PT	2023	E	KCP 6.2-174			1		GEP	
			2022	E+MED	KCP 6.2-88			1		GEP	
		SI	2023	E+MED	KCP 6.2-193				1	GEP	
					KCP 6.2-192				1	GEP	
		RO	2023	E	KCP 6.2-187				1	GEP	
				E+MED	KCP 6.2-191				1	GEP	
		HU	2023	E	KCP 6.2-186				1	GEP	
					KCP 6.2-190				1	GEP	
					KCP 6.2-189				1	GEP	
					KCP 6.2-188				1	GEP	

Target(s)	Crop	Country	Years	Type of trial**	KCP	Number of trials				GEP, non-GEP, official***	Comments (any other relevant information)	
						Marit. zone	North-East zone	Medit. zone	South-East zone			
		DK	2023	E+MED	KCP 6.2-117	1				GEP		
					KCP 6.2-121	1				GEP		
		NL	2022	E+MED	KCP 6.2-61	1				GEP		
	TRZDW	GR	2023	E	KCP 6.2-175			1		GEP		
				E+MED	KCP 6.2-176			1		GEP		
		PT	2022	E+MED	KCP 6.2-91			1		GEP		
			2023	E	KCP 6.2-177			1		GEP		
	TTLWI	CZ	2023	E	KCP 6.2-141	1				GEP		
					KCP 6.2-139	1				GEP		
					KCP 6.2-140	1				GEP		
					KCP 6.2-138	1				GEP		
		EE	2023	E+MED	KCP 6.2-164		1			GEP		
		HR	2023	E+MED	KCP 6.2-180			1		GEP		
		PL	2023	E	KCP 6.2-163		1			GEP		
				E+MED	KCP 6.2-166		1			GEP		
		NL	2022	E+MED	KCP 6.2-65	1				GEP		
	TRZSP	CZ	2023	E	KCP 6.2-136	1				GEP		
				E+MED	KCP 6.2-137	1				GEP		
	SECCW	CZ	2023	E	KCP 6.2-113	1				GEP		
				E+MED	KCP 6.2-114	1				GEP		
SEPTTR Total						21	11	10	8	-		
PUCCRE	TRZAW	CZ	2023	E	KCP 6.2-119	1				GEP		
				E+MED	KCP 6.2-124	1				GEP		
			2022	E+MED	KCP 6.2-64	1				GEP		
	TTLWI	CZ	2023	E+MED	KCP 6.2-138	1				GEP		
			SECCW	2023	E	KCP 6.2-113	1				GEP	
				LV	2023	E+MED	KCP 6.2-151		1			GEP
PUCCRR	SECCW	CZ		2023	E+MED	KCP 6.2-153		1			GEP	
			2023	E+MED	KCP 6.2-116	1				GEP		
			PL	2023	E	KCP 6.2-152		1			GEP	
PUCCRE/PUCCRR Total						6	3			-		
PUCCCA	AVESA	CZ	2023	E	KCP 6.2-101	1				GEP		
		EE	2022	E	KCP 6.2-79		1			GEP		
		LV	2022	E	KCP 6.2-80		1			GEP		
		PL	2023	E	KCP 6.2-145		1			GEP		
					KCP 6.2-81		1			GEP		
			2022	E	KCP 6.2-82		1			GEP		
PUCCCA Total						1	5			-		
PUCCHD	HORVW	CZ	2023	E	KCP 6.2-107	1				GEP		
			2022	E	KCP 6.2-66	1				GEP		
		LV	2022	E+MED	KCP 6.2-77		1			GEP		
		PL	2023	E	KCP 6.2-148		1			GEP		
		HU	2023	E+MED	KCP 6.2-182				1	GEP		
		NL	2022	E	KCP 6.2-67	1				GEP		
	HORVS	PL	2023	E	KCP 6.2-147		1			GEP		
				KCP 6.2-146		1			GEP			
DK		2023	E	KCP 6.2-103	1				GEP			
PUCCHD Total						4	4		1	-		
PUCCSI	TRZAW	CZ	2022	E+MED	KCP 6.2-62	1				GEP		
		PL	2023	E	KCP 6.2-157		1			GEP		
				E+MED	KCP 6.2-68		1			GEP		
		NL	2022	E+MED	KCP 6.2-61	1				GEP		
PUCCST	TRZAW	CZ	2023	E+MED	KCP 6.2-126	1				GEP		
			2022	E+MED	KCP 6.2-59	1				GEP		
		RO	2023	E+MED	KCP 6.2-195				1	GEP		
		HU	2023	E+MED	KCP 6.2-189				1	GEP		
PUCCSI/PUCCST Total						4	2		2	-		
PYRNAV	AVESA	CZ	2023	E	KCP 6.2-101	1				GEP		
		LV	2023	E	KCP 6.2-144		1			GEP		
					KCP 6.2-143		1			GEP		
			2022	E	KCP 6.2-80		1			GEP		
		PL	2023	E	KCP 6.2-145		1			GEP		
			2022	E	KCP 6.2-81		1			GEP		
PYRNAV Total						1	5			-		
PYRNTE	HORVW	CZ	2023	E	KCP 6.2-111	1				GEP		
					KCP 6.2-109	1				GEP		
					KCP 6.2-107	1				GEP		
				E+MED	KCP 6.2-110	1				GEP		

Target(s)	Crop	Country	Years	Type of trial**	KCP	Number of trials				GEP, non-GEP, official***	Comments (any other relevant information)		
						Marit. zone	North-East zone	Medit. zone	South-East zone				
					KCP 6.2-108	1				GEP			
		EE	2023	E+MED	KCP 6.2-149		1			GEP			
		LV	2022	E+MED	KCP 6.2-75		1			GEP			
					KCP 6.2-77		1			GEP			
		PL	2023	E	KCP 6.2-148		1			GEP			
					KCP 6.2-76		1			GEP			
		PT	2022	E+MED	KCP 6.2-95			1		GEP			
		SI	2023	E+MED	KCP 6.2-185				1	GEP			
	HU	2023	E+MED	KCP 6.2-182				1	GEP				
	DK	2023	E+MED	KCP 6.2-104	1				GEP				
HORVS	PL	2023	E	KCP 6.2-146		1			GEP				
	DK	2023	E	KCP 6.2-103	1				GEP				
PYRNTE Total						7	6	1	2	-			
RAMUCC	HORVW	CZ	2023	E	KCP 6.2-107	1				GEP			
				E+MED	KCP 6.2-112	1				GEP			
					KCP 6.2-110	1				GEP			
		PL	2022	E+MED	KCP 6.2-78		1			GEP			
		SI	2023	E+MED	KCP 6.2-185				1	GEP			
			2022	E+MED	KCP 6.2-97			1		GEP			
		HU	2023	E+MED	KCP 6.2-182				1	GEP			
	KCP 6.2-181							1	GEP				
HORVS	DK	2023	E	KCP 6.2-103	1				GEP				
RAMUCC Total						4	1	1	3	-			
RHYNSE	HORVW	CZ	2023	E	KCP 6.2-111	1				GEP			
					KCP 6.2-109	1				GEP			
		EE	2023	E+MED	KCP 6.2-149		1			GEP			
		GR	2023	E	KCP 6.2-168			1		GEP			
					KCP 6.2-169			1		GEP			
		HR	2023	E	KCP 6.2-170			1		GEP			
					KCP 6.2-171			1		GEP			
					KCP 6.2-93			1		GEP			
		LV	2023	E+MED	KCP 6.2-94			1		GEP			
					KCP 6.2-150		1			GEP			
					KCP 6.2-75		1			GEP			
		PL	2022	E+MED	KCP 6.2-77		1			GEP			
					KCP 6.2-76		1			GEP			
					KCP 6.2-78		1			GEP			
		PT	2023	E	KCP 6.2-172			1		GEP			
			2022	E+MED	KCP 6.2-96			1		GEP			
		SI	2022	E+MED	KCP 6.2-97			1		GEP			
		RO	2023	E+MED	KCP 6.2-184				1	GEP			
					KCP 6.2-183				1	GEP			
		HU	2023	E+MED	KCP 6.2-182				1	GEP			
					KCP 6.2-181				1	GEP			
		DK	2023	E+MED	KCP 6.2-104	1				GEP			
	TTLWI	CZ	2023	E	KCP 6.2-141	1				GEP			
	SECCW	CZ	2023	E	KCP 6.2-115	1				GEP			
					KCP 6.2-113	1				GEP			
					KCP 6.2-114	1				GEP			
					KCP 6.2-116	1				GEP			
				HR	2023	E	KCP 6.2-173			1		GEP	
				LV	2023	E+MED	KCP 6.2-151		1			GEP	
				PL	2023	E	KCP 6.2-152		1			GEP	
				E+MED	KCP 6.2-153		1			GEP			
RHYNSE Total						8	9	10	4	-			
ERYSGH	HORVW	LV	2023	E+MED	KCP 6.2-150		1			GEP			
		DK	2023	E	KCP 6.2-106	1				GEP			
				E+MED	KCP 6.2-104	1				GEP			
ERYSGR	HORVW	SE	2023	E+MED	KCP 6.2-105	1				GEP			
		CZ	2023	E+MED	KCP 6.2-128	1				GEP			
			2022	E+MED	KCP 6.2-62	1				GEP			
	TTLWI	LV	2023	E	KCP 6.2-154		1			GEP			
		CZ	2023	E	KCP 6.2-139	1				GEP			
		LV	2023	E	KCP 6.2-165		1			GEP			
	PL	2023	E+MED	KCP 6.2-166		1			GEP				
	TRZSP	CZ	2023	E+MED	KCP 6.2-137	1				GEP			
		CZ	2023	E+MED	KCP 6.2-116	1				GEP			
SECCW	LV	2023	E+MED	KCP 6.2-151		1			GEP				

Target(s)	Crop	Country	Years	Type of trial**	KCP	Number of trials				GEP, non-GEP, official***	Comments (any other relevant information)
						Marit. zone	North-East zone	Medit. zone	South-East zone		
ERYSGT	TRZAW	PL	2022	E+MED	KCP 6.2-68		1			GEP	
ERYSGR Total						8	6			-	

** P = preliminary trial, MED = minimum effective dose, E = efficacy trial.

*** GEP: Good Experimental Practices. Official: carried out by a national official organisation.

Information regarding chemical standards and test product used are provided in chapter 3.2.3 (Efficacy tests).

3.2.1 Preliminary tests (KCP 6.1)

3.2.1.1 Justification of the combination of active substances

Prothioconazole and Boscalid are old active ingredients that have been registered for many years all over the world. GLOB2021dF applies a reduced rate of Prothioconazole compared to maximum used rates (usually at 180-200 g/ha of Prothioconazole) with the addition of 50% of the maximum dose rate of Boscalid generally used on oilseed rape (200 g a.s./ha). This strategy is already successfully used in several fungicide mixtures.

The concerned active substances are authorized since many years as solo products or in mixtures on oilseed rape. On cereals, prothioconazole is a widely known and used molecule, while boscalid, despite had been used in early 2000 and until recently left aside in favour of new SDHI's as bixafen, fluxapyroxad, benzovindiflupyr. Since 2022, Sharda Cropchem has developed a similar co-formulation authorized on winter wheat at the maximum amount of 350 g boscalid + 150 g prothioconazole/ha.

OILSEED RAPE

As the co-formulation was not existing on the market at early stages of product development, 5 preliminary trials were carried out to evaluate the efficacy of different rates of Boscalid based products (Cantus/Pictor Pro/Propatan), tested in tank-mix combination with different amounts of prothioconazole based products (Proline/Joao) for the control of key diseases on oilseed rape.

Trials were performed in Czech Republic and northern part of France (2 trials in Maritime EPPO Zone) and in Poland (3 trials in North-East EPPO Zone). Site information and application details are presented in Appendix 3 of the BAD. Given the preliminary character of the studies, results are presented in this section per each climatic zone but results were analysed and taken into account for product development across the EPPO zones.

In those trials, 2 applications were performed in spring, one early application target for LEPTMA, at first signs of infection and at the latest 2 weeks before flowering and a second application targeting flowering diseases at BBCH 65.

Table 3.2-10 and Table 3.2-11 below summarize the most relevant results from trials testing the different ratios. A color grade scheme was used to highlight the disease control levels recorded and are described in detail in the efficacy section 3.2.3. Table 3.2-11 summarizes the yield response.

The results from these trials indicated that for both key diseases LEPTMA (*Plenodomus lingam* - phoma stem canker) and SCLESC (*Sclerotinia sclerotiorum* - root rot), a good efficacy was found for the ratios that included prothioconazole at 125 g a.s./ha and boscalid at 100 -150 g a.s./ha. In particular in the North-East EPPO zone, the higher rate of boscalid was beneficial. Remarkable yield increases were also observed at that ratios.

Therefore, formulation development was directed to a ratio close to the before mentioned ones. It was decided to develop a formulation named GLOB2021aF, containing 125 g/L of each active to be applied at 1 L/ha providing 125+125 g a.s./ha. Further development lead to a new formulation named GLOB2021dF containing 156+156 g/L to be applied at 0.8 L/ha always providing 125+125 g a.s./ha. Bridging between both formulation in provided below in point 3.2.1.2.

Given the history of both active substances, it was likely that a good control could be also achieved on cereals. Results of the large scale trial series on both oilseed rape and cereals are thus provided in the efficacy section (KCP 6.2). Lower rates were also tested in order to confirm the minimum effective dose.

Table 3.2-8: Justification to combine the active ingredients in GLOB2021dF on oilseed rape (LEPTMA and SCLESC, PESSEV %) – Maritime EPPO zone

KCP	Pest Code	Rating Date	Part Rated	Crop BBCH at appl.	Crop BBCH at ass.	Days After First Appl.	Days After Last Appl.	UNTREATED			Cantus+	Proline/Joao	Cantus+	Proline/Joao	Cantus+	Proline/Joao	Cantus+	Proline/Joao	Cantus/Pictor Pro/ Propatan	Prothioconazole 300 EC
								assessed value	% control	SNK	500	250	500	250	500	250	500	250		
											g/kg	g/L	g/kg	g/L	g/kg	g/L	g/kg	g/L	500	300
											WG	EC	WG	EC	WG	EC	WG	EC	g/kg	g/L
											0.12	0.5	0.2	0.5	0.2	0.3	0.3	0.5	0.5	0.6
kg/ha	l/ha	kg/ha	l/ha	kg/ha	l/ha	kg/ha	l/ha	kg/ha	l/ha	kg/ha	l/ha									
KCP 6.1-02	LEPTMA	02/04/20	LEAF	57	65	17	17	27.5	0	59.2 a	Joao	63.3 a	Joao	63.3 a	Joao	63.3 a	Joao	5 b	Pictor pro	58.3 a
		22/04/20	LEAF	57	69	37	20	50	0	70 a	Joao	70 a	Joao	50 ab	Joao	70 a	Joao	45 b	Pictor pro	30 c
		03/06/20	ROOT	57	85	79	62	38.7	0	47.5 a	Joao	65.5 a	Joao	62.9 a	Joao	59.9 a	Joao	78.9 a	Pictor pro	68.6 a
KCP 6.1-01	SCLESC	07/05/20	LEAF	55	65	31	31	0	0	0 -		0 -		0 -		0 -		0 -	Propatan	0 -
		19/05/20	STEM	55	69	43	12	0	0	0 -		0 -		0 -		0 -		0 -	Propatan	0 -
		30/06/20	STEM	55	85	85	54	31	0	54.8 b		83.5 a		71.3 ab		82.4 a		64.7 ab	Propatan	83.5 a
KCP 6.1-02	SCLESC	03/06/20	STEM	57	85	79	62	45.5	0	88.5 c	Joao	92.9 ab	Joao	93.6 ab	Joao	94.1 ab	Joao	94 ab	Pictor pro	88.2 c

EPPO zone	Target code	Grouping	Part rated	Crop BBCH at appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control																	
											Cantus at 0.12kg/ha + Proline/Joao at 0.5 L/ha = boscalid+prothio 60 + 125 g a.s./ha			Cantus at 0.2kg/ha + Pro-line/Joao at 0.5 L/ha = boscalid+prothio 100 + 125 g a.s./ha			Cantus at 0.2kg/ha + Pro-line/Joao at 0.3 L/ha = boscalid+prothio 100 + 75 g a.s./ha			Cantus at 0.3kg/ha + Pro-line/Joao at 0.5 L/ha = boscalid+prothio 150 + 125 g a.s./ha			Cantus/Pictor Pro/Propatan at 0.5 L/ha =boscalid 250 g a.s./ha			Prothioconazole 300 EC at 0.6 L/ha = 180 g a.s./ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	LEPTMA	All valid ass. (2-3w after A)	LEAF	57	1	17	17	27.5	-	-	59.2	-	-	63.3	-	-	63.3	-	-	63.3	-	-	5.0	-	-	58.3	-	-
		All valid ass. (2-3w after B)	LEAF	57	1	37	20	50	-	-	70.0	-	-	70.0	-	-	50.0	-	-	70.0	-	-	45.0	-	-	30.0	-	-
		All valid ass. (BBCH 79-85)	ROOT	57	1	79	62	38.7	-	-	47.5	-	-	65.5	-	-	62.9	-	-	59.9	-	-	78.9	-	-	68.6	-	-
MAR	SCLESC	All valid ass. (BBCH 70-85)	STEM	55-57	2	79-85	54-62	38.3	31-45.5	38.3	71.7	54.8-88.5	71.7	88.2	83.5-92.9	88.2	82.5	71.3-93.6	82.5	88.3	82.4-94.1	88.3	79.4	64.7-94	79.4	85.9	83.5-88.2	85.9

Table 3.2-9: Justification to combine the active ingredients in GLOB2021dF on oilseed rape (LEPTMA and SCLESC, PESSEV %) – North-east EPPO zone

KCP	Pest Code	Rating Date	Part Rated	Crop BBCH at appl.	Crop BBCH at ass.	Days After First Appl.	Days After Last Appl.	UNTREATED			Cantus+	Proline/Joao	Cantus+	Proline/Joao	Cantus+	Proline/Joao	Cantus+	Proline/Joao	Cantus/Pictor Pro/ Propatan	Prothioconazole 300 EC	
								assessed value	% control	SNK	500	250	500	250	500	250	500	250			
											g/kg	g/L	g/kg	g/L	g/kg	g/L	g/kg	g/L	500	300	
											WG	EC	WG	EC	WG	EC	WG	EC	g/kg	g/L	
											0.12	0.5	0.2	0.5	0.2	0.3	0.3	0.5	0.5	0.6	
											kg/ha	l/ha	kg/ha	l/ha	kg/ha	l/ha	kg/ha	l/ha	kg/ha	l/ha	
KCP 6.1-03	LEPTMA	30/04/20	LEAF	53	65	24	24	3.1	0		48.2 a		46.5 a		31 a		52.1 a		41.4 a		40.5 a
		28/05/20	LEAF	53	73	52	28	7	0		58.2 abc		55.2 bc		51.4 c		66.2 ab		54.7 bc		53.8 bc
KCP 6.1-04	LEPTMA	05/05/20	LEAF	55	65	27	27	67.5	0		22.3 c		25.9 c		36.2 bc		63.2 a		67.9 a		58.6 a
		26/05/20	LEAF	55	72	48	21	42.5	0		50 a		52.5 a		58.8 a		64.4 a		64.4 a		65 a
KCP 6.1-03	SCLESC	23/06/20	STEM	53	61	78	54	18.8	0		55.7 cd		61.5 bcd		48.3 d		94 a		83.7 ab		76.1 abc
KCP 6.1-04	SCLESC	18/06/20	STEM	55	83	71	44	81.2	0		47.9 f		56.4 d		62 c		70 a		65.9 b		72 a
KCP 6.1-05	SCLESC	26/06/20	STEM	31	85	79	59	30.1	0		76.4 a		77.4 a		77.8 a		80.4 a		71.6 a		76.2 a

EPPO zone	Target code	Grouping	Part rated	Crop BBCH at appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control																	
											Cantus at 0.12kg/ha + Proline/Joao at 0.5 L/ha = boscalid+prothio 60 + 125 g a.s./ha			Cantus at 0.2kg/ha + Proline/Joao at 0.5 L/ha = boscalid+prothio 100 + 125 g a.s./ha			Cantus at 0.2kg/ha + Proline/Joao at 0.3 L/ha = boscalid+prothio 100 + 75 g a.s./ha			Cantus at 0.3kg/ha + Proline/Joao at 0.5 L/ha = boscalid+prothio 150 + 125 g a.s./ha			Cantus/Pictor Pro/Propatan at 0.5 L/ha =boscalid 250 g a.s./ha			Prothioconazole 300 EC at 0.6 L/ha = 180 g a.s./ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
N-E	LEPTMA	All valid ass. (2-3w after A)	LEAF	55	1	27	27	67.5	-	-	22.3	-	-	25.9	-	-	36.2	-	-	63.2	-	-	67.9	-	-	58.6	-	-
		All valid ass. (2-3w after B)	LEAF	53-55	2	48-52	21-28	24.8	7-42.5	24.8	54.1	50-58.2	54.1	53.9	52.5-55.2	53.9	55.1	51.4-58.8	55.1	65.3	64.4-66.2	65.3	59.6	54.7-64.4	59.6	59.4	53.8-65	59.4
N-E	SCLESC	All valid ass. (BBCH 70-85)*	STEM	31-55	3	71-79	44-59	43.4	18.8-81.2	30.1	60.0	47.9-76.4	55.7	65.1	56.4-77.4	61.5	62.7	48.3-77.8	62.0	81.5	70-94	80.4	73.7	65.9-83.7	71.6	74.8	72-76.2	76.1

Table 3.2-10: Justification to combine the active ingredients in GLOB2021dF on oilseed rape (yield response) – Maritime and North-east EPPO zones

KCP	Rating Date	Rating Type	Crop BBCH at appl.	Crop BBCH at ass.	Days After First Appl.	Days After Last Appl.	UNTREATED			Cantus+ 500 g/kg WG 0.12 kg/ha	Proline/Joao 250 g/L EC 0.5 l/ha	Cantus+ 500 g/kg WG 0.2 kg/ha	Proline/Joao 250 g/L EC 0.5 l/ha	Cantus+ 500 g/kg WG 0.3 kg/ha	Proline/Joao 250 g/L EC 0.5 l/ha	Cantus+ 500 g/kg WG 0.5 kg/ha	Prothioconazole 300 EC 300 g/L EC 0.6 l/ha				
							assessed % value	control	SNK												
KCP 6.1-01	14/07/20	YIELD	55	89	99	68	3.4	100	-	100.4	-	107.9	-	103.3	-	105.9	-	103.4	-	103.5	-
KCP 6.1-02	06/07/20	YIELD	57	89	112	95	2	100	e	133.2	abc	147.7	a	129	bcd	140.4	ab	126.6	bcd	140	ab
KCP 6.1-03	20/07/20	YIELD	53	97	105	81	2.3	100	b	121.8	a	121.6	a	116.6	a	125.8	a	122	a	121.9	a
KCP 6.1-04	28/07/20	YIELD	55	99	111	84	2.9	100	d	113.2	c	119.3	b	125.9	ab	130.1	a	130	a	130.3	a
KCP 6.1-05	23/07/20	YIELD	31	89	106	86	3.1	100	b	109.7	ab	111.7	ab	112.8	ab	111.9	ab	117.3	a	110.8	ab

EPPO zone	Grouping	Type	Crop BBCH at appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)																	
										Cantus at 0.12kg/ha + Proline/Joao at 0.5 L/ha = boscalid+prothio 60 + 125 g a.s./ha			Cantus at 0.2kg/ha + Proline/Joao at 0.5 L/ha = boscalid+prothio 100 + 125 g a.s./ha			Cantus at 0.2kg/ha + Proline/Joao at 0.3 L/ha = boscalid+prothio 100 + 75 g a.s./ha			Cantus at 0.3kg/ha + Proline/Joao at 0.5 L/ha = boscalid+prothio 150 + 125 g a.s./ha			Cantus/Pictor Pro/ Propatan at 0.5 L/ha =boscalid 250 g a.s./ha			Prothioconazole 300 EC at 0.6 L/ha = 180 g a.s./ha		
							Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	All	Yield (t/ha)	55-57	2	99-112	68-95	2.7	2-3.4	2.7	116.8	100.4-133.2	116.8	127.8	107.9-147.7	127.8	116.2	103.3-129	116.2	123.2	105.9-140.4	123.2	115.0	103.4-126.6	115.0	121.8	103.5-140	121.8
NE	All	Yield (t/ha)	31-55	3	105-111	81-86	2.8	2.3-3.1	2.9	114.9	109.7-121.8	113.2	117.5	111.7-121.6	119.3	118.4	112.8-125.9	116.6	122.6	111.9-130.1	125.8	123.1	117.3-130	122.0	121.0	110.8-130.3	121.9

CEREALS:

Given the history of both active substances, it was likely that a good control could be also achieved on cereals.

A laboratory assay (spore germination inhibition assay) was conducted in well plates in a serial dilution as represented in the table below.

Table 3.2-1: Tested products and combinations in the serial dilution.

Treatments (prothioconazole + boscalid)	PPP Concen- tration a.i. (g/l)	Unit (µl/well OF ppm)	wells												
			1	2	3	4	5	6	7	8	9	10	11	12	
2. trt 6+ trt 9 (125+75 g a.i./ha)	See trt nb.	ppm	400	200	100	50	25	12.5	6.25	3.125	1.563	0.781	0.391	0	plate 1
		ppm	0.195	0.098	0.049	0.024	0.012	0.006	0.003	0.002	0.001	0	0	0	plate 2
3. trt 8+ trt 5 (75 +125 g a.i./ha)	See trt nb.	ppm	400	200	100	50	25	12.5	6.25	3.125	1.563	0.781	0.391	0	plate 1
		ppm	0.195	0.098	0.049	0.024	0.012	0.006	0.003	0.002	0.001	0	0	0	plate 2
4. trt 6+ trt 10 (125 + 200 g a.i./ha)	See trt nb.	ppm	650	325	162.5	81.25	40.625	20.313	10.156	5.078	2.539	1.27	0.635	0	plate 1
		ppm	0.317	0.159	0.079	0.04	0.02	0.01	0.005	0.002	0.001	0.001	0	0	plate 2
5. Cantus 125g a.i./ha	500 g/kg	ppm	250	125	62.5	31.25	15.625	7.813	3.906	1.953	0.977	0.488	0.244	0	plate 1
		ppm	0.122	0.061	0.031	0.015	0.008	0.004	0.002	0.001	0	0	0	0	plate 2
6. Protendo_300 125g a.i./ha	300 g/L	ppm	250	125	62.5	31.25	15.625	7.813	3.906	1.953	0.977	0.488	0.244	0	plate 1
		ppm	0.122	0.061	0.031	0.015	0.008	0.004	0.002	0.001	0	0	0	0	plate 2
7. Protendo_300 195g a.i./ha	300 g/L	ppm	390	195	97.5	48.75	24.375	12.188	6.094	3.047	1.523	0.762	0.381	0	plate 1
		ppm	0.19	0.095	0.048	0.024	0.012	0.006	0.003	0.001	0.001	0	0	0	plate 2
8. Protendo_300 75g a.i./ha	300 g/L	ppm	150	75	37.5	18.75	9.375	4.688	2.344	1.172	0.586	0.293	0.146	0	plate 1
		ppm	0.073	0.037	0.018	0.009	0.005	0.002	0.001	0.001	0	0	0	0	plate 2
9. Cantus 75g a.i./ha	500 g/kg	ppm	150	75	37.5	18.75	9.375	4.688	2.344	1.172	0.586	0.293	0.146	0	plate 1
		ppm	0.073	0.037	0.018	0.009	0.005	0.002	0.001	0.001	0	0	0	0	plate 2
10. Cantus 200g a.i./ha	500 g/kg	ppm	400	200	100	50	25	12.5	6.25	3.125	1.563	0.781	0.391	0	plate 1
		ppm	0.195	0.098	0.049	0.024	0.012	0.006	0.003	0.002	0.001	0	0	0	plate 2
11. Cantus 300g a.i./ha	500 g/kg	ppm	600	300	150	75	37.5	18.75	9.375	4.688	2.344	1.172	0.586	0	plate 1
		ppm	0.293	0.146	0.073	0.037	0.018	0.009	0.005	0.002	0.001	0.001	0	0	plate 2
12. trt 6+trt 5 (125+125 g a.i./ha)	See trt nb.	ppm	500	250	125	62.5	31.25	15.625	7.813	3.906	1.953	0.977	0.488	0	plate 1
		ppm	0.244	0.122	0.061	0.031	0.015	0.008	0.004	0.002	0.001	0	0	0	plate 2

In each well of a 96-well microtiter plate, 90 µl solution was added. This solution consisted of 1 test product or a mixture of the 2 test compounds. Each product and combination was tested in at least 20 concentrations (serial dilution). The *Zymoseptoria tritici* MUCL 45408 spore suspension contained 1000 spores per µl. In each well 10 µl was added. Each test was conducted twice (two repetitions in the well-plates). The well plates with the spores were then incubated at room temperature (24,5°C), aerobically, without shaking.

The first assessment took place after 72h of incubation. The evaluation of the germination of the spores and the growth of the hyphae in the well plates took also place after 7 days of incubation. The scale therefore used is described in the table below:

Table 3.2-2: Scale for efficacy evaluation in spore germination test

Score	Description
0	No germination tube.
1	A spore was scored as germinated when the germ tube length was at least as long as the diameter of the spore.
2	Germ tubes elongate. The structure looks like a spider.
3	Mycelium is growing, hyphae become longer and grow across each other.
4	Mycelium is growing, individual fungus no longer visible.
5	In the microwell plate mycelium is visible without use of microscope.

Final results are presented graphically in the below chart. It can be clearly seen that prothioconazole alone needs a lower concentration of a.s. to reach complete control, while boscalid alone needs the highest concentration. The combination of 125 g of each a.s. (ratio proposed by GLOB2021dF) was confirmed to request the minimum overall concentration of a.s. to reach complete control. A synergic effect can be thus hypothesized.

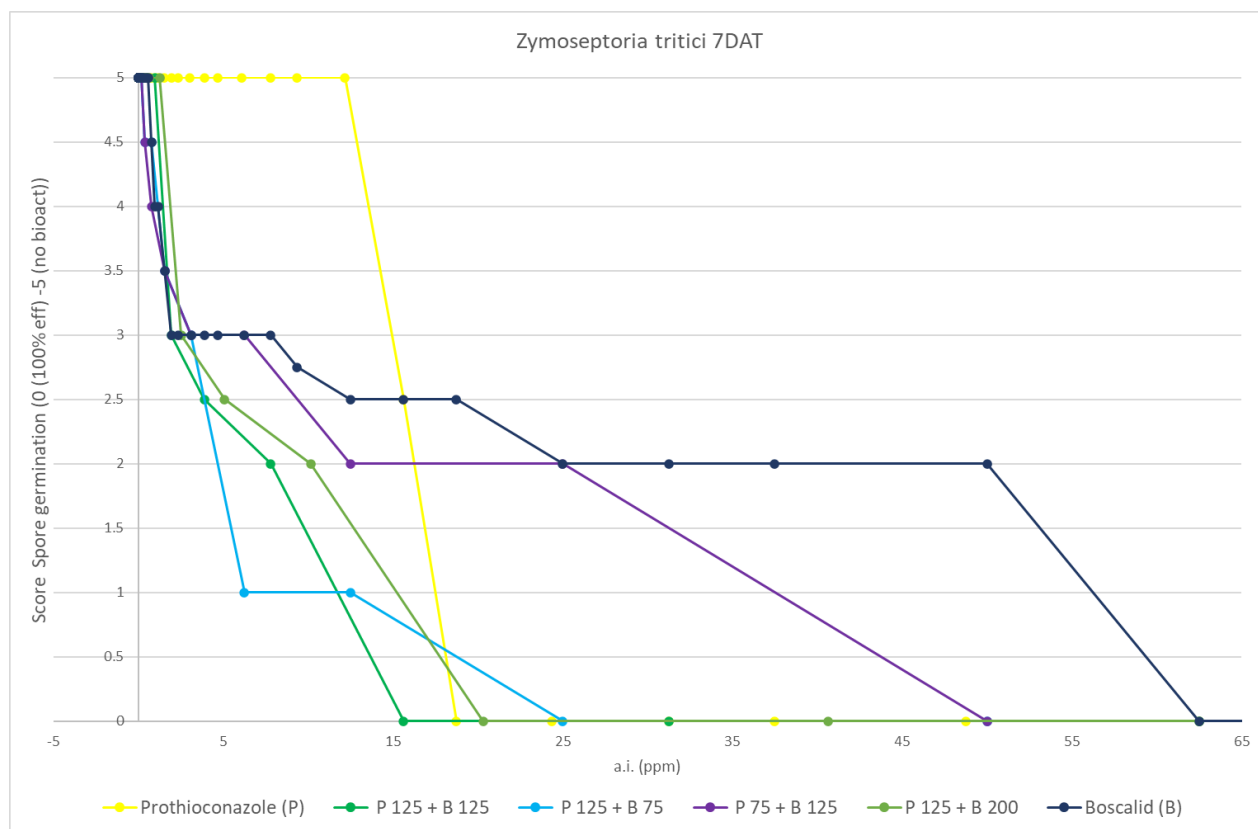


Figure 3.2 1) SEPTTR spore germination 7 days after treatment at decreasing concentrations of prothioconazole and boscalid alone and at different ratios. 0-5 score where 0 stands for total control. Final figures stand for the corresponding amount of a.s. at fields rate. Prothioconazole rate presented first, boscalid last.

Similarly, different ratios and PPPs containing the single active substances were tested under field conditions against different cereal diseases. 2 trials on barley and 2 trials on wheat in the Mediterranean EPPO zone are presented below. Given the preliminary character of the studies, results from any EPPO zone are considered to provide valuable information for product development.

Table 3.2-3: Justification to combine the active ingredients in GLOB2021dF and ratio justification on cereals (RHYNSE PESSEV control on barley) – Mediterranean EPPO zone

KCP	Pest Code	Crop Code	Rating Date	Part Rated	Crop BBCH at 1st appl.	Crop BBCH at ass.	Days After First Appl.	Days After Last Appl.	UNTREATED asses %con- ed value trol	SNK	GLOB2021dF 312 g/L SC 0.8 l/ha	Protendo 300 EC 300 G/L EC 0.6 l/ha	Cantus 500 g/kg WG 0.25 kg/ha	Protendo 300 EC 300 G/L EC 0.25 l/ha	Cantus 500 g/kg WG 0.15 kg/ha	Protendo 300 EC 300 G/L EC 0.415 l/ha	Cantus 500 g/kg WG 0.15 kg/ha	Protendo 300 EC 300 G/L EC 0.415 l/ha	Cantus 500 g/kg WG 0.25 kg/ha
KCP 6.1-07	RHYNSE	HORVW	15/04/24	FL-1	32	45	21	21	5.3	0	95.2 a	90.7 ab	68.8 c	76 abc	86.4 abc	76.1 abc	73.4 bc		
KCP 6.1-07	RHYNSE	HORVW	15/04/24	FL-2	32	45	21	21	7.5	0	84 a	86.6 a	55.2 b	70.2 a	78 a	72.4 a	73.5 a		
KCP 6.1-06	RHYNSE	HORVW	20/05/24	FLAG	32	75	42	21	5.3	0	100 a	96.2 a	67.6 c	82.6 b	97.4 a	93.7 a	84.9 b		
KCP 6.1-07	RHYNSE	HORVW	09/05/24	FLAG	32	75	45	24	9.1	0	88.6 ab	92.6 a	40 e	63.2 d	82.9 bc	77.6 c	65.6 d		
KCP 6.1-07	RHYNSE	HORVW	29/04/24	FL-1	32	69	35	14	9.5	0	87.2 a	80.2 ab	46.2 d	62.6 c	76.4 abc	70 bc	65.1 c		
KCP 6.1-06	RHYNSE	HORVW	20/05/24	FL-1	32	75	42	21	7.9	0	94.1 a	88.2 ab	34.5 e	62.9 d	83.1 b	73.9 c	65.4 d		
KCP 6.1-07	RHYNSE	HORVW	29/04/24	FL-2	32	69	35	14	13.2	0	79 a	75.4 ab	40.6 d	53.9 c	71.1 ab	68.1 ab	60 bc		
KCP 6.1-06	RHYNSE	HORVW	20/05/24	FL-2	32	75	42	21	14.7	0	81.4 a	79.2 a	33.4 e	56 d	69.7 b	60.6 c	56.5 d		
KCP 6.1-06		HORVW	07/06/24	YIELD	32	89	60	39	2	100	b	123.4 a	120.1 a	115.4 a	116.8 a	118.7 a	118.7 a	117.9 a	
KCP 6.1-07		HORVW	28/06/24	YIELD	32	89	95	74	9.5	100	-	102.8 -	103 -	101 -	101.8 -	102.9 -	102.4 -	102.4 -	
KCP 6.1-06		HORVW	07/06/24	TKW	32	99	60	39	40.2	100	b	102 a	101.8 a	101.6 a	101.8 a	101.9 a	101.9 a	101.8 a	
KCP 6.1-07		HORVW	01/07/24	TKW	32	99	98	77	40.4	100	-	101 -	101 -	100.6 -	100.5 -	101.6 -	101 -	100.4 -	

Table 3.2-4: Justification to combine the active ingredients in GLOB2021dF and ratio justification on cereals (PUCCRE PESSEV control on wheat) – Mediterranean EPPO zone

KCP	Pest Code	Crop Code	Rating Date	Part Rated	Crop BBCH at 1st appl.	Crop BBCH at ass.	Days After First Appl.	Days After Last Appl.	UNTREATED			GLOB2021dF	Protendo 300 EC	GLOB2208F	Cantus	Protendo 300 EC		Protendo 300 EC		Protendo 300 EC	Protendo 300 EC			
									asses ed value	%con- trol	SNK					300 EC	Cantus	300 EC	Cantus		300 EC	Cantus	300 EC	Cantus
KCP 6.1-08	PUCCRE	TRZAW	16/05/24	FLAG	32	73	44	21	82.4	0		75.1 a	77.4 a	42.8 b	40.4 b	45.1 b	58.8 ab	75.6 a	60.9 ab					
KCP 6.1-08	PUCCRE	TRZAW	16/05/24	FL-1	32	73	44	21	77.6	0		86.6 a	87.5 a	46.8 c	45.3 c	47.7 c	67.8 ab	85.8 a	63.2 bc					
KCP 6.1-08	PUCCRE	TRZAW	16/05/24	FL-2	32	73	44	21	21.6	0		90.4 ab	94.6 a	64.7 d	51.6 e	60 d	80.4 bc	82.3 bc	75.7 c					
KCP 6.1-09	PUCCRE	TRZAW	31/05/24	FLAG	32	75	56	35	8.6	0		88.9 ab	90.2 a	86 ab	62.3 e	67.5 de	80.5 bc	74.6 cd	71.1 cd					
KCP 6.1-08		TRZAW	21/06/24	YIELD	32	89	80	57	6.2	100	-	107.7 -	106.4 -	109.9 -	112.9 -	109.1 -	109.2 -	106.8 -	112.7 -					
KCP 6.1-09		TRZAW	12/07/24	YIELD	32	89	98	77	8.5	100	-	107.1 -	107.5 -	107.5 -	104.2 -	104.8 -	107 -	105.2 -	104.7 -					
KCP 6.1-08		TRZAW	21/06/24	TKW	32	99	80	57	35.9	100	-	101.2 -	99.4 -	98.9 -	96.9 -	98.5 -	99.3 -	101.1 -	100.2 -					
KCP 6.1-09		TRZAW	15/07/24	TKW	32	99	101	80	42.3	100	-	102.9 -	102.2 -	102.6 -	101.2 -	101.7 -	100.5 -	102 -	101.4 -					
																% control								

Table 3.2-5: Justification to combine the active ingredients in GLOB2021dF and ratio justification on cereals (PUCCRE PESSEV control on wheat) – Mediterranean EPPO zone

[illegible]

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			GLOB2021dF at 0.8 L/ha (125+125 g a.s./ha)			Protendo 300 EC at 0.6 L/ha (195 g a.s./ha)			GLOB2208F at 0.6 L/ha (103+135 g a.s./ha)			Cantus at 0.25 L/ha (125 g a.s./ha)			Protendo 300 EC at 0.25 L/ha + Cantus 500 WG at 0.15 kg/ha (75+75 g a.s./ha)			Protendo 300 EC at 0.415 L/ha+ Cantus 500 WG at 0.15 kg/ha (125+75 g a.s./ha)			Protendo 300 EC at 0.415 L/ha (125 g a.s./ha)			Protendo 300 EC at 0.25 L/ha + Cantus 500 WG at 0.25 kg/ha (75+125 g a.s./ha)		
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FL-2	32-32	1	21-21	21-21	11.6	11.6-11.6	11.6	91.1	91.1-91.1	91.1	90.4	90.4-90.4	90.4	91.7	91.7-91.7	91.7	61.6	61.6-61.6	61.6	67.6	67.6-67.6	67.6	82.3	82.3-82.3	82.3	84.9	84.9-84.9	84.9	74.2	74.2-74.2	74.2
			All valid ass. (2-3w after B)	FLAG	32-32	1	42-42	21-21	7.1	7.1-7.1	7.1	89.5	89.5-89.5	89.5	93.4	93.4-93.4	93.4	87.3	87.3-87.3	87.3	68.1	68.1-68.1	68.1	68.2	68.2-68.2	68.2	79.7	79.7-79.7	79.7	79.2	79.2-79.2	79.2	71.6	71.6-71.6	71.6
			All valid ass. (2-3w after B)	FL-1	32-32	1	42-42	21-21	21.0	21-21	21.0	85.4	85.4-85.4	85.4	84.4	84.4-84.4	84.4	79.5	79.5-79.5	79.5	64.9	64.9-64.9	64.9	65.6	65.6-65.6	65.6	74.0	74-74	74.0	70.2	70.2-70.2	70.2	68.3	68.3-68.3	68.3
			All valid ass. (2-3w after B)	FL-2	32-32	1	42-42	21-21	59.5	59.5-59.5	59.5	81.8	81.8-81.8	81.8	82.8	82.8-82.8	82.8	76.7	76.7-76.7	76.7	53.6	53.6-53.6	53.6	57.7	57.7-57.7	57.7	69.7	69.7-69.7	69.7	67.5	67.5-67.5	67.5	61.5	61.5-61.5	61.5
	-	TRZAW	All valid ass. (4-6w after B)	FLAG	32-32	1	56-56	35-35	16.4	16.4-16.4	16.4	85.0	85-85	85.0	87.2	87.2-87.2	87.2	77.4	77.4-77.4	77.4	49.8	49.8-49.8	49.8	63.0	63-63	63.0	75.3	75.3-75.3	75.3	70.5	70.5-70.5	70.5	66.5	66.5-66.5	66.5
			Yield (t/ha)	All	32.0	1	98.0	77.0	8.5	-	-	107.1	-	-	107.5	-	-	107.5	-	-	104.2	-	-	104.8	-	-	107.0	-	-	105.2	-	-	104.7	-	-
			TKW (g)	All	32.0	1	101.0	80.0	42.3	-	-	102.9	-	-	102.2	-	-	102.6	-	-	101.2	-	-	101.7	-	-	100.5	-	-	102.0	-	-	101.4	-	-

Indeed, 6 trials performed across all EPPO zones testing both the co-formulation and prothioconazole or boscalid straight formulations at target rates show that GLOB2021dF with a reduced rate of each active keeps SEPTTR control level as expected (Table 3.2-6).

Table 3.2-6: Justification to combine the active ingredients in GLOB2021dF on cereals (SEPTTR PESSEV control on wheat) – All EPPO zones

KCP/ EPPO zone	Pest Code	Crop Code	Rating Date	Part Rated	Crop BBCH at 1st appl.	Crop BBCH at ass.	Days After First Appl.	Days After Last Appl.	UNTREATED assessed value	%control	SNK	GLOB2021dF 312 g/L SC 0.8 l/ha	Proline 250 G/L EC 0.8 l/ha	GLOB1811F (boscalid) 500 g/kg WG 0.4 kg/ha	GLOB1811F (boscalid) 500 g/kg WG 0.7 kg/ha
KCP 6.2-119 (MAR)	SEPTTR	TRZAW	03/06/23	FL-1	37	47	15	15	13.8	0		90.9 b	90.9 b	92.3 b	75 d
KCP 6.2-155 (NE)	SEPTTR	TRZAW	01/06/23	FL-2	39	57	14	14	5.5	0		84.6 a	81.3 a Protikon	82.2 a	86.4 a
KCP 6.2-174 (MED)	SEPTTR	TRZAW	25/04/23	FL-2	39	47	14	14	8.7	0		95.3 ab	87.2 c Praktis	94.9 ab	97.5 a
KCP 6.2-175 (MED)	SEPTTR	TRZDW	14/04/23	FL-2	39	55	15	15	5.8	0		89.1 a	74.3 c	50.7 e	57.4 de
KCP 6.2-186 (SE)	SEPTTR	TRZAW	23/05/23	FLAG	39	51	16	16	5.2	0		80.4 a	69.8 ab	44.9 d	48.5 cd
KCP 6.2-187 (SE)	SEPTTR	TRZAW	19/05/23	FL-1	39	43	14	14	5	0		91.7 ab	92.4 a	88 b	89.3 ab

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control											
												GLOB2021dF at 0.8 L/ha (prothio + boscalid 125 + 125 g a.s./ha)			Proline at 0.8 L/ha (prothio 200 g a.s./ha)			GLOB1811F at 0.4 L/ha (boscalid 200 g a.s./ha)			GLOB1811F at 0.7 L/ha (boscalid 350 g a.s./ha)		
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
ALL	SEPTTR	TRZAW	All valid ass. (2-3w after A)	upper most leave with enough pressure	37-39	6	14-16	14-16	7.3	5-13.8	5.7	88.7	80.4-95.3	90.0	82.7	69.8-92.4	84.3	75.5	44.9-94.9	85.1	75.7	48.5-97.5	80.7

Conclusion:

Based on the results obtained on both crops, the ratio of 125 prothioconazole + 125 g boscalid/ha represents the best compromise of the selected active substances.

Results of large scale trial series on both oilseed rape and cereals are thus provided in the efficacy section (KCP 6.2). Lower rates were also tested in order to confirm the minimum effective dose.

3.2.1.2 Bridging to previous formulations

As above mentioned, after successful preliminary tests with tank-mixtures, it was decided to develop an EC formulation named GLOB2021aF, containing 125 g/L of each active to be applied at 1 L/ha providing 125+125 g a.s./ha.

First season (2021) results in the field with GLOB2021aF formulation confirmed expected control levels. Concurrently with efficacy field tests, other aspects of the formulation were considered and finally, in order to have a better long term stability and classification, it was decided to modify the formulation into an SC formulation increasing the a.s. loading. These aspects were not related to efficacy and to confirm it, both formulations were included in further testing.

The final formulation proposed for authorization is named GLOB2021dF containing 156+156 g/L to be applied at 0.8 L/ha always providing 125+125 g a.s./ha.

A number of field trials were set up by the applicant to test those slightly different formulations on oilseed rape. Results from 18 trials are presented in order to support the bridging between both formulations (6 trials in Maritime, 4 trials in North-East, 4 trial in Mediterranean and 4 trials in South-East EPPO zones). In particular for Poland, all trials from maritime EPPO zone may be considered fully supportive as they were all performed in the neighbouring country Czech Republic. Site information and application details are presented in Appendix 3 of the BAD.

Applications were performed in spring. Usually more than one disease was present in each trial and 2 applications were performed, being one at crop BBCH 61-65 and the following about 14 days after. In part of the trials a previous early spring application was performed (at crop BBCH 30-32) mainly targeted at phoma. Results demonstrate control and comparability of the formulations also against phoma, although spring is not the key timing for phoma control. Mean results of the most representative assessments for each disease and climatic zone are shown in the tables below. Given the preliminary character of the studies, results are presented in this section per each climatic zone but results were analysed and taken into account for product development across the EPPO zones.

A color grade scheme was used to highlight the mean efficacy among the formulations. The darker the green, the higher the efficacy.

It can be clearly concluded that both formulations GLOB2021aF (EC) and GLOB2021dF (SC) are comparable in terms of efficacy and thus all formulations tested can be used in support of the final formulation GLOB2021dF. Thus, table headers in section 3.2.2 and 3.2.3 will report the name GLOB2021dF.

Table 3.2-11: Efficacy of different prothioconazole + boscalid formulations (GLOB2021aF and GLOB2021dF) tested on oilseed rape against LEPTMA – spring applications – across EPPO zones

KCP	Pest Code	Crop Code	Rating Date	Part Rated	Rating Type	Crop BBCH at ass.	Days After First Appl.	Days After Last Appl.	UNTREATED			GLOB2021aF 125+125 g/L EC 1 L/ha (125+125 g a.s./ha)		GLOB2021dF 156+156 g/L SC 0.8 L/ha (125+125 g a.s./ha)	
									assessed value	%control	SNK				
KCP 6.2-15	LEPTMA	BRSNW	09/05/22	LEAF	PESINC	63	26	26	55	0		56.3 ab	3 appl.	59.8 a	3 appl.
KCP 6.2-15	LEPTMA	BRSNW	23/05/22	LEAF	PESINC	69	40	14	52	0		49.7 abc	3 appl.	51.9 ab	3 appl.
KCP 6.2-32	LEPTMA	BRSNW	02/06/22	LEAF	PESINC	67	15	15	9	0		79.2 a		75 a	
KCP 6.2-29	LEPTMA	BRSNW	18/05/22	LEAF	PESINC	62	29	29	29	0		86.2 a	3 appl.	86.6 a	3 appl.
KCP 6.2-29	LEPTMA	BRSNW	02/06/22	LEAF	PESINC	66	44	14	23	0		85.8 a	3 appl.	86.7 a	3 appl.
KCP 6.2-34	LEPTMA	BRSNW	02/05/22	LEAF	PESINC	69	14	14	36	0		85 a		70 a	
KCP 6.2-42	LEPTMA	BRSNW	27/04/22	LEAF	PESINC	67	14	14	31	0		34.3 a		27.2 a	
KCP 6.2-42	LEPTMA	BRSNW	18/05/22	LEAF	PESINC	79	35	21	40	0		62 a		67.1 a	
KCP 6.2-14	LEPTMA	BRSNW	01/07/22	STEM	SEVIND	85	79	39	23.5	0		97.8 a	3 appl.	87.2 b	3 appl.
KCP 6.2-15	LEPTMA	BRSNW	11/07/22	STEM	SEVIND	85	89	49	38.8	0		50.8 a	3 appl.	52.9 a	3 appl.
KCP 6.2-29	LEPTMA	BRSNW	08/07/22	STEM	SEVIND	81	80	35	11.5	0		93.1 a	3 appl.	98.1 a	3 appl.
KCP 6.2-32	LEPTMA	BRSNW	08/07/22	STEM	SEVIND	80	51	35	12	0		97.7 a		100 a	

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control						No of trials where formulations are statistically comparable
												GLOB2021aF at 1 L/ha (125+125 g a.s./ha)			GLOB2021dF at 0.8 L/ha (125+125 g a.s./ha)			
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	
MAR	LEPTMA	BRSNW	All valid ass. (2-4w after A)	LEAF	PESINC	1	26	-	55	-	-	56.3	-	-	59.8	-	-	1
			All valid ass. (2-4w after B)	LEAF	PESINC	1	40	14	52	-	-	49.7	-	-	51.9	-	-	1
			All valid ass. (BBCH 70-85)	STEM	SEVIND	2	79-89	39-49	31.2	23.5-38.8	31.2	74.3	50.8-97.8	74.3	70.1	52.9-87.2	70.1	1
NE	LEPTMA	BRSNW	All valid ass. (2-4w after A)	LEAF	PESINC	2	15-29	-	19.0	9-29	19.0	82.7	79.2-86.2	82.7	80.8	75-86.6	80.8	2
			All valid ass. (2-4w after B)	LEAF	PESINC	1	44	14	23	-	-	85.8	-	-	86.7	-	-	1
			All valid ass. (BBCH 70-85)	STEM	SEVIND	2	51-80	35-35	11.8	11.5-12	11.8	95.4	93.1-97.7	95.4	99.1	98.1-100	99.1	2
MED	LEPTMA	BRSNW	All valid ass. (2-4w after A)	LEAF	PESINC	2	14-14	-	33.5	31-36	33.5	59.7	34.3-85	59.7	48.6	27.2-70	48.6	2
			All valid ass. (2-4w after B)	LEAF	PESINC	1	35	21	40	-	-	62.0	-	-	67.1	-	-	1

Table 3.2-12: Efficacy of different prothioconazole + boscalid formulations (GLOB2021aF and GLOB2021dF) tested on oilseed rape against SCLESC – spring applications – across EPPO zones

KCP	Pest Code	Crop Code	Rating Date	Part Rated	Rating Type	Crop BBCH at ass.	Days After First Appl.	Days After Last Appl.	UNTREATED assessed value	%control	SNK	GLOB2021aF 125+125 g/L EC 1 L/ha (125+125 g a.s./ha)	GLOB2021dF 156+156 g/L SC 0.8 L/ha (125+125 g a.s./ha)
KCP 6.2-12	SCLESC	BRSNW	07/07/22	STEM	SEVIND	83	96	44	23	0		40 ab 3 appl.	41.8 ab 3 appl.
KCP 6.2-13	SCLESC	BRSNW	30/06/22	STEM	SEVIND	85	84	49	16.3	0		69.4 b 3 appl.	91.3 a 3 appl.
KCP 6.2-14	SCLESC	BRSNW	01/07/22	STEM	SEVIND	85	79	39	17	0		100 a 3 appl.	100 a 3 appl.
KCP 6.2-15	SCLESC	BRSNW	11/07/22	STEM	SEVIND	85	89	49	13.8	0		96.5 a 3 appl.	100 a 3 appl.
KCP 6.2-22	SCLESC	BRSNW	08/07/22	STEM	SEVIND	83	59	45	26.8	0		49.8 ab	51.4 ab
KCP 6.2-23	SCLESC	BRSNW	04/07/22	STEM	SEVIND	83	67	53	38	0		69.4 d	76.7 b
KCP 6.2-29	SCLESC	BRSNW	08/07/22	STEM	SEVIND	81	80	35	17.5	0		87.9 a 3 appl.	100 a 3 appl.
KCP 6.2-30	SCLESC	BRSNW	12/07/22	STEM	SEVIND	83	90	51	56	0		66.9 b 3 appl.	52.6 c 3 appl.
KCP 6.2-32	SCLESC	BRSNW	08/07/22	STEM	SEVIND	80	51	35	17.3	0		93.7 a	91.4 a
KCP 6.2-33	SCLESC	BRSNW	04/07/22	STEM	SEVIND	85	61	47	34.3	0		72.5 ab	86.3 a
KCP 6.2-34	SCLESC	BRSNW	15/06/22	STEM	SEVIND	83	58	44	9.8	0		59.9 a	56.3 a
KCP 6.2-35	SCLESC	BRSNW	16/06/22	STEM	SEVIND	83	59	45	13.5	0		63 ab	66.3 a
KCP 6.2-38	SCLESC	BRSNW	04/06/22	STEM	SEVIND	82	74	43	6.5	0		93.3 abc 3 appl.	96.4 a 3 appl.
KCP 6.2-42	SCLESC	BRSNW	03/06/22	STEM	SEVIND	83	51	37	5.3	0		69 a	58.5 a
KCP 6.2-48	SCLESC	BRSNW	20/06/22	STEM	SEVIND	83	47	31	48.9	0		73.2 ab	47.6 c
KCP 6.2-49	SCLESC	BRSNW	13/06/22	STEM	SEVIND	83	48	34	24	0		4.1 -	11.6 -
KCP 6.2-52	SCLESC	BRSNW	23/06/22	STEM	SEVIND	81	55	41	21.5	0		85.4 a	86.4 a
KCP 6.2-53	SCLESC	BRSNW	03/06/22	STEM	SEVIND	83	38	24	24.5	0		1 b	10.2 ab

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (SEVIND)			% control						No of trials where formulations are statistically comparable
												GLOB2021aF at 1 L/ha (125+125 g a.s./ha)			GLOB2021dF at 0.8 L/ha (125+125 g a.s./ha)			
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	
MAR	SCLESC	BRSNW	All valid ass. (BBCH 70-85)	STEM	SEVIND	6	59-96	39-53	22.5	13.8-38	20.0	70.9	40-100	69.4	76.9	41.8-100	84.0	6
NE	SCLESC	BRSNW	All valid ass. (BBCH 70-85)	STEM	SEVIND	4	51-90	35-51	31.3	17.3-56	25.9	80.3	66.9-93.7	80.2	82.6	52.6-100	88.9	3
MED	SCLESC	BRSNW	All valid ass. (BBCH 70-85)	STEM	SEVIND	4	51-74	37-45	8.8	5.3-13.5	8.2	71.3	59.9-93.3	66.0	69.4	56.3-96.4	62.4	4
SE	SCLESC	BRSNW	All valid ass. (BBCH 70-85)	STEM	SEVIND	4	38-55	24-41	29.7	21.5-48.9	24.3	40.9	1-85.4	38.7	39.0	10.2-86.4	29.6	3

Table 3.2-13: Efficacy of different prothioconazole + boscalid formulations (GLOB2021aF and GLOB2021dF) tested on oilseed rape against ALTEBA – spring applications – across Eppo zones

KCP	Pest Code	Crop Code	Rating Date	Part Rated	Rating Type	Crop BBCH at ass.	Days After First Appl.	Days After Last Appl.	UNTREATED assessed value	%control	SNK	GLOB2021aF 125+125 g/L EC 1 L/ha (125+125 g a.s./ha)	GLOB2021dF 156+156 g/L SC 0.8 L/ha (125+125 g a.s./ha)
KCP 6.2-34	ALTEBA	BRSNW	02/05/22	LEAF	PESINC	69	14	14	8	0		87.5 -	75 -
KCP 6.2-35	ALTEBA	BRSNW	02/05/22	LEAF	PESINC	67	14	14	19	0		74.7 a	85.4 a
KCP 6.2-38	ALTEBA	BRSNW	08/04/22	LEAF	PESINC	61	17	17	8.5	0		82 ab 3 appl.	82 ab 3 appl.
KCP 6.2-42	ALTEBA	BRSNW	27/04/22	LEAF	PESINC	67	14	14	6	0		83.3 a	100 a
KCP 6.2-35	ALTEBA	BRSNW	16/05/22	LEAF	PESINC	73	28	14	46	0		71.7 ab	84.6 a
KCP 6.2-38	ALTEBA	BRSNW	22/04/22	LEAF	PESINC	65	31	14	17.5	0		88.7 a 3 appl.	87.1 a 3 appl.
KCP 6.2-42	ALTEBA	BRSNW	18/05/22	LEAF	PESINC	79	35	21	51	0		44.5 d	50.4 cd
KCP 6.2-29	ALTEBA	BRSNW	06/05/22	LEAF	PESINC	53	17	17	12	0		68.8 ab 3 appl.	66.7 ab 3 appl.
KCP 6.2-32	ALTEBA	BRSNW	02/06/22	LEAF	PESINC	67	15	15	17	0		52.1 a	68.8 a
KCP 6.2-29	ALTEBA	BRSNW	02/06/22	LEAF	PESINC	66	44	14	22	0		74.4 a 3 appl.	69.4 a 3 appl.
KCP 6.2-49	ALTEBA	BRSNW	10/05/22	LEAF	PESINC	67	14	14	10.5	0		62.1 a	62.1 a
KCP 6.2-53	ALTEBA	BRSNW	10/05/22	LEAF	PESINC	71	14	14	8.5	0		37.1 a	54.3 a
KCP 6.2-14	ALTEBA	BRSNW	01/07/22	POD	PESINC	85	79	39	47	0		100 a 3 appl.	100 a 3 appl.
KCP 6.2-22	ALTEBA	BRSNW	08/07/22	POD	PESINC	83	59	45	93	0		47 a	50.6 a
KCP 6.2-23	ALTEBA	BRSNW	04/07/22	POD	PESINC	83	67	53	85	0		34 a	26.1 a
KCP 6.2-33	ALTEBA	BRSNW	04/07/22	POD	PESINC	85	61	47	52	0		57.8 ab	59.1 a
KCP 6.2-35	ALTEBA	BRSNW	16/06/22	POD	PESINC	83	59	45	19.3	0		81.6 ab	87.2 a
KCP 6.2-38	ALTEBA	BRSNW	04/06/22	POD	PESINC	82	74	43	8.5	0		94.7 a 3 appl.	97.2 a 3 appl.
KCP 6.2-42	ALTEBA	BRSNW	03/06/22	POD	PESINC	83	51	37	43.3	0		6.7 c	31.4 b

Eppo zone	Target code	Crop Code	Grouping	Part rated	Type	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control						No of trials where formulations are statistically comparable
												GLOB2021aF at 1 L/ha (125+125 g a.s./ha)			GLOB2021dF at 0.8 L/ha (125+125 g a.s./ha)			
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	
MAR	ALTEBA	BRSNW	All valid ass. (BBCH 79-85)	POD	PESINC	3	59-79	39-53	75.0	47-93	85.0	60.3	34-100	47.0	58.9	26.1-100	50.6	3
NE	ALTEBA	BRSNW	All valid ass. (2-4w after A)	LEAF	PESINC	3	15-44	-	17.0	12-22	17.0	65.1	52.1-74.4	68.8	68.3	66.7-69.4	68.8	3
			All valid ass. (BBCH 79-85)	POD	PESINC	1	61	47	52	-	-	57.8	-	-	59.1	-	-	1
MED	ALTEBA	BRSNW	All valid ass. (2-4w after A)	LEAF	PESINC	4	14-17	-	10.4	6-19	8.3	81.9	74.7-87.5	82.7	85.6	75-100	83.7	4
			All valid ass. (2-4w after B)	LEAF	PESINC	3	28-35	14-21	38.2	17.5-51	46.0	68.3	44.5-88.7	71.7	74.0	50.4-87.1	84.6	3
			All valid ass. (BBCH 79-85)	POD	PESINC	3	51-74	37-45	23.7	8.5-43.3	19.3	61.0	6.7-94.7	81.6	71.9	31.4-97.2	87.2	2
SE	ALTEBA	BRSNW	All valid ass. (2-4w after A)	LEAF	PESINC	2	14-14	-	9.5	8.5-10.5	9.5	49.6	37.1-62.1	49.6	58.2	54.3-62.1	58.2	2

Conclusion to Preliminary tests

Preliminary range finding tests are not required as GLOB2021dF (SC) contains prothioconazole and boscalid, which are existing active substances. Initially the applicant had developed an EC formulation GLOB2021aF containing 125 g/L of each active substance to be applied at 1 L/ha, giving 125+125 g a.s./ha. However, during testing it decided to change to an SC formulation, GLOB2021dF, containing 156+156 g/L, to be applied at 0.8 L/ha, while achieving better long term stability and product classification. The applicant has submitted results from 18 trials confirming that both formulations are comparable in terms of efficacy. Based on the results obtained, the applicant states that the ratio of 156+156 g/L to be applied at 0.8 L/ha represents the best compromise of the selected active substances.

3.2.2 Minimum effective dose tests (KCP 6.2)

Field trials were carried out across several countries of the Central, Southern and Northern Zone to fully reflect the range of climatic and agronomic conditions. Sites and application details of these trials are presented in Appendix 3 of the BAD.

A lower dose rate was included in part of the trials conducted on cereals and oilseed rape and are presented here in section 3.2.2. Those data are presented here summarizing only those trials where the effective dose was evaluated at 100% of the target dose rate as well as 60% of the full rate. A summary of the most representative results regarding the minimum effective dose are shown here in section 3.2.2.1 and 3.2.2.2 for oilseed rape and cereals respectively.

The disease control levels used for evaluation are recorded as a percentage and are displayed in summary tables reflecting HSE Data Requirement Handbook (ver. 2.2 June 2012, chapter 8, table 8.2 *Levels of pest control expected for effectiveness claims*):

Description of effectiveness against diseases	Mean level of control
Control (good to very good)	≥ 80%-100%
Partial / moderate / useful control	≥ 60%-79%
Reduction / some control	≥ 40-59%
Not reliable control	<40%

3.2.2.1 Minimum effective dose on oilseed rape

A lower dose rate was included in the vast majority of the trials conducted on oilseed rape and are presented in detail in section 3.2.3 of the Biological Assessment Dossier. Those data are presented here summarizing the most representative results from trials where a lower dose rate was tested. Compared to the trials presented in section 3.2.3, only 3 trials in the Maritime and 1 trial in the Mediterranean zone did not include a lower rate (KCP 6.2-09, KCP 6.2-10, KCP 6.2-11 and KCP 6.2-37. A total of 50 efficacy trials were presented in support of the minimum effective dose on oilseed rape (20 trials belonging to the Maritime EPPO Zone, 11 trials belonging to the North-East EPPO Zone, 8 trials belonging to the Mediterranean EPPO zone and 10 trials belonging to the South-East EPPO Zone).

Those trials evaluated the control of root, stem, foliar and pod diseases. On oilseed rape, the test product GLOB2021dF was applied according to the GAP table at the maximum rates of 0.8L/ha (100%) and 0.48 L/ha (60% of the full rate) or equivalent amount of the previous formulation GLOB2021aF for which a bridging section was presented above).

Minimum effective dose against LEPTMA is summarized here for trials with one autumn and one spring application. In turn, control of SCLESC or ALTEBA is summarized here after spring applications.

Results where the untreated check had an incidence level below 5% or a second assessment falling within the same timing window were not considered for means calculation and those data are shaded in grey in the BAD. Extreme values (e.g. 100% of incidence) were also discarded since a trustful comparison was not possible.

Further details on methodology are presented in section 3.2.3. A summary of the dose response results is provided in the tables below.

The results show that the requested maximum dose rate of 0.8 L/ha in oilseed rape provide the best control against all diseases. Furthermore, in some trials a clear dose response relationship can be observed, with the highest dose rate having not only the highest efficacy, but also offering a broad control on the different plant parts.

Finally, it must be noted that GLOB2021dF provided good results already after one application. As infestations on oilseed rape often occur as complexes of several diseases throughout a season, up to 2 applications of GLOB2021dF at the maximum dose rate of 0.8 L/ha should therefore be used to efficiently control all the diseases claimed on the label.

Maritime EPPO Zone

Table 3.2-14: Minimum effective dose of GLOB2021dF on oilseed rape – Maritime EPPO zone

EPPO zone	Pest Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control			% control					
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha		
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	LEPTMA	All valid ass. autumn appl. (2-4w after A)	LEAF	PESINC	16-18	4	21-38	21-38	20	10-32	19	41.4	16.7-66.1	41.5	47.7	33.3-71.7	42.9
		All valid ass. autumn appl. (2-4w after B)	LEAF	PESINC	16-18	4	162-201	15-25	46.3	8-75	51	60.8	45.8-81.5	57.9	63.9	46.7-83.3	62.7
MAR	SCLESC	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	33-62	4	26-96	12-44	12.7	4.5-23	11.6	58.2	44.6-72.4	58	64.3	41.8-80.4	67.5
MAR	ALTEBA	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	61-62	2	10-14	10-14	9.2	7.3-11	9.2	57.9	27.1-88.7	57.9	52.3	6.3-98.2	52.3
		All valid ass. spring appl. (2-4w after B)	LEAF	PESINC	61-61	1	23	9	33	33	33	36.1	36.1-36.1	36.1	52.8	52.8-52.8	52.8
		All valid ass. spring appl. (BBCH 80-85)	POD	PESSEV	61	1	67	53	11.4	-	-	76.2	-	-	77.9	-	-

North-East EPPO Zone

Table 3.2-15: Minimum effective dose of GLOB2021dF on oilseed rape – North-East EPPO zone

EPPO zone	Pest Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control			% control					
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha		
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	LEPTMA	All valid ass. autumn appl. (2-4w after A)	LEAF	PESINC	14-16	2	14-28	14-28	48.5	44-53	48.5	53.3	43-63.5	53.3	66.5	52.1-80.8	66.5
		All valid ass. autumn appl. (2-4w after B)	LEAF	PESINC	14-16	3	211-236	15-23	51	24-89	40	36.2	13.8-61.2	33.6	55.3	33.1-91.4	41.4
NE	SCLESC	All valid ass. spring appl. (BBCH 70-85)	STEM	SEVIND	30-65	8	51-90	35-54	24.7	5-56	22.3	67.5	34.8-97.2	71.8	80.1	52.6-100	82.1
NE	ALTEBA	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	51-65	3	60-83	42-53	27.6	6.9-52	24	28.1	14.5-36.4	33.4	56	38.1-70.9	59.1
		All valid ass. spring appl. (BBCH 80-85)	POD	PESSEV	30-65	3	56-87	40-47	7.3	5.1-9.8	6.9	62.3	49.4-73.5	64	83.3	81-84.6	84.2

Mediterranean EPPO Zone

Table 3.2-16: Minimum effective dose of GLOB2021dF on oilseed rape - Mediterranean EPPO zone

EPPO zone	Pest Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control			% control					
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha		
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	SCLESC	All valid ass. spring appl. (BBCH 70-85)	STEM	SEVIND	32-65	8	49-74	34-52	9.5	5.3-17	9	60.4	14.6-79.1	69.9	69.8	33.7-96.4	69.1
MED	ALTEBA	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	32-65	6	51-74	37-52	28.4	8.5-55.5	27.2	59.2	10.3-86.4	72.3	75.2	31.4-97.2	87.4

In the Mediterranean zone, no trials were performed against LEPTMA with autumn application.

South-East EPPO Zone

Table 3.2-17: Minimum effective dose of GLOB2021dF on oilseed rape - South-East EPPO zone

EPPO zone	Pest Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control			% control					
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha		
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	LEPTMA	All valid ass. autumn appl. (2-4w after A)	LEAF	PESINC	14-17	2	21-24	21-24	19.7	9.3-30	19.7	76.5	68.8-84.2	76.5	88.9	85.9-91.9	88.9
		All valid ass. autumn appl. (2-4w after B)	LEAF	PESINC	14-17	2	169-188	16-28	34.8	28.5-41	34.8	66.1	43.6-88.5	66.1	82.6	73-92.1	82.6
SE	SCLESC	All valid ass. spring appl. (BBCH 70-85)	STEM	PESSEV	57-64	5	38-80	24-59	26.7	9.1-56.9	22.4	55.9	42.7-74.8	46.7	70.3	51.3-86.4	76.9
SE	ALTEBA	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	50-64	3	59-65	37-45	32.5	12.5-69	16	88.7	81.7-93.1	91.3	95.2	91.7-98.4	95.4

3.2.2.1 Minimum effective dose on cereals

A lower dose rate was included in part of the trials conducted on cereals and are presented in detail in section 3.2.3 of the Biological Assessment Dossier. Those data are presented here summarizing the most representative results from trials where a lower dose rate was tested. A total of 48 efficacy trials were presented in support of the minimum effective dose on cereals (11 trials, belonging to the Maritime EPPO Zone, 5 trials, belonging to the North-East EPPO Zone and 10 trials belonging to the Mediterranean EPPO Zone, 15 trials belonging to the South-East EPPO zone).

Those trials evaluated the control of foliar and ear diseases on cereals. The test product GLOB2021dF was applied according to the GAP table at the maximum rate of 0.8L/ha (100%) and 0.48 L/ha (60% of the full rate). Further details on methodology are presented in section 3.2.3. A summary of the dose response results is provided in the tables below.

The results show that the requested dose rate of 0.8 L/ha in cereals provide the best control against a broad range of diseases for these crops. Furthermore, for some diseases a clear dose response relationship can be observed, with the highest dose rate having not only the highest efficacy, but also offering a more stable control throughout a wide range of situations and on the different plant parts.

As cereal infestations often occur as complexes of several diseases throughout a season, up to 2 applications of GLOB2021dF at the dose rate of 0.8 L/ha should therefore be used to efficiently control all the diseases claimed on the label.

Maritime EPPO Zone

Table 3.2-18: Minimum effective dose of GLOB2021dF on cereals - Maritime EPPO zone

EPPO zone	Pest code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control			% control					
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha		
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	FUSACU	TRZAW	All valid ass. BBCH 75-83	EAR	SEVIND	61-65	4	21-29	-	2752.9	278.1-7779	1477.3	66.1	27.9-92.1	72.2	79.6	47.5-92.6	89.2
MAR	SEPTTR	TRZAW	All valid ass. (2-3w after B)	FLAG	PESSEV	33	1	49	24	5	-	-	76.3	-	-	100	-	-
				FL-1	PESSEV	32-33	3	37-49	14-24	10.8	6.3-14.9	11.3	86	79-100	79.1	90.1	79-100	91.4
				FL-2	PESSEV	32-33	3	35-49	14-24	12.6	8.1-20	9.7	75.4	50.5-89.3	86.3	83.4	66.2-100	84.1
MAR	PUCCS/PUCCST	TRZAW	All valid ass. (2-3w after B)	FLAG	PESSEV	32-33	2	37-38	14-21	4.6	3.5-5.6	4.6	100	100-100	100	100	100-100	100
				FL-1	PESSEV	32-33	2	38-49	14-24	9.7	7.5-11.8	9.7	93.3	86.5-100	93.3	100	100-100	100
				FL-2	PESSEV	32-32	1	38-38	14-14	11.3	11.3-11.3	11.3	100	100-100	100	100	100-100	100

North-East EPPO Zone

Table 3.2-19: Minimum effective dose of GLOB2021dF on cereals - North-East EPPO zone

EPPO zone	Pest code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control			% control					
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha		
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	SEPTTR	TRZAW	All valid ass. (2-3w after B)	FL-1	PESSEV	32-33	2	37-38	14-21	10.6	6.3-14.9	10.6	89.6	79.1-100	89.6	95.7	91.4-100	95.7
				FL-2	PESSEV	32-32	3	35-38	14-15	7.3	4-9.7	8.1	72.9	50.5-89.3	78.9	81.2	66.2-100	77.3
NE	PYRNTE	HORVW	All valid ass. (4-6w after B)	FLAG	PESSEV	32-33	2	50-50	27-29	11.5	10.6-12.3	11.5	45.6	33.3-57.8	45.6	54.3	39.4-69.2	54.3
				FL-1	PESSEV	32-33	3	50-53	27-32	13.4	8-20	12.2	50.0	43.3-55.9	50.8	57.1	52.2-65.8	53.3
NE	RHYNSE	HORVW	All valid ass. (2-3w after B)	FL-1	PESSEV	32	1	42	20	5.9	-	-	54.1	-	-	75.8	-	-
				FL-2	PESSEV	32-32	2	35-42	14-20	8.5	5.4-11.5	8.5	71	70.9-71.1	71	87.9	76.9-98.8	87.9
			(4-6w after B)	FLAG	PESSEV	32	1	50	27	10	-	-	58	-	-	75.8	-	-

Mediterranean EPPO Zone

Table 3.2-20: Minimum effective dose of GLOB2021dF on cereals - Mediterranean EPPO zone

EPPO zone	Pest code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control			% control					
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha		
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	SEPTTR	TRZAW/TRZDW(1)	All valid ass. (2-3w after B)	FLAG	PESSEV	32-36	5	36-42	14-21	7	5.2-9.7	6.8	84.2	75.6-100	78.8	95.3	88.9-100	95.5
				FL-1	PESSEV	32-36	5	36-42	14-21	14.1	6.1-17.9	14.9	84.1	70.6-94.3	84.9	92.3	77.7-98.3	95.8
				FL-2	PESSEV	32-36	5	36-42	14-21	26.2	9.3-32.3	30.5	81.9	60.4-90.5	89.5	87.4	58.4-97.7	92.7
MED	RHYNSE	HORVW	All valid ass. (2-3w after A)	FLAG	PESSEV	37	1	22	22	4	-	-	98.7	-	-	99.4	-	-
				FL-1	PESSEV	32-37	3	21-22	21-22	8.5	5-10.3	10.2	85.4	67.8-97.1	91.4	85	63.1-98.4	93.4
				FL-2	PESSEV	32-37	4	19-22	19-22	13.1	5.1-21.8	12.8	88.8	79-100	88.1	89.2	72.4-100	92.2
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-37	3	37-41	15-20	12.9	5.2-27.5	6.1	86.8	66.1-100	94.3	96	90.6-100	97.5
				FL-1	PESSEV	32-37	3	37-41	15-20	22.9	9.5-42.1	17.1	82.1	61.8-92.4	92.1	91.4	82.4-97.8	93.9
				FL-2	PESSEV	32-37	3	37-41	15-20	31.3	18-51.2	24.8	80	59-92.8	88.2	89.2	79.3-95.2	93

South-East EPPO Zone

Table 3.2-21: Minimum effective dose of GLOB2021dF on cereals - Mediterranean EPPO zone

EPPO zone	Target code	Crop code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	DAA-A	DAA-B	Infestation in the untreated control			% control					
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha		
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FLAG	PESSEV	31	1	21	21	7.6	7.6-7.6	7.6	70.4	-	-	68.6	-	-
			FL-1	PESSEV	31	1	21	21	21	14.3	14.3-14.3	14.3	60.8	-	-	84.9	-	-
			FL-2	PESSEV	31-32	4	19-23	19-23	19-23	16.3	4.1-36.1	12.6	77.3	42.3-100	83.5	80.9	45.7-100	88.9
			FL-3	PESSEV	31-33	3	19-23	19-23	19-23	29.6	7.4-43.8	37.5	54.3	36-77.1	49.8	65.5	38.1-97.5	60.8
			All valid ass. (2-3w after B)	FLAG	PESSEV	31-33	3	43-52	20-25	11.8	6-20.4	9	57.9	53.7-64.4	55.7	66.8	55.1-82.9	62.4
			FL-1	PESSEV	31-33	4	41-52	18-25	18-25	22.1	16.3-38	17.1	64.8	46.9-100	56.2	77.1	50.5-100	78.9
			FL-2	PESSEV	31-33	6	34-52	15-25	15-25	32.8	5.3-53.6	40.8	65.7	30.2-95.7	65	73.2	45.7-99.4	75.1
			All valid ass. (4-6w after B)	FLAG	PESSEV	31-33	2	56-57	33-38	43.5	11.9-75	43.5	83.2	82.1-84.3	83.2	90.9	88.3-93.4	90.9
SE	PYRNTE	HORVW	All valid ass. (2-3w after A)	FL-2	PESSEV	32-32	2	22-24	22-24	19.6	6.2-33	19.6	74.1	49.2-98.9	74.1	82.8	65.6-100	82.8
			All valid ass. (2-3w after B)	FL-1	PESSEV	32-32	2	40-43	16-21	10.1	5.2-15	10.1	76.4	52.8-100	76.4	84.1	68.2-100	84.1
				FL-2	PESSEV	32-32	2	40-43	16-21	30.4	9.3-51.5	30.4	68.6	44.1-93.1	68.6	73.1	48-98.1	73.1
SE	RAMUCC	HORVW	All valid ass. (2-3w after A)	FL-1	PESSEV	32	1	24	24	7.5	-	-	100	-	-	100	-	-
				FL-2	PESSEV	32	1	24	24	21.5	-	-	100	-	-	100	-	-
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-32	2	40-41	16-21	15.6	11.5-19.7	15.6	96.9	93.7-100	96.9	99.4	98.7-100	99.4
				FL-1	PESSEV	32-32	2	40-41	16-21	39.7	29.4-50	39.7	82.2	64.3-100	82.2	98	96-100	98
				FL-2	PESSEV	32-32	3	40-43	16-21	52.8	4-100	54.5	63.2	25-96.3	68.2	82	71.7-99.3	75
SE	RHYNSE	HORVW	All valid ass. (2-3w after A)	FL-1	PESSEV	32-32	2	21-21	21-21	4.6	4-5.2	4.6	100	100-100	100	100	100-100	100
				FL-2	PESSEV	32-32	4	14-22	14-22	8.7	4.2-11.8	9.4	76.4	45.7-93.4	83.3	74.8	33.1-96	85.1
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-32	2	41-43	21-22	10.9	9.9-11.8	10.9	74.6	65.8-83.4	74.6	80.6	76.5-84.6	80.6
				FL-1	PESSEV	32-32	3	41-43	21-22	15.4	12.3-11.8	16	73.1	53.3-83.4	68.4	84.8	74.1-84.6	80.3
				FL-2	PESSEV	32-32	3	42-43	21-22	15.8	5.2-22.1	20	72.1	51.6-94.4	70.3	75.4	57.6-95.6	72.9

Conclusion to Minimum effective dose

The presented data correspond with the requirements of EPPO Standard PP 1/225 (Minimum Effective Dose).

On oilseed rape, the test product GLOB2021dF was applied according to the GAP table at the maximum rates of 0.8 L/ha (100%) and 0.48 L/ha (60% of the full rate). Alternatively, an equivalent amount of the previous formulation, GLOB2021aF, was used, for which bridging trials were presented earlier. The applicant submitted relevant data on oilseed rape targeting LEPTMA, SCLESC, and ALTEBA. However, the amount of trials presented is limited. In the trials, the application of GLOB2021dF at the lower rate of 0.48 L/ha resulted in less consistent and more variable disease control compared to the 0.8 L/ha rate. Nevertheless, no visible dose-response effects were evident in some maritime zone trials.

GLOB2021dF was also applied on cereals according to the GAP table at the maximum rates of 0.8 L/ha (100%) and 0.48 L/ha (60% of the full rate). The applicant submitted relevant data from two applications on winter wheat (targeting FUSACU, SEPTTR, PUCCSI) and winter barley (targeting PYRNTE, RHYNSE, RAMUCC). According to the results, the proposed dose rate of 0.8 L/ha of GLOB2021dF provided optimal overall control and should be considered effective against foliar and ear diseases.

3.2.3 Efficacy tests (KCP 6.2)

3.2.3.1 Oilseed rape – root, stem, foliar and pod diseases

In total, 53 efficacy trials were submitted to demonstrate the efficacy of GLOB2021dF for the use on oilseed rape. These trials were carried out between 2021 and 2022 by GEP certified research institutions in Belgium, the Czech Republic, Denmark, Germany, the Netherlands, Sweden and the UK (23 trials, belonging to the Maritime EPPO Zone), in Poland, Estonia, Latvia and Lithuania (11 trials, belonging to the North-East EPPO Zone), in Croatia, Greece, Italy (9 trials belonging to the Mediterranean EPPO Zone), as well as in Bulgaria, Croatia, Hungary and Romania (10 trials belonging to the South-East EPPO Zone).

Data are gathered per EPPO Zone. In the detailed tables presented in the Biological Assessment Dossier, trials performed in the Maritime EPPO Zone have their trial number highlighted in blue, but the ones which are also valid for Poland (Czech and German trials) are dark blue. Trials performed in the North-East EPPO Zone have their trial numbers marked in yellow, in Mediterranean zone marked in green and in the South-East EPPO zone are marked in amber as shown below. A concise summary is presented in the dRR.

Maritime EPPO Zone

Czech and German trials (Maritime EPPO Zone), valid for Poland

North-East EPPO Zone

Mediterranean EPPO Zone

South-East EPPO Zone

Information on trial methodology is presented in the tables below. Trial site information and application details are presented in Appendix 3 of the BAD for each EPPO zone.

Against black leg/phoma stem canker (LEPTMA) it is recommended to perform maximum one application in autumn in early stages of winter oilseed rape and a second application in spring before flowering. Against other diseases, up to 2 applications are recommended in spring around flowering (BBCH 60-69).

LEPTMA was assessed in the trials with one autumn + one spring application but also in trials aimed at evaluating SCLESC or ALTEBA, and thus following only spring applications. The use against LEPTMA according to the GAP tables is thus supported in the final summary by either trials with one autumn and one spring application or by the assessments performed after the 1st application in spring trials. This is a worst case as the maximum recommended are 2 applications being one in spring. It is correct to assume that control after only one spring application will be at least as good as after one autumn plus one spring application. In detailed tables, results after the 2nd spring application are also presented for information only.

According to the EPPO reference standard PP 1/78(3) Root, stem, foliar and pod diseases of rape, the assessments performed 2 to 4 weeks after each application on leaves, around BBCH 70-85 for assessments on stems and around BBCH 80-85 on pods were summarized. Where available, results regarding both disease incidence and severity were summarized. In addition, results regarding the severity index on stems and roots were also summarized below .

The disease control levels used for evaluation are recorded as a percentage and are displayed in summary tables reflecting HSE Data Requirement Handbook (ver. 2.2 June 2012, chapter 8, table 8.2 *Levels of pest control expected for effectiveness claims*):

Description of effectiveness against diseases	Mean level of control
Control (good to very good)	≥ 80%-100%
Partial / moderate / useful control	≥ 60%-79%
Reduction / some control	≥ 40-59%
Not reliable control	<40%

Table 3.2-22: Details on trial methodology – Maritime EPPO zone

Guidelines	General guidelines	PP 1/135(4), EPPO PP 1/152 (4), PP 1/181(4)
	Specific guidelines	PP 1/78(3)
Experimental design	Plot design	RCBD (25)
	Plot size	18.5-39 m ²
	Number of replications	4 (25)
Crop	Trials per crop	Winter oilseed rape (25, of which 2 only for mixture justification 3.2.1)
	Varieties per crop	Sherpa; Temptation; DK Exclaim; Kuga; SY Harnas; Zakari CS; SY Matteo; Avatar; Aspire; Butterfly; Crome; Hambre; Campus; Onca; DK Exception; Rescator; Zakari CS; Arabela; DK Exsteel; Architect; LG Austin; Umberto; SY Alibaba
	Crop stage (BBCH) at application	Trials with autumn appl (6) - A:15-18; B:32-39 Trials with 2 spring appl (12) - A:50-65; B:64-69 Trials with 3 spring appl - A:32-36; B:60-63; C:65-69
Application	Number of applications	2 (18 trials); 3 (7 trials)
	Intervals between applications	According to protocol. 1 autumn + 1 spring appl: 137-221 days 2 late spring appl: 14-44 days 1 early+ 2 late spring appl: 17-51 days A to B and 13-20 days B to C
	Spray volumes	150-300 L/ha
Assessment	Assessment types	PESSEV% (summarized) PESINC% (summarized) Severity index (summarized) YIELD (sumamrized)
	Assessment dates	2-4 weeks after each appl. BBCH 81-85 - stems and pods Harvest
Other relevant information	Soil types	loam; fine clay loam; sandy loam; clay loam; silty clay loam; loamy sand; fine sand; loam; sandy clay; sandy clay loam; clay
	Natural / artificial inoculation...	2 trials artificial inoculation
	Field / Greenhouse...	Field
	GEP	All trials were performed according to GEP

Table 3.2-23: Details on trial methodology – North-East EPPO zone

Guidelines	General guidelines	PP 1/135(4), EPPO PP 1/152 (4), PP 1/181(4)
	Specific guide-lines	PP 1/78(3)
Experimental design	Plot design	RCBD (14)
	Plot size	20-30 m ²
	Number of replications	4 (14)
Crop	Trials per crop	Winter oilseed rape (14, of which 3 only for mixture justification 3.2.1)
	Varieties per crop	Monolit; Kuga; Alibaba; Sundance; Mercedes; Fencers; Orion; Architekt; Epure; Kadore; Harry; INV 1130; Aspect; Visby
Application	Crop stage (BBCH) at application	Trials with autumn appl (3) - A:14-16; B:30-39 Trials with spring appl (9) - A:31-65; B:65-69 Trials with 3 spring appl (2) - A:30-31; B:61-62; C:66-67
	Number of applications	2 (12 trials); 3 (2 trials)
	Intervals between applications	According to protocol. 1 autumn + 1 spring appl: 137-221 days 2 late spring appl: 14-44 days 1 early+ 2 late spring appl: 17-51 days A to B and 13-20 days B to C
	Spray volumes	200-300 L/ha
Assessment	Assessment types	PESSEV% (summarized) PESINC% (summarized) Severity index (summarized) YIELD (sumamrized)
	Assessment dates	2-4 weeks after each appl. BBCH 81-85 - stems and pods Harvest
Other relevant information	Soil types	sandy loam; calcareous sandy loam; loam; clayey sand; loamy sand; sandy loam
	Natural / artificial inoculation...	3 trials artificial inoculation
	Field / Green-house...	Field
	GEP	All trials were performed according to GEP

Table 3.2-24: Details on trial methodology – Mediterranean EPPO zone

Guidelines	General guidelines	PP 1/135(4), EPPO PP 1/152 (4), PP 1/181(4)
	Specific guidelines	PP 1/78(3)
Experimental design	Plot design	RCBD (9)
	Plot size	20-30 m ²
	Number of replications	4 (9)
Crop	Trials per crop	Winter oilseed rape (9)
	Varieties per crop	Miranda; Gordon KWS; Diffusion; PX128; PT271; SY Cassidy; PT271; Alvaro
Application	Crop stage (BBCH) at application	Trials with spring appl (8) - A:51-65; B:65-72 Trials with 3 spring appl (1) - A: 32; B: 61; C: 65
	Number of applications	2 (8 trials); 3 (1 trials)
	Intervals between applications	According to protocol. 1 autumn + 1 spring appl: 137-221 days 2 late spring appl: 14-44 days 1 early+ 2 late spring appl: 17-51 days A to B and 13-20 days B to C
	Spray volumes	300 L/ha

Assessment	Assessment types	PESSEV% (summarized) PESINC% (summarized) Severity index (summarized) YIELD (sumamrized)
	Assessment dates	2-4 weeks after each appl. BBCH 81-85 - stems and pods Harvest
Other relevant information	Soil types	loam; silty sand; silty clay loam; silt loam; clay; clay loam
	Natural / artificial inoculation...	2 trials artificial inoculation
	Field / Greenhouse...	Field
	GEP	All trials were performed according to GEP

Table 3.2-25: Details on trial methodology – South-East EPPO zone

Guidelines	General guidelines	PP 1/135(4), EPPO PP 1/152 (4), PP 1/181(4)
	Specific guidelines	PP 1/78(3)
Experimental design	Plot design	RCBD (10)
	Plot size	20-30 m ²
	Number of replications	4 (10)
Crop	Trials per crop	Winter oilseed rape (10)
	Varieties per crop	PT275; Sherpa; Umberto; Glorieta; PT271; Dariot; Hillico
Application	Crop stage (BBCH) at application	Trials with autumn appl (2) - A:14-17; B:33-35 Trials with spring appl (8) - A:50-64; B:65-71
	Number of applications	2 (10 trials)
	Intervals between applications	According to protocol. 1 autumn + 1 spring appl: 137-221 days 2 late spring appl: 14-44 days
	Spray volumes	150-300 L/ha
Assessment	Assessment types	PESSEV% (summarized) PESINC% (summarized) Severity index (summarized) YIELD (sumamrized)
	Assessment dates	2-4 weeks after each appl. BBCH 67-85 - stems and pods Harvest
Other relevant information	Soil types	sandy clay loam; sandy loam; clay loam
	Natural / artificial inoculation...	3 trials artificial inoculation
	Field / Greenhouse...	Field
	GEP	All trials were performed according to GEP

An overview on the reference standards used in the trials is presented in the table below.

Table 3.2-26: Presentation of reference standards used in oilseed rape trials (efficacy trials)

Reference standard	Countries where the product is registered	Authorization number	Active substance(s)	Formulation		Registered application rate	Application rate in trials (per treatment)	Remarks/ Number of applic. per crop/season
				Type	Concentr. of a.s.			
Pictor Pro	FR	2050075	Boscalid	WG	500 g/kg	0.5 kg/ha	0.5 kg/ha	preliminary trial
Protendo 300 EC	CZ	5683-0	Prothioconazole	EC	300 g/L	0.6 L/ha	0.6 L/ha	
	DK	-	Prothioconazole	EC	300 g/L	-	0.6 L/ha	-
	NL	16355 N	Prothioconazole	EC	300 g/L	Max. 0.6 L/ha	0.6 L/ha	
	BE	11111P/B	Prothioconazole	EC	300 g/L	-	0.6 L/ha	
	SE	5615	Prothioconazole	EC	300 g/L	Max. 0.6 L/ha	0.6 L/ha	
	IT	17987	Prothioconazole	EC	300 g/L	0.6 L/ha	0.6 L/ha	
	EL	-	Prothioconazole	EC	300 g/L	0.3-0.6 L/ha	0.6 L/ha	UP/I-320-20/20-03/38 in Croatia
	PL	R-224/2019	Prothioconazole	EC	300 g/L	0.3-0.6 L/ha	0.6 L/ha	
	LV	714	Prothioconazole	EC	300 g/L	Max. 0.6 L/ha	0.6 L/ha	
	UK	2462	Prothioconazole	EC	300 g/L	Max. 0.6 L/ha	0.6 L/ha	
	HR	UP/I-320-20/20-03/38	Prothioconazole	EC	300 g/L	0.3-0.6 L/ha	0.6 L/ha	
	BG	-	Prothioconazole	EC	300 g/L	-	0.6 L/ha	
	HU	6300/731-1/2021	Prothioconazole	EC	300 g/L	0.3-0.6 L/ha	0.6 L/ha	
	RO	643PC/24.11.2020	Prothioconazole	EC	300 g/L	0.3-0.6 L/ha	0.5-0.6 L/ha	Max. 2
	FR	2190395 (Protendo 250 EC)	Prothioconazole	EC	300 g/L (250 g/L)	0.6 L/ha (0.7 L/ha)	0.6 L/ha	In preliminary trial at similar authorized rate
Difcor 250 EC	CZ	4747-0	Difenoconazole	EC	250 g/L	0.25 L/ha in autumn; 0.5 L/ha in spring	0.25-0.5 L/ha	LEPTMA in autumn
	DK	613-9	Difenoconazole	EC	250 g/L	-	0.5 L/ha	LEPTMA in autumn Authorized on pome fruits.
	LV	0580	Difenoconazole	EC	250 g/L	0.5 L/ha	0.5 L/ha	LEPTMA in autumn
	EE	580	Difenoconazole	EC	250 g/L	0.5 L/ha	0.5 L/ha	LEPTMA in autumn
Score	DE	024353-00	Difenoconazole	EC	250 g/L	0.5 L/ha	0.5 L/ha	LEPTMA in autumn
Tilmor	EE	374 02.03.2010	Tebuconazole + prothioconazole	EC	160 g/L + 80 g/L	0.8-1 L/ha	1 L/ha	LEPTMA in autumn
	LV	0383F/10	Tebuconazole + prothioconazole	EC	160 g/L + 80 g/L	0.8-1.2 L/ha	0.8 L/ha	LEPTMA in autumn
Folicur Expert	DK	18-665	Tebuconazole + prothioconazole	EC	160 g/L + 80 g/L	0.41-1.2 L/ha	0.8 L/ha	LEPTMA in autumn

In the following summary tables, the name Cantus is used in headers as a collective name for related products in a WG formulation containing boscalid which are registered in several countries. Also results from other local reference products as e.g. Propulse and Caramba are reported in detailed tables in the BAD for information only, but not summarized in the dRR as present in a few trials. These are not the uniform reference and are thus not included in the table above.

Maritime EPPO Zone

A total of 23 trials were carried out in the Maritime EPPO Zone to evaluate the efficacy of GLOB2021dF for the control of root, stem, foliar and pod diseases on oilseed rape. Those trials have been conducted between 2021 and 2022 in Belgium, the Czech Republic, Denmark, Germany, the Netherlands, Sweden and the UK. During the trials, the following diseases were assessed: black leg/ phoma stem canker (LEPTMA), root rot (SCLESC) and black spot of rape (ALTEBA).

Trials with initial application in autumn:

A difenoconazole based product (Difcor 250 EC or Score applied at local rates of 0.25-0.5 L/ha) was included in all trials as a uniform reference.

Trials with initial application in spring: Protendo 300 EC (prothioconazole 300 g/L) applied at 0.6 L/ha was included in all trials as a uniform reference. In part of the trials also a boscalid based product or other local reference products were also present and applied according to local authorizations. Those data are available in detailed tables in the BAD but are not summarized for the dRR.

For each rating type, data were summarized at the end of each table by an orthogonal comparison of the control achieved by the maximum proposed rate of GLOB2021dF to the reference product at each relevant assessment timing.

Results where the untreated check had a severity percentage below 5% or a second assessment falling within the same assessment timing window were not considered for means calculation and those data are shaded in grey in the BAD. Figures presented in italics for Untreated check in calculated control rows stand for the pressure.

Exceptionally, assessments where severity levels were between 4 and 5% were also considered when incidence levels were considerably higher. Extreme values (e.g. 100% of incidence) were also discarded since a trustful comparison was not possible. The number of trials where product is statistically superior (>), inferior (<) or equivalent (=) compared to standard are provided for each grouping.

Results

LEPTMA – *Plenodomus lingam*

Infection by black leg (phoma stem canker) was verified at acceptable levels in a total of 12 trials (6 with first autumn application and 6 with first spring application).

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was moderate and statistically equivalent to the efficacy of reference products (either Difcor 250 EC/Score in autumn trials or Protendo 300 EC applied at 0.6 L/ha in spring trials).

No incidence on pods was verified during the trials.

Autumn application trials

Table 3.2-27: Efficacy of GLOB2021dF against LEPTMA (PESINC on leaves) on oilseed rape – autumn + spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Difcor 250 EC/Score at 0.25-0.5 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MAR	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after A)	LEAF	PESINC	16-18	4	21-38	21-38	20.0	10-32	19.0	41.4	16.7-66.1	41.5	47.7	33.3-71.7	42.9	49.5	30.2-62.6	52.6	0	4	0
MAR	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after B)	LEAF	PESINC	16-18	4	162-201	15-25	46.3	8-75	51.0	60.8	45.8-81.5	57.9	63.9	46.7-83.3	62.7	60.8	46.7-90.9	52.7	0	3	1

Number of trials summarized: 6, 5 valid

Table 3.2-28 Efficacy of GLOB2021dF against LEPTMA (PESSEV on leaves) on oilseed rape - autumn + spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Difcor 250 EC/Score at 0.25-0.5 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MAR	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after A)	LEAF	PESSEV	17-18	2	21-25	21-25	6.8	4-9.6	6.8	39.7	32.7-46.7	39.7	60.5	42.7-78.3	60.5	53.9	31.1-76.7	53.9	0	2	0
MAR	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after B)	LEAF	PESSEV	17-18	2	173-201	15-18	6.5	4-9	6.5	81.4	68.3-94.4	81.4	74.1	60-88.1	74.1	85.1	73.3-96.9	85.1	0	2	0

Number of trials summarized: 3

Table 3.2-29 Efficacy of GLOB2021dF against LEPTMA (SEVERITY INDEX on root and stems) on oilseed rape - autumn + spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (SEVIND)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Difcor 250 EC/Score at 0.25-0.5 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MAR	LEPTMA	BRSNW	All valid ass. autumn appl. (BBCH 81-85)	ROOT	SEVIND	16-18	4	238-273	77-101	35.3	17.5-51.5	36.2	45.2	31-59.6	45.2	55.3	36.3-70.2	57.3	44.7	38.8-58.3	40.8	0	3	1
MAR	LEPTMA	BRSNW	All valid ass. autumn appl. (BBCH 81-85)	STEM	SEVIND	15	1	256	66	22.8	-	-	89.8	-	-	100.0	-	-	100.0	-	-	0	1	0

Number of trials summarized: 4 on roots, 1 on stem

Efficacy of GLOB2021dF against LEPTMA on oilseed rape - autumn + spring application

The presented data correspond with the requirements of the EPPO Standards PP 1/135(4) Phytotoxicity assessment, EPPO PP 1/152 (4) Design and analysis of efficacy evaluation trials, PP 1/181(4) Conduct and reporting of efficacy evaluation trials, including good experimental practice, PP 1/78(4) Root, stem, foliar and pod diseases of oilseed rape.

The number of valid trials conducted in the maritime EPPO zone was understated according to EPPO Standard PP 1/226 (Number of efficacy trials) to support the use against LEPTMA on oilseed rape (autumn + spring application). The applicant showed efficacy on leaves, with results of 63.9% from four valid trials (PESINC on leaves) and 74.1% from two valid trials (PESSEV on leaves). The dose rate of 0.8 L/ha for maritime zone showed comparable performance to the standards in most trials. The inconsistent results obtained of GLOB2021dF, along with the insufficient number of trials conducted, does not adequately support its registration for use against *Plenodomus lingam*.

Spring application trials

Table 3.2-30 Efficacy of GLOB2021dF against LEPTMA (PESINC on leaves) on oilseed rape – spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control															No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	32-53	2	21-26	-	68.2	55-81.3	68.2	39.8 (n=1)	-	-	66.8	59.8-73.8	66.8	44.4	39.6-49.2	44.4	-	-	-	-	-	-	0	0	2
MAR	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESINC	32-53	2	39-40	14-16	72.9	52-93.8	72.9	34.3 (n=1)	-	-	54.3	51.9-56.7	54.3	44.9	43.9-45.8	44.9	-	-	-	-	-	-	0	2	0

Number of trials summarized: 4, 2 valid

Table 3.2-31 Efficacy of GLOB2021dF against LEPTMA (PESSEV on leaves) on oilseed rape – spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESSEV	53-55	2	21-21	-	10.4	8.5-12.3	10.4	-	-	-	52.1	31.7-72.5	52.1	47.6	39.6-55.6	47.6	-	-	-	-	-	-	0	2	0
MAR	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESSEV	52-55	3	39-56	16-25	13.4	10.5-18	11.8	16.1 (n=1)	-	-	56.5	21.9-74.6	72.9	50.3	5-73.8	72.1	-	-	-	-	-	-	0	3	0

Number of trials summarized: 7 trials (3 valid)

Table 3.2-32 Efficacy of GLOB2021dF against LEPTMA (PESINC on stems) on oilseed rape – spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control															No of trials where product is >, < = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	LEPTMA	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	32-57	4	79-107	39-76	70.3	15-94	86.0	54.8 (n=2)	28.9-80.7	54.8	51.4	13-87.2	52.6	52.2	5.7-94.5	54.3	-	-	-	-	-	-	1	2	1

Number of trials summarized: 7 (4 valid)

Efficacy of GLOB2021dF against LEPTMA (on oilseed rape – spring application)

The presented data correspond with the requirements of the EPPO Standards PP 1/135(4) Phytotoxicity assessment, EPPO PP 1/152 (4) Design and analysis of efficacy evaluation trials, PP 1/181(4) Conduct and reporting of efficacy evaluation trials, including good experimental practice, PP 1/78(4) Root, stem, foliar and pod diseases of oilseed rape.

The number of valid trials conducted in the maritime EPPO zone was understated according to EPPO Standard PP 1/226 (Number of efficacy trials) to support the use against LEPTMA on oilseed rape (spring application). The relatively low efficacy achieved, not exceeding 60%, along with the limited number of trials conducted, does not provide adequate justification for registering GLOB2021dF for use against *Plenodomus lingam* in spring application.

SCLESC - *Sclerotinia sclerotiorum*

Infection by root rot *Sclerotinia sclerotiorum* was verified at acceptable levels in a total of 15 trials.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha applied at flowering reached moderate to good levels of control, well controlling the severity of the disease especially on stems and always equivalent to the efficacy of the prothioconazole based standard.

Table 3.2-33 Efficacy of GLOB2021dF against SCLESC (PESINC on leaves) on oilseed rape – spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
MAR	SCLESC	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	36-62	3	14-20	14-20	7.2	4.3-9.3	8.0	67.5	55-83.8	63.8	67.8	56.7-84.1	62.5	72.3	50-86.4	80.4	-	-	-	63.2	51.7-85.3	52.5	0	3	0
MAR	SCLESC	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESINC	36-50	3	64-72	13-28	29.6	20-35	33.8	39.1	28.6-55.4	33.3	56.8	28.6-72.6	69.2	56.6	28.6-75.9	65.4	-	-	-	50.9	28.6-63.2	60.8	0	3	0

Number of trials summarized: 5 trials (4 valid)

Table 3.2-34 Efficacy of GLOB2021dF against SCLESC (PESSEV on leaves) on oilseed rape – spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	SCLESC	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESSEV	36-62	3	14-20	14-20	5.9	4.3-7	6.3	56.3	55-58.7	55.2	71.3	69.8-72.5	71.6	72.6	55-82.3	80.6	-	-	-	69.4	67.5-70.6	70.2	0	3	0
MAR	SCLESC	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESSEV	36-50	3	64-72	13-28	22.5	15-27.5	25.0	40.4	35-48.8	37.5	56.9	43.3-73.5	53.8	52.0	20-74.6	61.4	-	-	-	48.6	26.7-66.1	52.9	0	2	1

Number of trials summarized: 5 trials (4 valid)

Table 3.2-35 Efficacy of GLOB2021dF against SCLESC (PESINC on stems) on oilseed rape – spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
MAR	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	32-65	14	26-97	12-65	52.5	9-98	55.0	54.0 (n=12)	20.5-100	52.3	66.4	15.9-100	70.8	66.1	15.9-100	70.0	-	-	-	-	-	-	0	12	2

Number of trials summarized: 15 trial (14 valid)

Table 3.2-36 Efficacy of GLOB2021dF against SCLESC (PESSEV on stems) on oilseed rape – spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESSEV	32-65	12	26-96	12-65	21.8	4.8-42.3	16.6	70.2 (n=10)	53.7-94.4	65.2	83.3	66.6-100	78.8	82.0	53.9-100	80.8	-	-	-	-	-	-	0	11	1

Number of trials summarized: 15 trial (12 valid)

Table 3.2-37 Efficacy of GLOB2021dF against SCLESC (SEVERITY INDEX on stems) on oilseed rape – spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	SEVIND	32-65	13	26-97	12-65	19.4	4-38	17.0	54.4 (n=11)	22.5-92.5	49.7	67.5	15.9-100	74.2	66.6	15.9-100	65.4	-	-	-	-	-	-	0	12	1

Number of trials summarized: 15 trial (13 valid)

Table 3.2-38 Efficacy of GLOB2021dF against SCLESC (PESINC on pods) on oilseed rape – spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	33-62	4	26-96	12-44	12.7	4.5-23	11.6	58.2	44.6-72.4	58.0	64.3	41.8-80.4	67.5	63.6	27.8-84.6	70.9	-	-	-	-	-	-	0	4	0

Number of trials summarized: 8 trials (4 valid)

Efficacy of GLOB2021dF against SCLESC on oilseed rape – spring application.

The presented data correspond with the requirements of the EPPO Standards PP 1/135(4) Phytotoxicity assessment, EPPO PP 1/152 (4) Design and analysis of efficacy evaluation trials, PP 1/181(4) Conduct and reporting of efficacy evaluation trials, including good experimental practice, PP 1/78(4) Root, stem, foliar and pod diseases of oilseed rape.

Data were sufficiently available only on stem assessments, with infestation levels above 5% considered acceptable for validating the trials. The findings demonstrated that a 0.8 L/ha application of GLOB2021dF consistently provided moderate control, with mean efficacies of 66.4% (n=14) in the PESINC assessment and 83.3% (n=12) in the PESSEV assessment. As a result, GLOB2021dF should be considered as effective against *Sclerotinia sclerotiorum* on winter oilseed rape. Control efficacy was comparable to that of the standard product, with mean efficacy of 66.1% and 82%.

ALTEBA - *Alternaria brassicae*

Infection by black spot of rape *Alternaria brassicae* was verified at acceptable levels in a total of 8 trials. Among the 8 trials, the disease affected different plant parts (leaves, stems or pods).

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was useful in controlling disease incidence, particularly on pods. Significant severity levels were observed in only one trail with good control. In all cases, GLOB2021dF showed to be comparable or even superior to the efficacy of the prothioconazole based standard.

Table 3.2-39 Efficacy of GLOB2021dF against ALTEBA (PESINC on leaves) on oilseed rape – spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control															No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	ALTEBA	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	61-62	2	10-14	10-14	9.2	7.3-11	9.2	57.9	27.1-88.7	57.9	52.3	6.3-98.2	52.3	52.6	33.3-71.8	52.6	-	-	-	45.9	18.8-72.9	45.9	0	2	0
MAR	ALTEBA	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESINC	61-61	1	23-23	9-9	33.0	33-33	33.0	36.1	36.1-36.1	36.1	52.8	52.8-52.8	52.8	48.6	48.6-48.6	48.6	-	-	-	55.6	55.6-55.6	55.6	0	1	0

Number of trials summarized: 5 trials (2 valid)

Not significant severity levels were observed on leaves.

Table 3.2-40 Efficacy of GLOB2021dF against ALTEBA (PESINC on stems) on oilseed rape – spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control															No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	ALTEBA	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	32-52	2	95-97	61-72	57.2	51.3-63	57.2	55.6	33.5-77.7	55.6	47.3	15.7-78.9	47.3	53.6	23.2-84	53.6	-	-	-	-	-	-	0	2	0

Number of trials summarized: 4 trials (2 valid)

Table 3.2-41 Efficacy of GLOB2021dF against ALTEBA (PESINC on pods) on oilseed rape – spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control															No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	ALTEBA	BRSNW	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	32-65	5	59-107	39-76	56.4	5.8-93	51.3	59.0 (n=4)	30.8-100	52.5	66.6	26.1-100	73.7	66.0	31.9-100	72.6	-	-	-	-	-	-	0	5	0

Number of trials summarized: 6 trials (5 valid)

Table 3.2-42 Efficacy of GLOB2021dF against ALTEBA (PESSEV on pods) on oilseed rape – spring application – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <= compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
MAR	ALTEBA	BRSNW	All valid ass. spring appl. (BBCH 80-85)	POD	PESSEV	61	1	67	53	11.4	-	-	76.2	-	-	77.9	-	-	74.7	-	-	81.3	81.3-81.3	81.3	-	-	-	0	0	1

Number of trials summarized: 1 trial

Efficacy of GLOB2021dF against ALTEBA (on oilseed rape – spring application)

The presented data correspond with the requirements of the EPPO Standards PP 1/135(4) Phytotoxicity assessment, EPPO PP 1/152 (4) Design and analysis of efficacy evaluation trials, PP 1/181(4) Conduct and reporting of efficacy evaluation trials, including good experimental practice, PP 1/78(4) Root, stem, foliar and pod diseases of oilseed rape.

Given the limited number of assessments and the high variability in results, the available data are insufficient to confirm efficacy for this specific use conclusively. Some control of *Alternaria brassicae* was observed during incidence assessments: 52.8% efficacy on leaves (n=1), 47.3% on stems (n=2, range 15.7%–78.9%), and 66.6% on pods (n=5, range 26.1%–100%). The performance of the tested product was comparable to that of reference products.

PL, as the zRMS, does not accept the submitted data. The concerned Member States are kindly asked to decide themselves whether to accept the efficacy of the applied product against *Alternaria brassicae*.

Summary (Maritime EPPO zone)

The table below shows the overall mean efficacy results of GLOB2021dF applied at the target rate of 0.8 L/ha per disease, assessment timing and plant part assessed. The number of trials on which each result is based is also shown. Finally, the results obtained across all timings, rating types and plant parts are combined in a weighted mean in order to show the overall susceptibility level of each disease. Results in key plant parts as e.g. stems for Sclerotinia or pods for Alternaria are also highlighted.

Table 3.2-43 Overall efficacy and susceptibility level to GLOB2021dF at the target rate of 0.8 L/ha on oilseed rape - Maritime EPPO zone

EPPO zone	Target code	Grouping	Part rated	Type	Nb. trials	Infestation in the untreated control			% control									No of trials where product is >, <, = compared to standard [statistical]			All timings, rating types and parts	Nb. of assess. (nb.trials)	Control provided
									GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha (Difcor 250 EC/Score in autumn trials)								
						Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
MAR	LEPTMA*	All valid ass. autumn appl. (2-4w after A)	LEAF	PESINC	4	20	10-32	19	41.4	16.7-66.1	41.5	47.7	33.3-71.7	42.9	49.5	30.2-62.6	52.6	0	4	0	61	21 (12: 6 autumn, 6 spring)	Moderate control
		All valid ass. autumn appl. (2-4w after B)	LEAF	PESINC	4	46.3	8-75	51	60.8	45.8-81.5	57.9	63.9	46.7-83.3	62.7	60.8	46.7-90.9	52.7	0	3	1			
		All valid ass. autumn appl. (2-4w after A)	LEAF	PESSEV	2	6.8	4-9.6	6.8	39.7	32.7-46.7	39.7	60.5	42.7-78.3	60.5	53.9	31.1-76.7	53.9	0	2	0			
		All valid ass. autumn appl. (2-4w after B)	LEAF	PESSEV	2	6.5	4-9	6.5	81.4	68.3-94.4	81.4	74.1	60-88.1	74.1	85.1	73.3-96.9	85.1	0	2	0			
		All valid ass. autumn appl. (BBCH 81-85)	ROOT	SEVIND	4	35.3	17.5-51.5	36.2	45.2	31-59.6	45.2	55.3	36.3-70.2	57.3	44.7	38.8-58.3	40.8	0	3	1			
		All valid ass. autumn appl. (BBCH 81-85)	STEM	SEVIND	1	22.8	-	-	89.8	-	-	100	-	-	100	-	-	0	1	0			
		All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	2	68.2	55-81.3	68.2	39.8 (n=1)	-	-	66.8	59.8-73.8	66.8	44.4	39.6-49.2	44.4	0	0	2			
		All valid ass. spring appl. (2-4w after A)	LEAF	PESSEV	2	10.4	8.5-12.3	10.4	-	-	-	52.1	31.7-72.5	52.1	47.6	39.6-55.6	47.6	0	2	0			
	SCLESC	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	3	7.2	4.3-9.3	8	67.5	55-83.8	63.8	67.8	56.7-84.1	62.5	72.3	50-86.4	80.4	0	3	0	69% (>80% on stems)	55 (15)	Moderate to good control

EPPO zone	Target code	Grouping	Part rated	Type	Nb. trials	Infestation in the untreated control			% control									No of trials where product is >, <, = compared to standard [statistical]			All timings, rating types and parts	Nb. of assess. (nb.trials)	Control provided
									GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha (Difcor 250 EC/Score in autumn trials)								
						Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
		All valid ass. spring appl. (2-4w after B)	LEAF	PESINC	3	29.6	20-35	33.8	39.1	28.6-55.4	33.3	56.8	28.6-72.6	69.2	56.6	28.6-75.9	65.4	0	3	0			
		All valid ass. spring appl. (2-4w after A)	LEAF	PESSEV	3	5.9	4.3-7	6.3	56.3	55-58.7	55.2	71.3	69.8-72.5	71.6	72.6	55-82.3	80.6	0	3	0			
		All valid ass. spring appl. (2-4w after B)	LEAF	PESSEV	3	22.5	15-27.5	25	40.4	35-48.8	37.5	56.9	43.3-73.5	53.8	52	20-74.6	61.4	0	2	1			
		All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	14	52.5	9-98	55	54.0 (n=12)	20.5-100	52.3	66.4	15.9-100	70.8	66.1	15.9-100	70	0	12	2			
		All valid ass. spring appl. (BBCH 70-85)	STEM	PESSEV	12	21.8	4.8-42.3	16.6	70.2 (n=10)	53.7-94.4	65.2	83.3	66.6-100	78.8	82	53.9-100	80.8	0	11	1			
		All valid ass. spring appl. (BBCH 70-85)	STEM	SEVIND	13	19.4	4-38	17	54.4 (n=11)	22.5-92.5	49.7	67.5	15.9-100	74.2	66.6	15.9-100	65.4	0	12	1			
		All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	4	12.7	4.5-23	11.6	58.2	44.6-72.4	58	64.3	41.8-80.4	67.5	63.6	27.8-84.6	70.9	0	4	0			
		ALTEBA	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	2	9.2	7.3-11	9.2	57.9	27.1-88.7	57.9	52.3	6.3-98.2	52.3	52.6	33.3-71.8	52.6	0	2			
	All valid ass. spring appl. (2-4w after B)		LEAF	PESINC	1	33	33	33	36.1	36.1-36.1	36.1	52.8	52.8-52.8	52.8	48.6	48.6-48.6	48.6	0	1	0			
	All valid ass. spring appl. (BBCH 70-85)		STEM	PESINC	2	57.2	51.3-63	57.2	55.6	33.5-77.7	55.6	47.3	15.7-78.9	47.3	53.6	23.2-84	53.6	0	2	0			
	All valid ass. spring appl. (BBCH 80-85)		POD	PESINC	5	56.4	5.8-93	51.3	59 (n=4)	30.8-100	52.5	66.6	26.1-100	73.7	66	31.9-100	72.6	0	5	0			
		All valid ass. spring appl. (BBCH 80-85)	POD	PESSEV	1	11.4	-	-	76.2	-	-	77.9	-	-	74.7	-	-	0	0	1			

* In line with the GAP table, the use against LEPTMA is supported by either trials with one autumn and one spring application or by the assessments performed after the 1st application only in spring trials. This is a worst case as GAP recommendation is maximum 2 applications being one in spring. It is correct to assume that control after only one spring application will be at least as good as after one autumn plus one spring application.

CONCLUSION (MARITIME EPPO ZONE)

A total of 23 trials were carried out in the Maritime EPPO Zone to evaluate the efficacy of GLOB2021dF for the control of root, stem, foliar and pod diseases on oilseed rape. Those trials have been conducted between 2021 and 2022 in Belgium, the Czech Republic, Denmark, Germany, the Netherlands, Sweden and the UK. During the trials, the following diseases were assessed: black leg/ phoma stem canker (LEP-TMA), root rot (SCLESC) and black spot of rape (ALTEBA).

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was equivalent to the efficacy of standard products based on prothioconazole applied according to local authorizations against all targets (or to difenoconazole based products Difcor 250 EC/Score in autumn trials against LEPTMA).

Generally, these results also confirm the results obtained from the Mediterranean, South-East and North-East EPPO zones.

Reference is also made to the yield results under section 3.4.2, where the benefit of treatment with GLOB2021dF is demonstrated.

North-East EPPO Zone (Central EU-zone: Poland)

A total of 11 trials were carried out in the North-East EPPO Zone to evaluate the efficacy of GLOB2021dF for the control of root, stem, foliar and pod diseases on oilseed rape. Those trials have been conducted between 2021 and 2022 in Estonia, Latvia, Lithuania and Poland. Those were combined with the results of the German and Czech trials (12 trials) since these are neighbouring countries and considered as valid to Poland, the only MS in the Central zone belonging to the North-East climatic zone. The combined results from 23 trials are thus shown in the tables below. In the detailed tables presented in the Biological Assessment Dossier, trials highlighted in yellow are those conducted in the North-East EPPO Zone, while dark blue ones are those conducted in DE and CZ.

Trials with initial application in autumn:

A difenoconazole based product (Difcor 250 EC or Score applied at local rates of 0.25-0.5 L/ha) was included in all trials as a uniform reference. In part of the trials also Tilmor/Folicur Expert at 0.8-1 L/ha (160 g/l tebuconazole + 80 g/l prothioconazole) were present as local reference products and applied according to local authorizations. Those data are available in detailed tables in the BAD and summarized for the dRR regarding only trials in the North-East EPPO zone.

Trials with initial application in spring: Protendo 300 EC (prothioconazole 300 g/L) applied at 0.6 L/ha was included in all trials as a uniform reference. In part of the trials also a boscalid based product or other local reference products were also present and applied according to local authorizations. Those data are available in detailed tables in the BAD but are not summarized for the dRR.

For each rating type, data were summarized at the end of each table by an orthogonal comparison of the control achieved by the maximum proposed rate of GLOB2021dF to the reference product at each relevant assessment timing.

Results where the untreated check had a severity percentage below 5% or a second assessment falling within the same assessment timing window were not considered for means calculation and those data are shaded in grey in the BAD. Figures presented in italics for Untreated check in calculated control rows stand for the pressure.

Exceptionally, assessments where severity levels were between 4 and 5% were also considered when incidence levels were considerably higher. Extreme values (e.g. 100% of incidence) were also discarded since a trustful comparison was not possible. The number of trials where product is statistically superior (>), inferior (<) or equivalent (=) compared to standard are provided for each grouping.

Results

LEPTMA – *Plenodomus lingam*

Infection by black leg (phoma stem canker) was verified at acceptable levels in a total of 9 trials (3 with first autumn application and 6 with first spring application). Those were combined with the results of German and Czech trials (7 trials; 5 with first autumn application and 2 with first spring application) since these are neighbouring countries and considered as valid to the CMS Poland. The combined results from 16 trials are thus shown in the tables below.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was moderate and statistically equivalent or even superior to the efficacy of reference products (either Difcor 250 EC/Score in autumn trials or Protendo 300 EC applied at 0.6 L/ha in spring trials).

Best results were achieved in the control of the disease severity. It is known that the control of the incidence in fungal diseases is more difficult than controlling the severity. Nevertheless, GLOB2021dF provided still useful control on the incidence of black leg.

Autumn application trials

Table 3.2-44 Efficacy of GLOB2021dF against LEPTMA (PESINC on leaves) on oilseed rape – autumn + spring application – North-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control												No of trials where product is >, <, = compared to standard		
													GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Difcor 250 EC/Score at 0.25-0.5 L/ha			Tilmor/Folicur Expert at 0.8-1 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
NE (+CZ, DE)	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after A)	LEAF	PESINC	14-18	6	14-38	14-38	29.5	10-53	26.0	45.4	16.7-66.1	49.9	54.0	33.3-80.8	49.5	54.2	30.2-71.3	55.6	-	-	-	0	6	0
NE (+CZ, DE)	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after B)	LEAF	PESINC	14-18	6	162-236	15-25	43.8	8-89	43.0	49.7	13.8-81.5	53.5	62.4	33.1-91.4	62.7	55.1	27.3-90.9	52.7	-	-	-	0	5	1

Number of trials summarized: 3 NE+5 CZ, DE

Means valid for Northern zone (CZ and DE trials not included in mean calculation)

Means data for Northern zone (22 trials not included in mean calculation)											% control												No of trials where product is >, <, = compared to standard				
EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)	GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Difcor 250 EC/Score at 0.25-0.5 L/ha			Tilmor/Folicur Expert at 0.8-1 L/ha							
											Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn				Mean	Min & Max
NE	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after A)	LEAF	PESINC	14-16	2	14-28	14-28	48.5	44-53	48.5	53.3	43-63.5	53.3	66.5	52.1-80.8	66.5	63.6	55.9-71.3	63.6	62.7	62-63.3	62.7	0	2	0
NE	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after B)	LEAF	PESINC	14-16	3	211-236	15-23	51.0	24-89	40.0	36.2	13.8-61.2	33.6	55.3	33.1-91.4	41.4	44.7	27.3-71.8	34.9	49.9	22.5-84.3	42.8	0	3	0

Number of trials summarized: 3

Table 3.2-45 Efficacy of GLOB2021dF against LEPTMA (PESSEV on leaves) on oilseed rape - autumn + spring application – North-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)		% control												No of trials where product is >, <, = compared to standard			
												GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Difcor 250 EC/Score at 0.25-0.5 L/ha			Tilmor/Folicur Expert at 0.8-1 L/ha						
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ, DE)	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after A)	LEAF	PESSEV	16-18	3	14-25	14-25	6.0	4-9.6	4.3	44.5	32.7-54.2	46.7	64.2	42.7-78.3	71.5	60.6	31.1-76.7	73.9	-	-	-	0	3	0
NE (+CZ, DE)	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after B)	LEAF	PESSEV	14-17	2	173-236	15-18	8.3	7.5-9	8.3	59.7	25-94.4	59.7	71.6	55-88.1	71.6	68.5	40-96.9	68.5	-	-	-	0	2	0

Number of trials summarized: 2 NE+2 CZ, DE

Means valid for Northern zone (CZ and DE trials not included in mean calculation)

Means valid for Northern zone (SE and DE trials not included in mean calculation)																														
EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard					
													GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Difcor 250 EC/Score at 0.25-0.5 L/ha			Tilmor/Folicur Expert at 0.8-1 L/ha								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
NE	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after A)	LEAF	PESSEV	16-16	1	14	14	4.3	-	-	-	54.2	-	-	-	71.5	-	-	-	-	-	-	88.5	-	-	0	1	0
NE	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after B)	LEAF	PESSEV	14-14	1	236	15	7.5	-	-	-	25.0	-	-	-	55.0	-	-	-	-	-	-	62.5	-	-	0	1	0

Number of trials summarized: 2

Table 3.2-46 Efficacy of GLOB2021dF against LEPTMA (SEVERITY INDEX on root and stems) on oilseed rape - autumn + spring application – North-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (SEVIND)		% control															No of trials where product is >, <, = compared to standard		
												GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Difcor 250 EC/Score at 0.25-0.5 L/ha			Tilmor/Folicur Expert at 0.8-1 L/ha								
												Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
NE (+CZ, DE)	LEPTMA	BRSNW	All valid ass. autumn appl. (BBCH 81-85)	ROOT	SEVIND	14-18	6	238-290	50-101	32.6	7-51.5	32.5	38.4	31-55.5	35.5	52.3	10.6-100	48.4	42.9	22.5-59.1	40.7	-	-	-	0	4	2		
NE (+CZ, DE)	LEPTMA	BRSNW	All valid ass. autumn appl. (BBCH 81-85)	STEM	SEVIND	14-16	3	256-290	66-91	20.5	8.8-29.8	22.8	66.5	54.2-89.8	55.6	89.4	68.2-100	100.0	71.9	45.2-100	70.5	-	-	-	0	1	2		

Number of trials summarized: 3 NE + 4 CZ, DE

Means valid for Northern zone (CZ and DE trials not included in mean calculation)

Means valid for Northern zone (SE and DE trials not included in mean calculation)																											
EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (SEVIND)			% control												No of trials where product is >, <, = compared to standard		
													GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Difcor 250 EC/Score at 0.25-0.5 L/ha			Tilmor/Folicur Expert at 0.8-1 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	LEPTMA	BRNSW	All valid ass. autumn appl. (BBCH 81-85)	ROOT	SEVIND	14-16	3	271-290	50-91	24.0	7-39	26.0	36.3	33.5-39.3	36.2	52.6	10.6-100	47.1	39.3	22.5-59.1	36.4	36.4	20.7-55.5	32.9	0	2	1
NE	LEPTMA	BRNSW	All valid ass. autumn appl. (BBCH 81-85)	STEM	SEVIND	14-16	2	271-290	83-91	19.3	8.8-29.8	19.3	54.9	54.2-55.6	54.9	84.1	68.2-100	84.1	57.9	45.2-70.5	57.9	61.2	37.3-85.1	0.0	0	0	2

Number of trials summarized:

Efficacy of GLOB2021dF against LEPTMA on oilseed rape - autumn + spring application

The presented data correspond with the requirements of the EPPO Standards PP 1/135(4) Phytotoxicity assessment, EPPO PP 1/152 (4) Design and analysis of efficacy evaluation trials, PP 1/181(4) Conduct and reporting of efficacy evaluation trials, including good experimental practice, PP 1/78(4) Root, stem, foliar and pod diseases of oilseed rape and PP1/226(3) Number of efficacy trials

The applicant demonstrated efficacy against LEPTMA on leaves, with results of 62.4% from six valid trials (PESINC on leaves) and 71.6% from two valid trials (PESSEV on leaves). The dose rate of 0.8 L/ha for the northeastern zone showed comparable performance to the standards in most trials. The combined results from PL, CZ, and DE data are considered to show variable levels of disease reduction, which are sufficient to support a claim of moderate control.

Spring application trials

Table 3.2-47 Efficacy of GLOB2021dF against LEPTMA (PESINC on leaves) on oilseed rape – spring application – North-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	30-63	6	15-29	-	35.7	9-68	32.0	50.4	18.6-74.2	51.6	70.1	12.8-100	80.7	72.5	31-100	84.4	-	-	-	-	-	0	5	1	
NE (+CZ)	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESINC	30-52	5	32-55	14-25	41.2	15-77	39.0	43.1	13.5-67.5	44.0	65.2	35.1-100	52.2	64.6	36.7-90.8	65.1	-	-	-	-	-	0	5	0	

Number of trials summarized: 6 NE (5 VALID) + 2 CZ (1 VALID)

Means valid for Northern zone (CZ and DE trials not included in mean calculation)

Means valid for Northern zone (SE and DE trials not included in mean calculation)																														
EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	30-63	5	15-29	-	31.8	9-68	29.0	52.5	18.6-74.2	55.0	72.1	12.8-100	86.3	77.2	31-100	86.2	-	-	-	-	-	-	0	5	0
NE	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESINC	30-52	4	32-55	14-25	38.5	15-77	31.0	45.3	13.5-67.5	50.1	68.5	35.1-100	69.5	69.8	36.7-90.8	75.9	-	-	-	-	-	-	0	4	0

Number of trials summarized: 6 NE (5 VALID)

Table 3.2-48 Efficacy of GLOB2021dF against LEPTMA (PESSEV on leaves) on oilseed rape – spring application – North-East EPPO zone

Means valid for PL and Northern zone

Means valid for F and Northern zone																														
EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESSEV	32-32	1	24-24	-	6.3	6.3-6.3	6.3	94.3	94.3-94.3	94.3	97.1	97.1-97.1	97.1	96.9	96.9-96.9	96.9	-	-	-	-	-	-	0	1	0
NE	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESSEV	32-51	2	42-55	18-25	5.7	5-6.3	5.7	53.8	31-76.5	53.8	61.3	47.3-75.2	61.3	66.1	43.4-88.7	66.1	-	-	-	-	-	-	0	2	0

Number of trials summarized: 6 NE (3 valid). No additional CZ, DE trials.

Table 3.2-49 Efficacy of GLOB2021dF against LEPTMA (PESINC on stems) on oilseed rape – spring application – North-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	LEPTMA	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	30-63	6	51-89	35-54	52.3	16-94	49.0	53.0	16.7-88.8	51.5	66.1	33.3-100	65.2	66.9	31.1-100	69.2	-	-	-	-	-	-	1	4	1

Number of trials summarized: 4NE + 3 CZ

Means valid for Northern zone (CZ and DE trials not included in mean calculation)

Means valid for Northern zone (CZ and DE trials not included in mean calculation)																														
EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
NE	LEPTMA	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	30-63	4	51-80	35-54	32.5	16-75	19.5	52.1	16.7-88.8	51.5	67.9	33.3-100	69.1	69.0	37.5-100	69.2	-	-	-	-	-	-	0	4	0

Number of trials summarized: 4

No incidence was observed on pods.

Efficacy of GLOB2021dF against LEPTMA on oilseed rape - spring application

The presented data correspond with the requirements of the EPPO Standards PP 1/135(4) Phytotoxicity assessment, EPPO PP 1/152 (4) Design and analysis of efficacy evaluation trials, PP 1/181(4) Conduct and reporting of efficacy evaluation trials, including good experimental practice, PP 1/78(4) Root, stem, foliar and pod diseases of oilseed rape and PP1/226(3) Number of efficacy trials.

The applicant demonstrated acceptable efficacy in six trials against *Plenodomus lingam* for spring application, specifically targeting stem infections. The combined results from PL, CZ, and DE data showed variable levels of disease reduction, averaging 66.1% (ranging from 33.3% to 100%), which is considered sufficient to support the claim of 'moderate control.'

SCLESC - *Sclerotinia sclerotiorum*

Infection by root rot *Sclerotinia sclerotiorum* was verified at acceptable levels in a total of 8 trials. Those were combined with the results of Czech trials (7 trials) since it's a neighbouring country and considered as valid to the cMS Poland. The combined results from 15 trials are thus shown in the tables below.

No incidence on the leaves was observed.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha applied at flowering reached good levels of control, well controlling the severity of the disease especially on stems and in general equivalent to the efficacy of the prothioconazole based standards.

Table 3.2-50 Efficacy of GLOB2021dF against SCLESC (PESINC on stems) on oilseed rape – spring application – North-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
NE (+CZ)	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	30-65	15	51-96	35-54	47.9	14-92	41.0	59.7	14.9-93.8	60.2	73.0	22.9-100	77.9	70.6	27.8-100	83.3	-	-	-	-	-	-	1	12	2

Number of trials summarized: 8 NE trials + 7 CZ

Means valid for Northern zone (CZ and DE trials not included in mean calculation)

Means valid for Northern zone (CZ and DE trials not included in mean calculation)																															
EPPO zone	Target code	Crop Code	Group-ing	Part rated	Type	Crop BBCH at 1st appl.	Nb. tri-als	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <, = compared to standard [statistical]			
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products						
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	mi-nor
NE	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	30-65	8	51-90	35-54	42.5	14-86	35.0	56.4	14.9-93.8	54.6	69.9	22.9-100	76.4	70.4	28.9-100	72.9	-	-	-	-	-	-	1	7	0	

Number of trials summarized: 8

Table 3.2-51 Efficacy of GLOB2021dF against SCLESC (PESSEV on stems) on oilseed rape – spring application – North-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESSEV	30-65	14	51-96	35-54	27.2	5.1-68.6	27.0	71.2	26.5-97.1	71.8	83.6	43-100	91.1	79.5	34.6-100	84.8	-	-	-	-	-	-	1	11	2

Number of trials summarized: 8 NE (7 valid) + 7 CZ

Means valid for Northern zone (CZ and DE trials not included in mean calculation)

EPPO zone	Target code	Crop Code	Group-ing	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESSEV	30-65	7	51-90	35-54	29.0	5.1-68.6	27.7	65.8	26.5-97.1	71.3	78.8	43-100	90.8	75.4	34.6-100	71.4	-	-	-	-	-	-	1	5	1

Number of trials summarized: 8 (7 valid)

Table 3.2-52 Efficacy of GLOB2021dF against SCLESC (SEVERITY INDEX on stems) on oilseed rape – spring application – North-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (SEV INDEX)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	SEVIND	30-65	15	51-96	35-54	23.4	5-56	18.3	68.1	31.5-97.2	72.3	79.8	41.8-100	86.3	76.0	27.8-100	84.8	-	-	-	-	-	-	1	12	2

Number of trials summarized: 8 NE trials + 7 CZ

Means valid for Northern zone (CZ and DE trials not included in mean calculation)

Means valid for Northern zone (SE and DE trials not included in mean calculation)																														
EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (SEV INDEX)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	SEVIND	30-65	8	51-90	35-54	24.7	5-56	22.3	67.5	34.8-97.2	71.8	80.1	52.6-100	82.1	77.0	37.7-100	80.2	-	-	-	-	-	-	1	6	1

Number of trials summarized: 8 NE trials

Table 3.2-53 Efficacy of GLOB2021dF against SCLESC (PESINC on pods) on oilseed rape – spring application – North-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control																	No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products							
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal
NE (+CZ)	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	30-63	3	56-96	40-44	31.9	23-36.8	36.0	35.0	25.7-53	26.4	54.0	41.8-64.6	55.6	44.2	27.8-58.6	46.2	-	-	-	-	-	-	0	2	1		

Number of trials summarized: 3 NE trials (2 valid) + 4 CZ (1 valid)

Means valid for Northern zone (CZ and DE trials not included in mean calculation)

Means valid for Northern zone (SE and DE trials not included in mean calculation)																														
EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	30-63	2	56-87	40-42	36.4	36-36.8	36.4	26.1	25.7-26.4	26.1	60.1	55.6-64.6	60.1	52.4	46.2-58.6	52.4	-	-	-	-	-	-	0	1	1

Number of trials summarized: 3 NE trials (2 valid)

Efficacy of GLOB2021dF against SCLESC - *Sclerotinia sclerotiorum* – spring application

The presented data correspond with the requirements of the EPPO Standards PP 1/135(4) Phytotoxicity assessment, EPPO PP 1/152 (4) Design and analysis of efficacy evaluation trials, PP 1/181(4) Conduct and reporting of efficacy evaluation trials, including good experimental practice, PP 1/78(4) Root, stem, foliar and pod diseases of oilseed rape and PP1/226(3) Number of efficacy trials

Infection by root rot *Sclerotinia sclerotiorum* was verified at acceptable levels in a total of 8 trials. Those were combined with the results of Czech trials (7 trials). The level of infestation was considered acceptable (>5%) to validate the trials. Data demonstrated that the proposed dose of 0.8 L/ha of GLOB2021dF consistently provided moderate control, with a mean efficacy of 73% (n=15) in the PESINC on stems assessment and 83.6% (n=14) in the PESSEV on stems assessment. It should be considered effective against *Sclerotinia sclerotiorum* on winter oilseed rape. The observed levels of control were similar to the efficacy of the standard product, with mean values of 70.6% and 79.5%, respectively.

ALTEBA - *Alternaria brassicae*

Infection by black spot of rape *Alternaria brassicae* was verified at acceptable levels in a total of 6 trials. Those were combined with the results of Czech trials (3 trials) since it's a neighbouring country and considered as valid to the cMS Poland. The combined results from 9 trials are thus shown in the tables below.

Data demonstrated that GLOB2021dF at the proposed rate of 0.8 L/ha provided moderate to good levels of control, well controlling the severity of the disease especially on pods being statistically equivalent to the efficacy of the prothioconazole based standard.

Table 3.2-54 Efficacy of GLOB2021dF against ALTEBA (PESINC on leaves) on oilseed rape – spring application – North-East EPPO zone

Means valid for PL and Northern zone

Means valid for PE and Northern Zone																															
EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control															No of trials where product is >, <, = compared to standard			
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products						
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn				Mean
NE	ALTEBA	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	30-63	4	14-29	14-29	17.8	11.3-31	14.5	51.8	35.4-66.7	52.5	73.9	67.4-80	74.0	78.7	70.8-90.8	76.7	-	-	-	-	-	-	-	1	3	0
NE	ALTEBA	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESINC	30-52	2	32-44	14-14	24.5	22-27	24.5	60.8	59.1-62.5	60.8	76.2	69.4-83	76.2	73.5	73.1-73.8	73.5	-	-	-	-	-	-	0	2	0	

Number of trials summarized: 5 NE trials (4 valid). No additional CZ, DE trials.

Not significant severity levels were observed on leaves.

Table 3.2-55 Efficacy of GLOB2021dF against ALTEBA (PESINC on pods) on oilseed rape – spring application – North-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control															No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	ALTEBA	BRSNW	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	32-65	6	59-83	39-53	51.3	6.9-93	49.5	42.7	14.5-100	34.9	57.5	26.1-100	54.9	52.8	31.9-100	45.0	-	-	-	-	-	-	0	6	0

Number of trials summarized: 3 NE trials + 3 CZ

Means valid for Northern zone (CZ and DE trials not included in mean calculation)

Means valid for Northern zone (SE and DE trials not included in mean calculation)																														
EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control															No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	ALTEBA	BRSNW	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	51-65	3	60-83	42-53	27.6	6.9-52	24.0	28.1	14.5-36.4	33.4	56.0	38.1-70.9	59.1	46.0	40.2-54.7	43.0	-	-	-	-	-	-	0	3	0

Number of trials summarized: 3

Table 3.2-56 Efficacy of GLOB2021dF against ALTEBA (PESSEV on pods) on oilseed rape – spring application – North-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	ALTEBA	BRSNW	All valid ass. spring appl. (BBCH 80-85)	POD	PESSEV	30-65	4	56-87	40-53	8.3	5.1-11.4	8.4	65.8	49.4-76.2	68.8	81.9	77.9-84.6	82.6	79.8	74.7-85.8	79.4	-	-	-	-	-	-	0	3	1

Number of trials summarized: 3 NE trials + 1 CZ

Means valid for Northern zone (CZ and DE trials not included in mean calculation)

Means valid for Northern zone (CZ and DE trials not included in mean calculation)																														
EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control															No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	ALTEBA	BRSNW	All valid ass. spring appl. (BBCH 80-85)	POD	PESSEV	30-65	3	56-87	40-47	7.3	5.1-9.8	6.9	62.3	49.4-73.5	64.0	83.3	81-84.6	84.2	81.5	75.5-85.8	83.2	-	-	-	-	-	-	0	3	0

Number of trials summarized: 3

Efficacy of GLOB2021dF against ALTEBA (on oilseed rape – spring application)

The presented data correspond with the requirements of the EPPO Standards PP 1/135(4) Phytotoxicity assessment, EPPO PP 1/152 (4) Design and analysis of efficacy evaluation trials, PP 1/181(4) Conduct and reporting of efficacy evaluation trials, including good experimental practice, PP 1/78(4) Root, stem, foliar and pod diseases of oilseed rape.

Results from trials in Poland's neighbouring countries are acceptable. The 0.8 L/ha dose performed similarly to the standard in most trials. The average disease incidence on leaves from two trials was 24.5%, with a control efficacy of 76.2% against *Alternaria brassicae*. GLOB2021dF provided moderate control with an efficacy of 81.9% on pods (disease severity) compared to 79.8% for the prothioconazole standard. In incidence assessments, GLOB2021dF achieved 57.5% efficacy on pods, slightly better than the prothioconazole standard (52.8%).

Summary (North-East EPPO zone)

The table below shows the overall mean efficacy results of GLOB2021dF applied at the target rate of 0.8 L/ha per disease, assessment timing and plant part assessed. The number of trials on which each result is based is also shown. Finally, the results obtained across all timings, rating types and plant parts are combined in a weighted mean in order to show the overall susceptibility level of each disease. Results in key plant parts as e.g. stems for Sclerotinia or pods for Alternaria are also highlighted.

Table 3.2-57 Overall efficacy and susceptibility level to GLOB2021dF at the target rate of 0.8 L/ha on oilseed rape – North-East EPPO zone

EPPO zone	Target code	Grouping	Part rated	Type	Nb. trials	Infestation in the untreated control			% control									No of trials where product is >, <, = compared to standard [statistical]			All timings, rating types and parts	Nb. of assessm. (nb.trials)	Control provided
									GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha (Dicfor 250 EC/Score in autumn trials)								
						Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
NE (+CZ,DE)	LEPTMA*	All valid ass. autumn appl. (2-4w after A)	LEAF	PESINC	6	29.5	10-53	26	45.4	16.7-66.1	49.9	54	33.3-80.8	49.5	54.2	30.2-71.3	55.6	0	6	0	65	33 (16: 8 autumn, 8 spring)	Moderate control
		All valid ass. autumn appl. (2-4w after B)	LEAF	PESINC	6	43.8	8-89	43	49.7	13.8-81.5	53.5	62.4	33.1-91.4	62.7	55.1	27.3-90.9	52.7	0	5	1			
		All valid ass. autumn appl. (2-4w after A)	LEAF	PESSEV	3	6	4-9.6	4.3	44.5	32.7-54.2	46.7	64.2	42.7-78.3	71.5	60.6	31.1-76.7	73.9	0	3	0			
		All valid ass. autumn appl. (2-4w after B)	LEAF	PESSEV	2	8.3	7.5-9	8.3	59.7	25-94.4	59.7	71.6	55-88.1	71.6	68.5	40-96.9	68.5	0	2	0			
		All valid ass. autumn appl. (BBCH 81-85)	ROOT	SEVIND	6	32.6	7-51.5	32.5	38.4	31-55.5	35.5	52.3	10.6-100	48.4	42.9	22.5-59.1	40.7	0	4	2			
		All valid ass. autumn appl. (BBCH 81-85)	STEM	SEVIND	3	20.5	8.8-29.8	22.8	66.5	54.2-89.8	55.6	89.4	68.2-100	100	71.9	45.2-100	70.5	0	1	2			
		All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	6	35.7	9-68	32	50.4	18.6-74.2	51.6	70.1	12.8-100	80.7	72.5	31-100	84.4	0	5	1			
		All valid ass. spring appl. (2-4w after A)	LEAF	PESSEV	1	6.3	6.3-6.3	6.3	94.3	94.3-94.3	94.3	97.1	97.1-97.1	97.1	96.9	96.9-96.9	96.9	0	1	0			
	SCLESC	All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	15	47.9	14-92	41	59.7	14.9-93.8	60.2	73	22.9-100	77.9	70.6	27.8-100	83.3	1	12	2	77% (>80% on stems)	47 (15)	Control

EPPO zone	Target code	Grouping	Part rated	Type	Nb. trials	Infestation in the untreated control			% control									No of trials where product is >, <, = compared to standard [statistical]			All timings, rating types and parts	Nb. of assessm. (nb.trials)	Control provided
									GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha (Difcor 250 EC/Score in autumn trials)								
						Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
		All valid ass. spring appl. (BBCH 70-85)	STEM	PESSEV	14	27.2	5.1-68.6	27	71.2	26.5-97.1	71.8	83.6	43-100	91.1	79.5	34.6-100	84.8	1	11	2			
		All valid ass. spring appl. (BBCH 70-85)	STEM	SEVIND	15	23.4	5-56	18.3	68.1	31.5-97.2	72.3	79.8	41.8-100	86.3	76	27.8-100	84.8	1	12	2			
		All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	3	31.9	23-36.8	36	35	25.7-53	26.4	54	41.8-64.6	55.6	44.2	27.8-58.6	46.2	0	2	1			
	ALTEBA	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	4	17.8	11.3-31	14.5	51.8	35.4-66.7	52.5	73.9	67.4-80	74	78.7	70.8-90.8	76.7	1	3	0	70% (>80% on pods)	16 (9)	Control
		All valid ass. spring appl. (2-4w after B)	LEAF	PESINC	2	24.5	22-27	24.5	60.8	59.1-62.5	60.8	76.2	69.4-83	76.2	73.5	73.1-73.8	73.5	0	2	0			
		All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	6	51.3	6.9-93	49.5	42.7	14.5-100	34.9	57.5	26.1-100	54.9	52.8	31.9-100	45	0	6	0			
		All valid ass. spring appl. (BBCH 80-85)	POD	PESSEV	4	8.3	5.1-11.4	8.4	65.8	49.4-76.2	68.8	81.9	77.9-84.6	82.6	79.8	74.7-85.8	79.4	0	3	1			

* In line with the GAP table, the use against LEPTMA is supported by either trials with one autumn and one spring application or by the assessments performed after the 1st application only in spring trials. This is a worst case as GAP recommendation is maximum 2 applications being one in spring. It is correct to assume that control after only one spring application will be at least as good as after one autumn plus one spring application.

CONCLUSION (NORTH-EAST EPPO ZONE)

A total of 11 trials were carried out in the North-East EPPO Zone to evaluate the efficacy of GLOB2021dF for the control of root, stem, foliar and pod diseases on oilseed rape. Those trials have been conducted between 2021 and 2022 in Estonia, Latvia, Lithuania and Poland. Those were combined with the results of the German and Czech trials (12 trials) since these are neighbouring countries and considered as valid to Poland, the only MS in the Central zone belonging to the North-East climatic zone. The combined results from 23 trials are thus shown in the tables above.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was equivalent to the efficacy of standard products based on prothioconazole applied according to local authorizations against all targets (or to difenoconazole based products Difcor 250 EC/Score in autumn trials against LEPTMA).

Generally, these results also confirm the results obtained from the Maritime, Mediterranean and South-East EPPO zones.

Reference is also made to the yield results under section 3.4.2, where the benefit of treatment with GLOB2021dF is demonstrated.

Mediterranean EPPO Zone

A total of 9 trials were carried out in the Mediterranean EPPO Zone to evaluate the efficacy of GLOB2021dF for the control of root, stem, foliar and pod diseases on oilseed rape. Those trials have been conducted between 2021 and 2022 in Croatia, Greece and Italy. During the trials, the following diseases were assessed: black leg/ phoma stem canker (LEPTMA), root rot (SCLESC) and black spot of rape (AL-TEBA).

Protendo 300 EC (prothioconazole 300 g/L) applied at 0.6 L/ha was included in all trials as a uniform reference.

For each rating type, data were summarized at the end of each table by an orthogonal comparison of the control achieved by the maximum proposed rate of GLOB2021dF to the reference product at each relevant assessment timing.

Results where the untreated check had a severity percentage below 5% or a second assessment fall-ing within the same assessment timing window were not considered for means calculation and those data are shaded in grey in the BAD. Figures presented in italics for Untreated check in calculated control rows stand for the pressure.

Exceptionally, assessments where severity levels were between 4 and 5% were also considered when incidence levels were considerably higher. Extreme values (e.g. 100% of incidence) were also discarded since a trustful comparison was not possible. The number of trials where product is statistically superior (>), inferior (<) or equivalent (=) compared to standard are provided for each grouping.

Results

LEPTMA – *Plenodomus lingam*

Infection by black leg (phoma stem canker) was verified at acceptable levels in a total of 5 trials. Although no specific trials were performed during autumn, the appearance of LEPTMA in trials with 2 spring applications provide supportive indication on the control of this disease, in particular by the assessments performed after the 1st spring application. This is a worst case as the maximum recommended are 2 applications being one in autumn and one in spring. It is correct to assume that control after only one spring application will be at least as good as after one autumn plus one spring application.

Spring application trials

Table 3.2-58 Efficacy of GLOB2021dF against LEPTMA (PESINC on leaves) on oilseed rape – spring application – Mediterranean EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control									No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	51-65	5	14-19	-	35.8	31-43	36.0	56.3 (n=4)	33.3-84.1	53.9	58.2	21.8-88.2	70.0	57.6	18.9-88.2	69.6	0	5	0
MED	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESINC	51-65	4	35-47	21-28	55.0	36-77	53.5	69.1 (n=3)	62.3-77.4	67.5	68.0	57.8-80.1	67.1	68.5	46.8-94.1	66.6	0	4	0

Number of trials summarized: 5

Table 3.2-59 Efficacy of GLOB2021dF against LEPTMA (PESSEV on leaves) on oilseed rape – spring application – Mediterranean EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESSEV	65.0	1	14.0	14.0	4.8	-	-	55.8	-	-	55.8	-	-	62.5	-	-	0	1	0
MED	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESSEV	51-51	2	45-47	28-28	5.4	5.3-5.4	5.4	88.5 (n=1)	-	-	88.9	88.6-89.1	88.9	84.8	82.9-86.6	84.8	0	2	0

Number of trials summarized: 5 (3 valid)

Table 3.2-60 Efficacy of GLOB2021dF against LEPTMA (PESINC on stems) on oilseed rape – spring application – Mediterranean EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control									No of trials where product is >, <, = compared to standard [statistical]		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	LEPTMA	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	51-51	1	69-69	52-52	37.0	37-37	37.0	86.9	-	-	93.2	-	-	87.3	-	-	0	1	0

Number of trials summarized: 2 (1 valid)

No incidence was verified on pods.

SCLESC - *Sclerotinia sclerotiorum*

Infection by root rot *Sclerotinia sclerotiorum* was verified at acceptable levels in 9 trials.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha applied at flowering reached good levels of control, well controlling the severity of the disease on stems and also the incidence on pods, being always equivalent to the efficacy of the prothioconazole based standard.

Table 3.2-61 Efficacy of GLOB2021dF against SCLESC (PESINC and PESSEV on leaves) on oilseed rape – spring application – Mediterranean zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC/PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	SCLESC	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	64	1	15	15	69.0	-	-	53.3	-	-	72.4	-	-	71.0	-	-	0	1	0
					PESSEV	64	1	15	15	5.2	-	-	53.8	-	-	71.1	-	-	69.2	-	-	0	1	0

Number of trials summarized: 1 (PESINC and PESSEV)

Table 3.2-62 Efficacy of GLOB2021dF against SCLESC (PESINC on stems) on oilseed rape – spring application – Mediterranean EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	32-65	9	49-74	34-52	33.7	8-61	33.5	61.9 (n=8)	4.8-89.2	73.3	66.9	26.3-96.4	66.3	59.9	32.4-91.4	57.7	0	7	2

Number of trials summarized: 9

Table 3.2-63 Efficacy of GLOB2021dF against SCLESC (PESSEV on stems) on oilseed rape – spring application – Mediterranean EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, < = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESSEV	32-65	7	49-74	34-52	7.7	4.4-18.8	5.7	81.5	64.3-97.9	79.4	93.2	82.3-99.7	94.4	86.6	75.6-98.9	83.1	0	5	2

Number of trials summarized: 9 (7 valid)

Table 3.2-64 Efficacy of GLOB2021dF against SCLESC (SEVERITY INDEX on stems) on oilseed rape – spring application – Mediterranean EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (SEV INDEX)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	SEVIND	32-65	8	49-74	34-52	9.5	5.3-17	9.0	60.4	14.6-79.1	69.9	69.8	33.7-96.4	69.1	58.0	35.3-91.7	54.5	0	6	2

Number of trials summarized: 9 (8 valid)

Table 3.2-65 Efficacy of GLOB2021dF against SCLESC (PESINC on pods) on oilseed rape – spring application – Mediterranean EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control									No of trials where product is >, < = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	32-65	9	49-74	34-52	12.7	6-30	9.5	74.3 (n=8)	54.2-84.5	75.6	84.0	70.7-100	79.2	74.0	43.3-100	74.3	0	9	0

Number of trials summarized: 9

ALTEBA - *Alternaria brassicae*

Infection by black spot of rape *Alternaria brassicae* was verified at acceptable levels in a total of 7 trials.

Data demonstrated that GLOB2021dF at the proposed rate of 0.8 L/ha provided good levels of control. It is known that the control of the incidence in fungal diseases is more difficult than controlling the severity. Nevertheless, GLOB2021dF at the proposed rate of 0.8 L/ha provided good control on the severity of the disease on stems as well as the incidence on pods, being in general equivalent to the efficacy of the prothioconazole based standard.

Table 3.2-66 Efficacy of GLOB2021dF against ALTEBA (PESINC on leaves) on oilseed rape – spring application – Mediterranean zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	ALTEBA	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	32-65	6	14-17	14-17	11.2	6-19	8.3	77.4	62.5-100	68.6	88.6	75-100	87.3	87.4	69.8-100	87.6	0	6	0
MED	ALTEBA	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESINC	32-65	4	28-35	14-21	44.6	17.5-64	48.5	64.2	47-78.2	65.9	70.2	50.4-87.1	71.6	75.0	69.8-87.2	71.6	2	2	0

Number of trials summarized: 6

Table 3.2-67 Efficacy of GLOB2021dF against ALTEBA (PESSEV on leaves) on oilseed rape – spring application – Mediterranean EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	ALTEBA	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESSEV	59-61	2	14-14	14-14	7.7	6.8-8.6	7.7	61.1	56.8-65.3	61.1	83.4	80-86.8	83.4	75.0	64.3-85.7	75.0	0	2	0
MED	ALTEBA	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESSEV	32-65	4	28-35	14-21	10.6	5.2-24.5	6.4	77.6	72-83.7	77.3	88.3	84.2-92.9	88.1	90.0	75.7-97.1	93.7	2	2	0

Number of trials summarized: 6 (5 valid)

Table 3.2-68 Efficacy of GLOB2021dF against ALTEBA (PESINC on stems) on oilseed rape – spring application – Mediterranean EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	ALTEBA	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	32-65	6	51-74	37-52	43.3	25-77	40.0	54.8	30.8-71.7	58.5	63.9	20.6-88.1	69.7	70.2	54.2-88.1	70.9	1	5	0

Number of trials summarized: 6

Table 3.2-69 Efficacy of GLOB2021dF against ALTEBA (PESSEV on stems) on oilseed rape – spring application – Mediterranean EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	ALTEBA	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESSEV	32-65	5	51-74	37-52	6.1	4.6-8.6	5.6	74.0	54.6-89.5	77.5	84.8	67-98.2	90.2	90.6	79.6-96.6	90.8	1	4	0

Number of trials summarized: 6 (5 valid)

Table 3.2-70 Efficacy of GLOB2021dF against ALTEBA (PESINC on pods) on oilseed rape – spring application – Mediterranean EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, < = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	ALTEBA	BRSNW	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	32-65	6	51-74	37-52	28.4	8.5-55.5	27.2	59.2	10.3-86.4	72.3	75.2	31.4-97.2	87.4	82.3	66.7-94.4	83.4	2	4	0

Number of trials summarized: 6

Summary (Mediterranean EPPO zone)

The table below shows the overall mean efficacy results of GLOB2021dF applied at the target rate of 0.8 L/ha per disease, assessment timing and plant part assessed. The number of trials on which each result is based is also shown. Finally, the results obtained across all timings, rating types and plant parts are combined in a weighted mean in order to show the overall susceptibility level of each disease. Results in key plant parts as e.g. stems for Sclerotinia or pods for Alternaria are also highlighted.

Table 3.2-71 Overall efficacy and susceptibility level to GLOB2021dF at the target rate of 0.8 L/ha on oilseed rape - Mediterranean EPPO zone

EPPO zone	Target code	Grouping	Part rated	Type	Nb. trials	Infestation in the untreated control			% control									No of trials where product is >, <, = compared to standard [statistical]			All timings, rating types and parts	Nb. of assessm. (nb.trials)	Control provided
									GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha (Difcor 250 EC/Score in autumn trials)								
						Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
MED	LEPTMA*	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	5	35.8	31-43	36	56.3 (n=4)	33.3-84.1	53.9	58.2	21.8-88.2	70	57.6	18.9-88.2	69.6	0	5	0	58	6 (5 spring)	Some control
		All valid ass. spring appl. (2-4w after A)	LEAF	PESSEV	1	4.8	-	-	55.8	-	-	55.8	-	-	62.5	-	-	0	1	0			
	SCLESC	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	1	69	-	-	53.3	-	-	72.4	-	-	71	-	-	0	1	0	77% (<80% on stems and pods)	35 (9)	Ccontrol
		PESSEV		1	5.2	-	-	53.8	-	-	71.1	-	-	69.2	-	-	0	1	0				
		All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	9	33.7	8-61	33.5	61.9 (n=8)	4.8-89.2	73.3	66.9	26.3-96.4	66.3	59.9	32.4-91.4	57.7	0	7	2			
		All valid ass. spring appl. (BBCH 70-85)	STEM	PESSEV	7	7.7	4.4-18.8	5.7	81.5	64.3-97.9	79.4	93.2	82.3-99.7	94.4	86.6	75.6-98.9	83.1	0	5	2			
		All valid ass. spring appl. (BBCH 70-85)	STEM	SEVIND	8	9.5	5.3-17	9	60.4	14.6-79.1	69.9	69.8	33.7-96.4	69.1	58	35.3-91.7	54.5	0	6	2			
		All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	9	12.7	6-30	9.5	74.3 (n=8)	54.2-84.5	75.6	84	70.7-100	79.2	74	43.3-100	74.3	0	9	0			

EPPO zone	Target code	Grouping	Part rated	Type	Nb. trials	Infestation in the untreated control			% control									No of trials where product is >, <, = compared to standard [statistical]			All timings, rating types and parts	Nb. of assessm. (nb.trials)	Control provided
									GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha (Difcor 250 EC/Score in autumn trials)								
						Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
ALTEBA	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	6	11.2	6-19	8.3	77.4	62.5-100	68.6	88.6	75-100	87.3	87.4	69.8-100	87.6	0	6	0	79 (<80% on stems)	33 (7)	Control	
	All valid ass. spring appl. (2-4w after B)	LEAF	PESINC	4	44.6	17.5-64	48.5	64.2	47-78.2	65.9	70.2	50.4-87.1	71.6	75	69.8-87.2	71.6	2	2	0				
	All valid ass. spring appl. (2-4w after A)	LEAF	PESSEV	2	7.7	6.8-8.6	7.7	61.1	56.8-65.3	61.1	83.4	80-86.8	83.4	75	64.3-85.7	75	0	2	0				
	All valid ass. spring appl. (2-4w after B)	LEAF	PESSEV	4	10.6	5.2-24.5	6.4	77.6	72-83.7	77.3	88.3	84.2-92.9	88.1	90	75.7-97.1	93.7	2	2	0				
	All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	6	43.3	25-77	40	54.8	30.8-71.7	58.5	63.9	20.6-88.1	69.7	70.2	54.2-88.1	70.9	1	5	0				
	All valid ass. spring appl. (BBCH 70-85)	STEM	PESSEV	5	6.1	4.6-8.6	5.6	74	54.6-89.5	77.5	84.8	67-98.2	90.2	90.6	79.6-96.6	90.8	1	4	0				
	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	6	28.4	8.5-55.5	27.2	59.2	10.3-86.4	72.3	75.2	31.4-97.2	87.4	82.3	66.7-94.4	83.4	2	4	0				

* In line with the GAP table, the use against LEPTMA is supported by the assessments performed after the 1st application only in spring trials. This is a worst case as GAP recommendation is maximum 2 applications being one in spring. It is correct to assume that control after only one spring application will be at least as good as after one autumn plus one spring application.

CONCLUSION (MEDITERRANEAN EPPO ZONE)

A total of 9 trials were carried out in the Mediterranean EPPO Zone to evaluate the efficacy of GLOB2021dF for the control of root, stem, foliar and pod diseases on oilseed rape. Those trials have been conducted between 2021 and 2022 in Croatia, Greece and Italy. During the trials, the following diseases were assessed: black leg/ phoma stem canker (LEPTMA), root rot (SCLESC) and black spot of rape (AL-TEBA).

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was equivalent to the efficacy of standard products based on prothioconazole applied according to local authorizations against all targets.

Generally, these results also confirm the results obtained from the Maritime, South-East and North-East EPPO zones.

Reference is also made to the yield results under section 3.4.2, where the benefit of treatment with GLOB2021dF is demonstrated.

South-East EPPO Zone

A total of 10 trials were carried out in the South-East EPPO Zone to evaluate the efficacy of GLOB2021dF for the control of root, stem, foliar and pod diseases on oilseed rape. Those trials have been conducted between 2021 and 2022 in Bulgaria, Hungary and Romania. During the trials, the following diseases were assessed: black leg/ phoma stem canker (LEPTMA), root rot (SCLESC) and black spot of rape (ALTEBA).

Protendo 300 EC (prothioconazole 300 g/L) applied at 0.6 L/ha was included in all trials as a uniform reference. Only in Romania it was applied at 0.5 L /ha according to local practice (authorized range 0.5-0.6 L /ha). In part of the trials (initial application in autumn against LEPTMA) also a boscalid based product was included and applied according to local authorizations.

For each rating type, data were summarized at the end of each table by an orthogonal comparison of the control achieved by the maximum proposed rate of GLOB2021dF to the reference product at each relevant assessment timing.

Results where the untreated check had a severity percentage below 5% or a second assessment fall-ing within the same assessment timing window were not considered for means calculation and those data are shaded in grey in the BAD. Figures presented in italics for Untreated check in calculated control rows stand for the pressure.

Exceptionally, assessments where severity levels were between 4 and 5% were also considered when incidence levels were considerably higher. Extreme values (e.g. 100% of incidence) were also discarded since a trustful comparison was not possible. The number of trials where product is statistically superior (>), inferior (<) or equivalent (=) compared to standard are provided for each grouping.

Results

LEPTMA – *Plenodomus lingam*

Infection by black leg (phoma stem canker) was verified at acceptable levels in a total of 6 trials (2 with first autumn application and 4 with first spring application).

Although results after initial autumn application regard only 2 trials, they indicate that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha is very good, being equivalent to the prothioconazole based standard. Assessments performed after the 1st application in trials initiated in spring corroborate these results as it is a worst case as the maximum recommended are 2 applications being one in autumn and one in spring. It is correct to assume that control after only one spring application will be at least as good as after one autumn plus one spring application.

Autumn application trials

Table 3.2-72 Efficacy of GLOB2021dF against LEPTMA (PESINC on leaves) on oilseed rape – autumn + spring application – South -East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control												No of trials where product is >, <= compared to standard		
													GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Protendo 300 EC at 0.6 (0.5 in RO) L/ha			Cantus at 0.5 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
SE	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after A)	LEAF	PESINC	14-17	2	21-24	21-24	19.7	9.3-30	19.7	76.5	68.8-84.2	76.5	88.9	85.9-91.9	88.9	85.1	84.2-86	85.1	83.4	77.8-89	83.4	0	2	0
SE	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after B)	LEAF	PESINC	14-17	2	169-188	16-28	34.8	28.5-41	34.8	66.1	43.6-88.5	66.1	82.6	73-92.1	82.6	77.5	65.5-89.4	77.5	74.8	55.7-93.9	74.8	0	2	0

Number of trials summarized: 2

Table 3.2-73 Efficacy of GLOB2021dF against LEPTMA (PESSEV on leaves) on oilseed rape - autumn + spring application – South -East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
													GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Protendo 300 EC at 0.6 (0.5 in RO) L/ha			Cantus at 0.5 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
SE	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after A)	LEAF	PESSEV	17	1	24	24	5.4	-	-	92.3	-	-	94.5	-	-	91.4	-	-	95.5	-	-	0	1	0
SE	LEPTMA	BRSNW	All valid ass. autumn appl. (2-4w after B)	LEAF	PESSEV	14-17	2	169-188	16-28	10.6	5.3-15.9	10.6	81.9	73.1-90.7	81.9	91.8	88.5-95.1	91.8	89.5	86.6-92.3	89.5	89.5	83-95.9	89.5	0	2	0

Number of trials summarized: 2

Table 3.2-74 Efficacy of GLOB2021dF against LEPTMA (SEVERITY INDEX on root and stems) on oilseed rape - autumn + spring application – South -East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (SEV INDEX)			% control												No of trials where product is >, <, = compared to standard		
													GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Protendo 300 EC at 0.6 (0.5 in RO) L/ha			Cantus at 0.5 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	LEPTMA	BRSNW	All valid ass. autumn appl. (BBCH 81-85)	ROOT	SEVIND	17	1	220	67	19.8	-	-	95.8	-	-	97.6	-	-	96.7	-	-	98.6	-	-	0	1	0
SE	LEPTMA	BRSNW	All valid ass. autumn appl. (BBCH 81-85)	STEM	SEVIND	14	1	224	64	48	-	-	68.2	-	-	85.3	-	-	82.3	-	-	78.9	-	-	0	1	0

Number of trials summarized: 2, 1 on root, 1 on stem

Efficacy of GLOB2021dF against LEPTMA on oilseed rape - autumn + spring application

The presented data correspond with the requirements of the EPPO Standards PP 1/135(4) Phytotoxicity assessment, EPPO PP 1/152 (4) Design and analysis of efficacy evaluation trials, PP 1/181(4) Conduct and reporting of efficacy evaluation trials, including good experimental practice, PP 1/78(4) Root, stem, foliar and pod diseases of oilseed rape.

The two valid trials conducted in the South-East EPPO zone were insufficient according to EPPO Standard PP 1/226 (3) (Number of efficacy trials) to support the use against *Leptosphaeria maculans* on oilseed rape (autumn and spring application). Although the efficacy results were favourable, the limited number of trials does not provide sufficient justification for registering GLOB2021dF for this use.

Spring application trials

Table 3.2-75 Efficacy of GLOB2021dF against LEPTMA (PESINC on leaves) on oilseed rape – spring application – South -East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dFat 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	50-57	4	20-23	20-23	25.3	15-34	26.0	68.0	38.3-89.9	71.9	66.8	38.3-92.5	68.2	58.9	38.3-89.9	53.7	0	3	1
SE	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESINC	50-57	4	41-46	21-22	49.5	19.5-90	44.2	55.1	12.2-84.9	61.6	60.9	24.3-91.6	63.8	57.9	30.9-93.4	53.7	0	4	0

Number of trials summarized: 4

Table 3.2-76 Efficacy of GLOB2021dF against LEPTMA (PESSEV on leaves) on oilseed rape – spring application – South -East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESSEV	50-57	3	20-22	20-22	10.9	9.3-12.1	11.3	74.5	54.2-87.6	81.8	76.5	54.2-90.4	85.0	68.7	54.2-88	63.9	0	3	0
SE	LEPTMA	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESSEV	50-57	4	41-46	21-22	17.5	12.7-24.9	16.3	77.9	66.7-84.9	80.0	82.9	66.7-92.1	86.4	78.5	66.7-91.3	78.0	0	3	1

Number of trials summarized: 4

Table 3.2-77 Efficacy of GLOB2021dF against LEPTMA (PESINC on stems) on oilseed rape – spring application – South -East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	LEPTMA	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	50-57	3	63-80	39-59	48.7	22-65	59.0	55.9	11.9-100	55.7	65.0	19.3-100	75.6	56.8	10-100	60.4	0	2	1

Number of trials summarized: 3

Table 3.2-78 Efficacy of GLOB2021dF against LEPTMA (SEVIND on stems) on oilseed rape – spring application – South -East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (SEV.INDEX)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	LEPTMA	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	SEVIND	50-57	3	63-80	39-59	23.7	5.5-33	32.6	75.9	47.6-100	80.0	79.7	50.1-100	88.9	74.1	40.2-100	82.0	0	2	1

Number of trials summarized: 3

Table 3.2-79 Efficacy of GLOB2021dF against LEPTMA (PESINC on root and pods) on oilseed rape – spring application – South-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	LEPTMA	BRSNW	All valid ass. spring appl. (BBCH 80-85)	ROOT	PESINC	55	1	59	37	59.0	-	-	76.2	-	-	82.8	-	-	87.3	-	-	0	1	0
SE	LEPTMA	BRSNW	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	55	1	59	37	34.8	-	-	88.8	-	-	93.3	-	-	91.6	-	-	0	1	0

Number of trials summarized: 3 (1 valid on root and pod)

Efficacy of GLOB2021dF against LEPTMA (on oilseed rape – spring application)

The presented data correspond with the requirements of the EPPO Standards PP 1/135(4) Phytotoxicity assessment, EPPO PP 1/152 (4) Design and analysis of efficacy evaluation trials, PP 1/181(4) Conduct and reporting of efficacy evaluation trials, including good experimental practice, PP 1/78(4) Root, stem, foliar and pod diseases of oilseed rape

The number of valid trials conducted in the southeast EPPO zone was understated according to EPPO Standard PP 1/226 (3) (Number of efficacy trials) to support the use against LEPTMA on oilseed rape (spring application). The insufficient number of trials do not provide sufficient justification for registering GLOB2021dF against *Plenodomus lingam* at spring application.

SCLESC - *Sclerotinia sclerotiorum*

Infection by root rot *Sclerotinia sclerotiorum* was verified at acceptable levels in 5 trials.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha applied at flowering reached moderate levels of control, well controlling the severity of the disease on stems and also the incidence on pods, being in general equivalent to the efficacy of the prothioconazole based standard. It is worthy to note that incidence levels were very high in the concerned trials.

Table 3.2-80 Efficacy of GLOB2021dF against SCLESC (PESINC on stems) on oilseed rape – spring application – South-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	57-64	5	38-80	24-59	78.4	35-100	96.0	34.2	9.1-68.8	36.0	39.2	10.2-74.3	37.7	33.3	4.2-74	20.3	0	4	1

Number of trials summarized: 5

Table 3.2-81 Efficacy of GLOB2021dF against SCLESC (PESSEV on stems) on oilseed rape – spring application – South-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESSEV	57-64	5	38-80	24-59	26.7	9.1-56.9	22.4	55.9	42.7-74.8	46.7	70.3	51.3-86.4	76.9	64.8	43.2-88.6	65.3	1	3	1

Number of trials summarized: 5

Table 3.2-82 Efficacy of GLOB2021dF against SCLESC (PESINC on pods) on oilseed rape – spring application – South-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)	% control												No of trials where product is >, <, = compared to standard		
											GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major	
SE	SCLESC	BRSNW	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	63	1	51	35	65.0	-	-	61.3	-	-	84.5	-	-	88.4	-	-	0	1	0	

Number of trials summarized: 3 (1 valid)

Efficacy of GLOB2021dF against SCLESC (on oilseed rape – spring application)

The presented data correspond with the requirements of the EPPO Standards PP 1/135(4) Phytotoxicity assessment, EPPO PP 1/152 (4) Design and analysis of efficacy evaluation trials, PP 1/181(4) Conduct and reporting of efficacy evaluation trials, including good experimental practice, PP 1/78(4) Root, stem, foliar and pod diseases of oilseed rape.

The number of five valid trials conducted in the southeast EPPO zone was understated according to EPPO Standard PP 1/226 (3) (Number of efficacy trials) to support the use against SCLESC on oilseed rape (spring application). The inconsistent results obtained, along with the insufficient number of trials, do not provide adequate justification for registering GLOB2021dF for this use.

ALTEBA - *Alternaria brassicae*

Infection by black spot of rape *Alternaria brassicae* was verified at acceptable levels in a total of 5 trials.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was good in controlling the disease incidence, particularly on pods. In all cases, GLOB2021dF showed to be comparable to the efficacy of the prothioconazole based standard.

Table 3.2-83 Efficacy of GLOB2021dF against ALTEBA (PESINC on leaves) on oilseed rape – spring application – South-East zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	ALTEBA	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	50-64	4	14-22	14-22	8.2	6.5-10.5	7.9	74.9	49.3-100	75.2	74.1	54.3-100	71.1	72.7	42.1-100	74.4	0	4	0
SE	ALTEBA	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESINC	50-55	2	41-43	21-21	22.7	9-36.3	22.7	95.8	91.5-100	95.8	96.5	93-100	96.5	96.4	92.8-100	96.4	0	2	0

Number of trials summarized: 4

Table 3.2-84 Efficacy of GLOB2021dF against ALTEBA (PESSEV on leaves) on oilseed rape – spring application – South-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
SE	ALTEBA	BRSNW	All valid ass. spring appl. (2-4w after A)	LEAF	PESSEV	50-64	3	14-20	14-20	7.6	5-9.8	8.0	72.6	55.6-100	62.1	81.2	69.4-100	74.3	80.3	69.4-100	71.4	0	3	0
SE	ALTEBA	BRSNW	All valid ass. spring appl. (2-4w after B)	LEAF	PESSEV	50-55	2	41-43	21-21	10.0	10-10	10.0	95.2	90.3-100	95.2	96.7	93.4-100	96.7	96.8	93.6-100	96.8	0	2	0

Number of trials summarized: 4

Table 3.2-85 Efficacy of GLOB2021dF against ALTEBA (PESINC on stems) on oilseed rape – spring application – South-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	maj
SE	ALTEBA	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	50-64	4	38-65	24-45	57.0	35-70	61.5	53.2	33.2-87.9	45.8	57.7	25.7-92.7	56.1	49.7	13.2-86.3	49.7	0	4	0

Number of trials summarized: 4

Table 3.2-86 Efficacy of GLOB2021dF against ALTEBA (PESSEV on stems) on oilseed rape – spring application – South-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	ALTEBA	BRSNW	All valid ass. spring appl. (BBCH 70-85)	STEM	PESSEV	55-64	2	48-59	34-37	6.3	4.3-8.2	6.3	69.6	44.1-95.1	69.6	71.7	46.5-96.8	71.7	67.2	39.6-94.8	67.2	0	2	0

Number of trials summarized: 4 (2 valid)

Table 3.2-87 Efficacy of GLOB2021dF against ALTEBA (PESINC on pods) on oilseed rape – spring application – South-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESINC%)			% control									No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	ALTEBA	BRSNW	All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	50-64	3	59-65	37-45	32.5	12.5-69	16.0	88.7	81.7-93.1	91.3	95.2	91.7-98.4	95.4	95.0	91.7-98.6	94.6	0	3	0

Number of trials summarized: 5 (3 valid)

Efficacy of GLOB2021dF against ALTEBA (on oilseed rape – spring application)

The presented data correspond with the requirements of the EPPO Standards PP 1/135(4) Phytotoxicity assessment, EPPO PP 1/152 (4) Design and analysis of efficacy evaluation trials, PP 1/181(4) Conduct and reporting of efficacy evaluation trials, including good experimental practice, PP 1/78(4) Root, stem, foliar and pod diseases of oilseed rape.

The five valid trials conducted in the southeast EPPO zone is below the required number according to EPPO Standard PP 1/226 (3) (Number of efficacy trials) to support the use against *Alternaria brassicae* on oilseed rape (spring application). Although the assessment results on leaf, pods and stem were favourable, the limited number of trials does not provide sufficient justification for registering GLOB2021dF for this use.

Summary (South-East EPPO zone)

The table below shows the overall mean efficacy results of GLOB2021dF applied at the target rate of 0.8 L/ha per disease, assessment timing and plant part assessed. The number of trials on which each result is based is also shown. Finally, the results obtained across all timings, rating types and plant parts are combined in a weighted mean in order to show the overall susceptibility level of each disease. Results in key plant parts as e.g. stems for Sclerotinia or pods for Alternaria are also highlighted.

EPPO zone	Target code	Grouping	Part rated	Type	Nb. trials	Infestation in the untreated control			% control									No of trials where product is >, <, = compared to standard [statistical]			All timings, rating types and parts	Nb. of assessm. (nb.trials)	Control provided
									GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha (Difcor 250 EC/Score in autumn trials)								
						Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
SE	LEPTMA*	All valid ass. autumn appl. (2-4w after A)	LEAF	PESINC	2	19.7	9.3-30	19.7	76.5	68.8-84.2	76.5	88.9	85.9-91.9	88.9	85.1	84.2-86	85.1	0	2	0	81	16 (6: 2 autumn, 4 spring)	Control
		All valid ass. autumn appl. (2-4w after B)	LEAF	PESINC	2	34.8	28.5-41	34.8	66.1	43.6-88.5	66.1	82.6	73-92.1	82.6	77.5	65.5-89.4	77.5	0	2	0			
		All valid ass. autumn appl. (2-4w after A)	LEAF	PESSEV	1	5.4	-	-	92.3	-	-	94.5	-	-	91.4	-	-	0	1	0			
		All valid ass. autumn appl. (2-4w after B)	LEAF	PESSEV	2	10.6	5.3-15.9	10.6	81.9	73.1-90.7	81.9	91.8	88.5-95.1	91.8	89.5	86.6-92.3	89.5	0	2	0			
		All valid ass. autumn appl. (BBCH 81-85)	ROOT	SEVIND	1	19.8	-	-	95.8	-	-	97.6	-	-	96.7	-	-	0	1	0			
		All valid ass. autumn appl. (BBCH 81-85)	STEM	SEVIND	1	48	-	-	68.2	-	-	85.3	-	-	82.3	-	-	0	1	0			
		All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	4	25.3	15-34	26	68	38.3-89.9	71.9	66.8	38.3-92.5	68.2	58.9	38.3-89.9	53.7	0	3	1			
		All valid ass. spring appl. (2-4w after A)	LEAF	PESSEV	3	10.9	9.3-12.1	11.3	74.5	54.2-87.6	81.8	76.5	54.2-90.4	85	68.7	54.2-88	63.9	0	3	0			
		SCLESC	All valid ass.	STEM	PESINC	5	78.4	35-100	96	34.2	9.1-68.8	36	39.2	10.2-74.3	37.7	33.3	4.2-74	20.3	0	4			

EPPO zone	Target code	Grouping	Part rated	Type	Nb. trials	Infestation in the untreated control			% control									No of trials where product is >, <, = compared to standard [statistical]			All timings, rating types and parts	Nb. of assessm. (nb.trials)	Control provided
									GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha (Difcor 250 EC/Score in autumn trials)								
		Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major							
		spring appl. (BBCH 70-85)																		>70% on stem severity)	(5)	control	
		All valid ass. spring appl. (BBCH 70-85)	STEM	PESSEV	5	26.7	9.1-56.9	22.4	55.9	42.7-74.8	46.7	70.3	51.3-86.4	76.9	64.8	43.2-88.6	65.3	1	3				1
		All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	1	65	-	-	61.3	-	-	84.5	-	-	88.4	-	-	0	1				0
	ALTEBA	All valid ass. spring appl. (2-4w after A)	LEAF	PESINC	4	8.2	6.5-10.5	7.9	74.9	49.3-100	75.2	74.1	54.3-100	71.1	72.7	42.1-100	74.4	0	4	0	79% (>80% on pods)	20 (5)	Control
		All valid ass. spring appl. (2-4w after B)	LEAF	PESINC	2	22.7	9-36.3	22.7	95.8	91.5-100	95.8	96.5	93-100	96.5	96.4	92.8-100	96.4	0	2	0			
		All valid ass. spring appl. (2-4w after A)	LEAF	PESSEV	3	7.6	5-9.8	8	72.6	55.6-100	62.1	81.2	69.4-100	74.3	80.3	69.4-100	71.4	0	3	0			
		All valid ass. spring appl. (2-4w after B)	LEAF	PESSEV	2	10	10-ott	10	95.2	90.3-100	95.2	96.7	93.4-100	96.7	96.8	93.6-100	96.8	0	2	0			
		All valid ass. spring appl. (BBCH 70-85)	STEM	PESINC	4	57	35-70	61.5	53.2	33.2-87.9	45.8	57.7	25.7-92.7	56.1	49.7	13.2-86.3	49.7	0	4	0			
		All valid ass. spring appl. (BBCH 70-85)	STEM	PESSEV	2	6.3	4.3-8.2	6.3	69.6	44.1-95.1	69.6	71.7	46.5-96.8	71.7	67.2	39.6-94.8	67.2	0	2	0			
		All valid ass. spring appl. (BBCH 80-85)	POD	PESINC	3	32.5	12.5-69	16	88.7	81.7-93.1	91.3	95.2	91.7-98.4	95.4	95	91.7-98.6	94.6	0	3	0			

* In line with the GAP table, the use against LEPTMA is supported by either trials with one autumn and one spring application or by the assessments performed after the 1st application only in spring trials. This is a worst case as GAP recommendation is maximum 2 applications being one in spring. It is correct to assume that control after only one spring application will be at least as good as after one autumn plus one spring application.

CONCLUSION (SOUTH-EAST EPPO ZONE)

A total of 10 trials were carried out in the South-East EPPO Zone to evaluate the efficacy of GLOB2021dF for the control of root, stem, foliar and pod diseases on oilseed rape. Those trials have been conducted between 2021 and 2022 in Bulgaria, Hungary and Romania. During the trials, the following diseases were assessed: black leg/ phoma stem canker (LEPTMA), root rot (SCLESC) and black spot of rape (ALTEBA).

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was equivalent to the efficacy of standard products based on prothioconazole applied according to local authorizations against all targets.

Generally, these results also confirm the results obtained from the Maritime, North-East and Mediterranean EPPO zones.

Reference is also made to the yield results under section 3.4.2, where the benefit of treatment with GLOB2021dF is demonstrated.

Extrapolation of the results achieved in all EPPO zones

Spring oilseed rape has a much shorter cycle than winter oilseed rape. Moreover, the occurrence of fungal diseases in spring oilseed rape is much less pronounced than in winter oilseed rape. Therefore, the results obtained in the major crop winter oilseed rape are deemed to be sufficient to cover the use also on spring oilseed rape without further data.

3.2.3.2 Cereals – leaf and ear diseases

In total, 131 efficacy trials were submitted to demonstrate the efficacy of GLOB2021dF for the use on cereals. These trials were carried out during 2022 and 2023 by GEP certified research institutions in Belgium, Denmark, the Czech Republic, the Netherlands and Sweden (47 trials, belonging to the Maritime EPPO Zone), in Poland, Estonia and Latvia (40 trials, belonging to the North-East EPPO Zone), in Croatia, Greece, Italy, Portugal and the coastal part of Slovenia (28 trials belonging to the Mediterranean EPPO Zone), as well as in Hungary, Romania and Slovenia (16 trials belonging to the South-East EPPO Zone).

Data are gathered per EPPO Zone. In the detailed tables presented in the Biological Assessment Dossier, trials performed in the Maritime EPPO Zone have their trial number highlighted in blue, but the ones which are also valid for Poland (Czech and German trials) are dark blue. Trials performed in the North-East EPPO Zone have their trial numbers marked in yellow, in Mediterranean zone marked in green and in the South-East EPPO zone are marked in amber as shown below. A concise summary is presented in the dRR.

Maritime EPPO Zone
Czech and German trials (Maritime EPPO Zone), valid for Poland
North-East EPPO Zone
Mediterranean EPPO Zone
South-East EPPO Zone

Information on trial methodology is presented in the tables below. Trial site information and application details are presented in Appendix 3 of the BAD for each EPPO zone.

According to the EPPO reference standard PP 1/26(4) Foliar and ear diseases on cereals, the assessments performed 2 to 3 weeks after each application on different leaf levels, as well as around BBCH 75-83 for assessments on the ears (*Fusarium* spp.) were summarized. When an assessment 2-3 weeks after application (± 2 to 3 days) was not available or no sufficient disease pressure was observed, a later assessment at about 4-6 weeks was chosen. As a rule, a maximum of 3 leaf levels were summarized, starting from the uppermost level with available data (i.e. up to L-3 after the first application and up to L-2 after the second application; at 4-6 weeks after the second application only assessments on the flag leaf were taken into account). In addition, results regarding the Fusarium index (FHB) and mycotoxins content are also summarized below.

Results in detailed tables in the BAD are sorted by crop, timing after each application and leaf level.

The disease control levels used for evaluation are recorded as a percentage and are displayed in summary tables reflecting HSE Data Requirement Handbook (ver. 2.2 June 2012, chapter 8, table 8.2 *Levels of pest control expected for effectiveness claims*):

Description of effectiveness against diseases	Mean level of control
Control (good to very good)	$\geq 80\%$ -100%
Partial / moderate / useful control	$\geq 60\%$ -79%
Reduction / some control	$\geq 40\%$ -59%
Not reliable control	<40%

Table 3.2-88: Details on trial methodology – Maritime EPPO zone

Guidelines	General guidelines	PP 1/135(4), EPPO PP 1/152 (4), PP 1/181(4)
	Specific guidelines	PP 1/26(4)
Experimental design	Plot design	RCBD (47)
	Plot size	18.5-50 m ²
	Number of replications	4 (47)
Crop	Trials per crop	AVESA (1), TRZAW (23); TTLWI (5); HORVW (11); HORVS (1); SECCW (4); TRZSP (2)
	Varieties per crop	AVESA: Marco Polo TRZAW: Campesino; Tobak; Fenomen; Calgary; LG Mocca; Patras; Talent; Bohemia; Ilusion; Energo; Hallfreda; Julius; Kalbex; LG Mocca; Pondus; Vanessa Viriato; Zyatt TRZSP: Rokosz; Wirtas TTLWI: Agostino; Avokado; Cedrico; Claudius; Tenor HORVW: Bordeaux; Breunskyli; Fabian; Kosmos; KWS Higgins; KWS Meridian; KWS Tardis; LG Zoro; Rumcajs; Titus HORVS: RGT Planet SECCW: Bojko; Daňkovské Turku; Herakles; Insepector
	Sowing period	Autumn sowing: 02/09-18/11 Spring sowing: 23/03-22/04
Application	Crop stage (BBCH) at application	1 appl. Trials: 61-65 2 appl. Trials - A: 31-33; B: 37-65
	Number of applications	1 (12 trials); 2 (35 trials)
	Intervals between applications	14-29
	Spray volumes	150-200 L/ha
Assessment	Assessment types	PESSEV% (summarized) PESINC% FHB index (summarized) Mycotoxin content (summarized) YIELD (summarized)
	Assessment dates	1) 2-3 weeks after 1st. Appl. 2) 2-3 weeks after 2nd. Appl. 3) 4-6 weeks after 2nd. Appl. 3) Harvest
Other relevant information	Soil types	loam; fine clay loam; loamy sand; sandy loam; sand; silty clay loam; clay loam; fine sandy loam; silt loam; sandy clay
	Natural / artificial inoculation...	6 trials artificial inoculation (Fusarium sp.)
	Field / Greenhouse...	Field
	GEP	All trials were performed according to GEP

Table 3.2-89: Details on trial methodology – North-East EPPO zone

Guidelines	General guidelines	PP 1/135(4), EPPO PP 1/152 (4), PP 1/181(4)
	Specific guidelines	PP 1/26(4)
Experimental design	Plot design	RCBD (40)
	Plot size	15-27.5 m ²
	Number of replications	4 (40)
Crop	Trials per crop	TRZAW (16); HORVW (7); HORVS (2); AVESA (7); SECCW (3); TTLWI (5)
	Varieties per crop	TRZAW: Arkadia; RGT Kilimanjoro; Dubai; Tobak; Arkadia; Edvins; Skagen; Belissa; Creator; Euforia; Fredis; Informer; Natula HORVW: Anja; Baracooda; SY Galileo; Sandra; KWS Kosmos; Morris; HORVS: Amadora; Raptus AVESA: Armani; Bingo; Montrose; Kusta; Stendes Dart; Bingo; Gepard SECCW: Elias; KWS Serafino; Vinetto TTLWI: Cappricia; ; Meloman; Ruja; Trismart
	Sowing period	Autumn sowing: 02/09-03/11 Spring sowing: 23/03-02/05
Application	Crop stage (BBCH) at application	1 appl. Trials:51-65 2 appl. Trials - A:32-37; B:39-71
	Number of applications	1 (18 trials); 2 (22 trials)
	Intervals between applications	14-32
	Spray volumes	150-200 L/ha
Assessment	Assessment types	PESSEV% (summarized) PESINC% FHB index (summarized) Mycotoxin content (summarized) YIELD (sumamrized)
	Assessment dates	1) 2-3 weeks after 1st. Appl. 2) 2-3 weeks after 2nd. Appl 3) 4-6 weeks after 2nd. Appl 3) Harvest
Other relevant information	Soil types	calcareous sandy loam; sandy clay; loam; sand; loamy sand; sandy loam; silty clay; sandy clay loam; silt loam; peaty loam; clayey sand; clay sandy loam
	Natural / artificial inoculation...	7 trials artificial inoculation (Fusarium sp.)
	Field / Greenhouse...	Field
	GEP	All trials were performed according to GEP

Table 3.2-90: Details on trial methodology – Mediterranean EPPO zone

Guidelines	General guidelines	PP 1/135(4), EPPO PP 1/152 (4), PP 1/181(4)
	Specific guidelines	PP 1/26(4)
Experimental design	Plot design	RCBD (28)
	Plot size	20-30 m ²
	Number of replications	4 (28)
Crop	Trials per crop	TRZAW (9); TRZDW (7); HORVW (10); SECCW (1); TTLWI (1)
	Varieties per crop	TRZAW: Platone; Rubisko; Elisavet; Kraljica; Ingenio; Andino; Mandica; Ingenio; Valbona TRZDW: Claudio; Antalis; Don Ricardo; Quadratto; Simeto HORVW: Zlatko; RGT Planet; Pewter; Sandra; Colorado; Zana SECCW: Vector RWA TTLWI: Riparo RWA
	Sowing period	27/09-19/01 TRZDW: 1 trial on 03/04
Application	Crop stage (BBCH) at application	1 appl. Trials:61-65 2 appl. Trials - A:31-37; B:39-59
	Number of applications	1 (9 trials); 2 (19 trials)
	Intervals between applications	19-28
	Spray volumes	150-200 L/ha
Assessment	Assessment types	PESSEV% (summarized) PESINC% FHB index (summarized) Mycotoxin content (summarized) YIELD (sumamrized)
	Assessment dates	1) 2-3 weeks after 1st. Appl. 2) 2-3 weeks after 2nd. Appl 3) 4-6 weeks after 2nd. Appl 3) Harvest
Other relevant information	Soil types	loam; sandy clay loam; clay; clay sandy loam; fine gravelly loam; clay loam; sandy clay; silt loam; sandy loam; sandy silt loam
	Natural / artificial inoculation...	3 trials artificial inoculation (Fusarium sp.)
	Field / Greenhouse...	Field
	GEP	All trials were performed according to GEP

Table 3.2-91: Details on trial methodology – South-East EPPO zone

Guidelines	General guidelines	PP 1/135(4), EPPO PP 1/152 (4), PP 1/181(4)
	Specific guidelines	PP 1/26(4)
Experimental design	Plot design	RCBD (16)
	Plot size	20-30 m ²
	Number of replications	4 (16)
Crop	Trials per crop	HORVW (5); TRZAW (11)
	Varieties per crop	HORVW: KWS Meridian; Cardinal; Maxim; Concordia; TRZAW: Nádor; PG. 102; KWS Sirtaki; GK Körös; CH Combin; Miranda; Nexera 86; Kraljica; GK Csillag; Miranda; Panaso
	Sowing period	15/09-15/11
Application	Crop stage (BBCH) at application	1 appl. Trials: 61 2 appl. Trials - A:31-33; B:39-59
	Number of applications	1 (5 trials); 2 (11 trials)
	Intervals between applications	19-32
	Spray volumes	200 L/ha
Assessment	Assessment types	PESSEV% (summarized) PESINC% FHB index (summarized) Mycotoxin content (summarized) YIELD (sumamrized)
	Assessment dates	1) 2-3 weeks after 1st. Appl. 2) 2-3 weeks after 2nd. Appl 3) 4-6 weeks after 2nd. Appl 3) Harvest
Other relevant information	Soil types	sandy loam; clay loam; silty sand; loamy clay; fine gravelly loam; sandy clay loam; loamy sand;
	Natural / artificial inoculation...	2 trials artificial inoculation (Fusarium sp.)
	Field / Greenhouse...	Field
	GEP	All trials were performed according to GEP

An overview on the reference standards used in the trials is presented in the table below.

Table 3.2-92: Presentation of reference standards used in cereal trials (efficacy trials)

Reference Standard	Countries where the product is registered	Authorization number	Active substance(s)	Formulation		Registered application rate	Application rate in trials (x treatment)	Re-mark
				Type	Concentration of a.s.			
Praktis	PT	1485	Prothioconazole	EC	250 g/L	0.8 L/ha	0.8 L/ha	
Protendo 300 EC	CZ	5683-0	Prothioconazole	EC	300 g/L	0.65 L/ha	0.65 L/ha	
	BE	11111P/B	Prothioconazole	EC	300 g/L	0.65 L/ha	0.65 L/ha	Max 2
	LV	714	Prothioconazole	EC	300 g/L	0.65 Lha	0.65 L/ha	
	NL	16355 N	Prothioconazole	EC	300 g/L	0.65 L/ha	0.65 L/ha	
	PL	R-224/2019	Prothioconazole	EC	300 g/L	0.65 L/ha	0.65 L/ha	
	EE	00800	Prothioconazole	EC	300 g/L	0.33 l/ha - 0.65 l/ha	0.65 L/ha	
	HR	UP/I-320-20/20-03/38	Prothioconazole	EC	300 g/L	0.65 L/ha	0.65 L/ha	
	PT	-	Prothioconazole	EC	300 g/L	0.65 L/ha	0.65 L/ha	
	SI	U34330-70/18/9	Prothioconazole	EC	300 g/L	0.65 L/ha	0.65 L/ha	
	EL	-	Prothioconazole	EC	300 g/L	0.65 L/ha	0.65 L/ha	
	IT	17987	Prothioconazole	EC	300 g/L	0.65 L/ha	0.65 L/ha	
Procer 300	PL	R-208/2019	Prothioconazole	EC	300 g/L	0.65 L/ha	0.65 L/ha	

Reference Standard	Countries where the product is registered	Authorization number	Active substance(s)	Formulation		Registered application rate	Application rate in trials (x treatment)	Re-mark
				Type	Concentration of a.s.			
Proline 250 EC	NL	12725	Prothioconazole	EC	250 g/L	0.8 L/ha	0.8 L/ha	Max 2
	EL	60838	Prothioconazole	EC	250 g/L	0.8 L/ha	0.8 L/ha	Max 2
	HR	UP/I-320-20/17-03/357	Prothioconazole	EC	250 g/L	0.8 L/ha	0.8 L/ha	
Hutton	CZ	4662-2	prothioconazole + spiroxamine + tebuconazole		100+250+100 g/L	0.8 L/ha	0.8 L/ha	
Zantara	EE	393	bixafen + tebuconazole	EC	50+166 g/L	0.9-1.2 L/ha	1.2 L/ha	
	PL	R-54/2014	bixafen + tebuconazole	EC	50+166 g/L	1-1.2 L/ha	1.2 L/ha	
	RO	2859/18.04.2011	bixafen + tebuconazole	EC	50+166 g/L	1-1.2 L/ha	1.2 L/ha	
Ascera Xpro	LV	549	bixafen + fluopyram + prothioconazole	EC	65 + 65 + 130g/L	0.6-1.2 L/ha	1.2-1.5 L/ha	
	PL	R-172/2018	bixafen + fluopyram + prothioconazole	EC	65 + 65 + 130g/L	1.5 L/ha	1.2-1.5 L/ha	Not auth. on oats
	HR	UP/I-320-20/14-01/459	bixafen + fluopyram + prothioconazole	EC	65 + 65 + 130g/L	1 – 1.5 l/ha	1.2-1.5 L/ha	
Aviator Xpro	PL	R- 11/2013	bixafen + prothioconazole	EC	75 + 150 g/L	0.8-1 L/ha	0.8-1 L/ha	
	CZ	5635-0	bixafen + prothioconazole	EC	75 + 150 g/L	0.8-1 L/ha	0.8 L/ha	
	RO	352PC	bixafen + prothioconazole	EC	75 + 150 g/L	0.8-1 L/ha on wheat 0.6-0.8 L/ha on barley	0.8-1 L/ha	
	PT	936	bixafen + prothioconazole	EC	75 + 150 g/L	0.8-1.25 L/ha	1-1.25 L/ha	
	GR	61125	bixafen + prothioconazole	EC	75 + 150 g/L	1.25 L/ha	1.25 L/ha	
	SE	5292	bixafen + prothioconazole	EC	75 + 150 g/L	0.3-1.0 L/ha	1 L/ha	
Siltra Xpro	SE	5284	bixafen + prothioconazole	EC	60 + 200 g/L	0.75 L/ha	0.75 L/ha	Max 2
	CZ	5569-0	bixafen + prothioconazole	EC	60 + 200 g/L	1 L/ha	1 L/ha	
	EE	527	bixafen + prothioconazole	EC	60 + 200 g/L	0.75-1 L/ha	1 L/ha	
	LV	479	bixafen + prothioconazole	EC	60 + 200 g/L	0.75-1 L/ha	1 L/ha	
	HU	6300/1204-1/2020	bixafen + prothioconazole	EC	60 + 200 g/L	0.8-1 L/ha	1 L/ha	
	SI	U34330-43/17/6	bixafen + prothioconazole	EC	60 + 200 g/L	1 L/ha	1 L/ha	

In the following summary tables, the name *Protendo 300 EC* or *Prothioconazole ref.* is used in headers as a collective name for related products in an EC formulation containing prothioconazole which are registered in several countries. The treatments always provided a sufficiently similar amount of active substance, namely 195 to 200 g a.s./ha. In the same way, all products based in a mixture of bixafen and a triazole (usually prothioconazole) were gathered and the name *bixafen+triazole mixtures* is used in tables headers. Exact product names for each trial can be found in right column in raw data tables in the BAD.

Maritime EPPO Zone

A total of 47 trials were carried out in the Maritime EPPO Zone to evaluate the efficacy of GLOB2021dF for the control of foliar and ear diseases on cereals. Those trials have been conducted during 2022 and 2023 in Belgium, Denmark, the Czech Republic, the Netherlands and Sweden.

During 2022 season, Protendo 300 EC (prothioconazole 300 EC) applied at 0.65 L/ha or Proline (prothioconazole 250 g/L) applied at 0.8 L/ha were included in all trials as a uniform reference except on oats. For this cereal, the reference product according to authorized uses in the countries where trials were performed is based on bixafen mixtures with a triazole. These mixtures were also used as uniform reference in nearly all 2023 trials and therefore results from this season are compared to products as Ascra or Aviator Xpro.

Data were summarized at the end of each table by an orthogonal comparison of the control achieved by the proposed rate of GLOB2021dF to the reference products at each relevant assessment timing. As a lower dose rate was tested only in part of the trials, these data are summarized only when representative and, if different, the relative number of trials is showed close to the mean value.

Results where the untreated check had a severity percentage below 5% or a second assessment falling within the same assessment timing window were not considered for means calculation and those data are shaded in grey in the BAD. Figures presented in italics for Untreated check in calculated control rows stand for the pressure.

Exceptionally, infestation between 4 and 5% were used when a tendency could be seen in disease development. The number of trials where product is statistically >, <, = compared to the reference standard is provided for each grouping.

Results

FUSASP – *Fusarium* spp.

Infection by *Fusarium* species was verified at acceptable levels in a total of 4 trials in 2022 and 6 trials on 2023, all on wheat. Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was good even after one single application at BBCH 61-65. Control levels were comparable to those of standard products based either on prothioconazole alone or on bixafen + triazole mixtures.

Results also demonstrate the benefit of the treatment with GLOB2021dF in the amount of mycotoxins in the harvested grains. The dose rate of 0.8 L/ha resulted in 70 to 89 % average reduction in the content of mycotoxins compared to the untreated control in trials where relevant amounts of mycotoxins were found.

No specific EPPO extrapolation table is available on foliar and ear diseases. Nevertheless, the Dutch guidance states that for *Fusarium* spp., it is possible to extrapolate from winter wheat to spring wheat, rye, triticale and spelt because in these crops same diseases can be found and their susceptibility to infection is lower. Also on UK, extrapolation is acceptable from winter wheat to minor cereals including oats, spring wheat, durum wheat, rye, triticale. Therefore, acceptability of the data provided on winter wheat to other crops may be taken into account by each cMS.

Table 3.2-93 Efficacy of GLOB2021dF against FUSASP (PESSEV on ear) on wheat – 1 application– Maritime EPPO zone- 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MAR	FUSACU	TRZAW	All valid ass. BBCH 75-83	EAR	PESSEV	4	21-29	-	32.0	6.9-77.8	21.7	55.3	25.7-74.2	60.6	67.3	40.1-81.3	74.0	64.7	40.1-86.3	66.2	0	4	0

Number of trials summarized: 4

Table 3.2-94 Efficacy of GLOB2021dF against FUSASP (PESSEV on ear) on wheat – 1 application– Maritime EPPO zone- 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control										No of trials where product is >, <, = compared to standard				
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MAR	FUSASP	TRZAW	All valid ass. BRCH 75-83	EAR	PESSEV	61-63	6	20-29	20-29	27.7	6.4-68.6	11.0	-	-	-	72.3	49.3-99.4	71.1	-	-	-	69.4	38.3-90.8	68.6	1	4	1

number of trials summarized: 6 wheat

*2 trials not included in means calculation due to very low levels detected (below 0.5 PPM)

Table 3.2-95 Efficacy of GLOB2021dF against FUSASP (FHB index -severity x incidence) on wheat – 1 application– Maritime EPPO zone – 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control (FHB index)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MAR	FUSACU	TRZAW	All valid ass. BBCH 75-83	EAR	SEVIND	4	21-29	-	2752.9	278.1-7779	1477.3	66.1	27.9-92.1	72.2	79.6	47.5-92.6	89.2	76.3	47.7-97.5	80.0	0	4	0

Number of trials summarized: 4

Table 3.2-96 Efficacy of GLOB2021dF against FUSASP (FHB index -severity x incidence) on wheat – 1 application– Maritime EPPO zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	FUSASP	TRZAW	All valid ass. BBCH 75-83	EAR	SEVIND	61-63	6	20-29	20-29	1841.8	7.7-5248.8	282.1	-	-	-	82.8	49.3-100	88.0	-	-	-	81.9	38.3-96.5	89.1	1	5	0

Table 3.2-97 Efficacy of GLOB2021dF against FUSASP (mycotoxin content) on wheat – 1 application– Maritime EPPO zone– 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control (PPM)			% control									No of trials where product is >, <, = compared to standard		
											GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha					
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MAR	FUSACU	TRZAW	All*	Micotoxin (PPM)	1	88-88	-	6.6	-	-	82.3	-	-	88.9	-	-	91.5	-	-	0	1	0

*2 trials not included in means calculation due to very low levels detected (below 0.5 PPM). Number of trials assessed: 3 (1 valid)

Table 3.2-98 Efficacy of GLOB2021dF against FUSASP (mycotoxin content) on wheat – 1 application– Maritime EPPO zone– 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1* appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	FUSASP	TRZAW	All*	SEED	Micotoxin (PPM)	61-63	3	78-97	78-97	3.0	2-4.3	2.8	62.8 (n=2)	53-72.6	62.8	70.0	63.7-73.6	72.7	-	-	-	75.6	64.6-83.2	79.1	n.a.	n.a	n.a

number of trials summarized: 6 wheat

*3 trials not included in means calculation due to very low levels detected (below 0.5 PPM)

Efficacy of GLOB2021dF against *Fusarium spp.*

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products) and PP1/226(3) Number of efficacy trials

Infection by *Fusarium* species was verified at acceptable levels in a total of 4 trials in 2022 and 6 trials in 2023, all conducted on wheat. In all these trials, the disease infestation level in untreated plots was sufficient (at least 5% pest severity at one leaf stage) to validate the trials and reliably assess the efficacy of GLOB2021dF. The data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was acceptable (moderate achievement), with a mean efficacy of 70.3% (n=10), even after a single application at BBCH 61-65. The results also indicated that the efficacy of GLOB2021dF at the proposed label rate was statistically equivalent to, or in some cases superior to, standard products.

Additionally, GLOB2021dF treatment reduced mycotoxin levels in harvested grain. A dose rate of 0.8 L/ha resulted in an average reduction of 70% to 89% in mycotoxin levels compared to the untreated control in trials where significant levels of mycotoxins were present.

SEPTTR – *Zymoseptoria tritici*

Infection by *Zymoseptoria tritici* was verified at acceptable levels in a total of 5 trials in 2022 (4 on wheat and 1 on triticale) and 15 trials in 2023 (7 on wheat, 2 on spelt, 2 on rye, 4 on triticale). Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good, especially on the top leaves including the flag leaf. Control levels were in general comparable to those of standard products based on prothioconazole alone or on bixafen + triazole mixtures.

In addition, results from 1 supportive trial targeted for *Fusarium* on wheat with a single late application (BBCH 61-65) indicate also a good control of SEPTTR.

No specific EPPO extrapolation table is available on foliar and ear diseases. Nevertheless, the Dutch guidance states that for leaf and ear diseases, it is possible to extrapolate from winter wheat to spring wheat, rye, triticale and spelt because in these crops same diseases can be found and their susceptibility to infection is lower. Also on UK, extrapolation is acceptable from winter wheat to minor cereals including oats, spring wheat, durum wheat, rye, triticale. Therefore, acceptability of the substantial data provided on winter wheat as well as supportive data on minor cereals in support of other crops may be taken into account by each cMS. In addition, based on practical experience it is known that if *Zymoseptoria tritici* can be well controlled, LEPTNO *Parastagonospora nodorum* (syn.= *Leptosphaeria nodorum*, leaf infection) can also be well controlled. Therefore, the data provided will support by extrapolation all used claimed in the table “All intended uses” in Part B – Section 0.

Table 3.2-99: Efficacy of GLOB2021dF against SEPTTR (PESSEV %) on cereals (wheat, triticale) at different leaf levels– Maritime EPPO zone – 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MAR	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FLAG	33	1	25	-	9.5	-	-	100.0	-	-	100.0	-	-	100.0	-	-	0	1	0
				FL-1	33	1	25	-	11.6	-	-	48.4	-	-	98.3	-	-	100.0	-	-	0	1	0
				FL-2	33	1	25	-	53.8	-	-	33.5	-	-	32.7	-	-	33.9	-	-	0	1	0
			All valid ass. (2-3w after B)	FLAG	33	1	49	24	5	-	-	76.3	-	-	100.0	-	-	100.0	-	-	0	1	0
				FL-1	32-33	3	37-49	14-24	10.8	6.3-14.9	11.3	86.0	79-100	79.1	90.1	79-100	91.4	86.3	77.7-90.8	90.3	0	3	0
				FL-2	32-33	3	35-49	14-24	12.6	8.1-20	9.7	75.4	50.5-89.3	86.3	83.4	66.2-100	84.1	75.5	63.9-84.5	78.1	1	1	1
		TTLWI	All valid ass. (2-3w after A)	FL-1	33	1	20	-	7.0	-	-	52.9	-	-	67.0	-	-	77.3	-	-	0	1	0
				FL-2	33	1	20	-	9.8	-	-	72.1	-	-	76.5	-	-	71.7	-	-	0	1	0
				FL-1	33	1	34	14	2.3	-	-	100.0	-	-	100.0	-	-	100.0	-	-	0	1	0
			All valid ass. (2-3w after B)	FL-2	33	1	34	14	13.0	-	-	84.2	-	-	84.2	-	-	84.2	-	-	0	1	0

Number of trials summarized: 4 wheat, 1 triticale

Table 3.2-100: Efficacy of GLOB2021dF against SEPTTR (PESSEV %) on cereals (wheat, rye, spelt, triticale) at different leaf levels– Maritime EPPO zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MAR	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FL-2	32-32	4	21-24	21-24	13.6	5-25.9	11.7	-	-	-	83.4	51.5-100	91.0	-	-	-	78.7	46.6-100	84	1	3	0
				FL-3	32-32	4	21-22	21-22	24.8	4.3-48.4	23.3	-	-	-	66.2	29-96.4	69.6	70.9	67.7-74.1	71	76.9 (n=3)	45.3-100	85	3	0	0
			All valid ass. (2-3w after B)	FLAG	32-32	1	45-45	21-21	4.5	4.5-4.5	4.5	-	-	-	100.0	100-100	100.0	-	-	-	100.0	100-100	100.0	0	1	0
				FL-1	32-32	6	31-45	10-22	14.1	5.6-30.3	11.3	-	-	-	87.0	50-100	92.1	89.7	87.7-92.9	88.5	95.9	83.5-100	98.2	1	5	0
				FL-2	32-32	5	31-45	10-22	38.0	14.4-62.5	39.1	-	-	-	80.9	37.2-97.3	96.0	87.8	81.3-94.2	87.8	89.4	61.1-100	95.3	1	4	0
			All valid ass. (4-6w after B)	FLAG	33	1	66	38	10	-	-	-	-	-	69.4	-	-	60.6	-	-	-	-	-	0	1	0
MAR	SEPTTR	TRZSP		FL-2	32.0	1	22.0	22.0	7.5	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)	% control												No of trials where product is >, <, = compared to standard				
										GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures							
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
			All valid ass. (2-3w after A)	FL-3	32.0	1	22.0	22.0	38.8	-	-	-	-	-	80.8	-	-	-	-	-	79.9	-	-	0	1	0
			All valid ass. (2-3w after B)	FLAG	32.0	1	28.0	7.0	14.7	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0
				FL-1	32.0	1	28.0	7.0	26.6	-	-	-	-	-	91.9	-	-	-	-	-	100.0	-	-	1	0	0
				FL-2	32.0	1	28.0	7.0	37.5	-	-	-	-	-	95.0	-	-	-	-	-	95.0	-	-	0	1	0
			All valid ass. (4-6w after B)	FLAG	32.0	1	50.0	29.0	75.0	-	-	-	-	-	96.7	-	-	-	-	-	100.0	-	-	1	0	0
			MAR	SEPTTR	SECCW	All valid ass. (2-3w after A)	FL-2	32.0	1	25.0	25.0	41.3	-	-	-	-	-	79.8	-	-	-	-	-	80.7	-	-
All valid ass. (2-3w after B)	FL-1	32.0				1	46.0	21.0	17.5	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0
All valid ass. (4-6w after B)	FLAG	32.0				1	50.0	29.0	20.3	-	-	-	-	-	89.1	-	-	-	-	-	100.0	-	-	1	0	0
MAR	SEPTTR	TTLWI	All valid ass. (2-3w after A)	FL-2	32-32	1	21-21	21-21	8.0	8-8	8.0	-	-	-	98.7	98.7-98.7	98.7	-	-	-	98.7	98.7-98.7	98.7	0	1	0
				FL-3	32-32	1	21-21	21-21	41.9	-	-	-	-	-	80.2	-	-	-	-	-	81.6	-	-	0	1	0
			All valid ass. (2-3w after B)	FLAG	32-32	1	38-38	17-17	7.8	7.8-7.8	7.8	-	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0
				FL-1	32-32	2	38-42	17-21	12.1	6.6-17.5	12.1	-	-	-	87.7	80.8-94.6	87.7	-	-	-	90.4	80.8-100	90.4	0	2	0
				FL-2	32-32	3	35-42	14-21	21.9	10.6-37.5	17.5	-	-	-	87.5	67.5-100	95.0	-	-	-	87.7	68.9-100	94.1	0	3	0
			All valid ass. (4-6w after B)	FLAG	32-32	1	50-50	29-29	35.9	-	-	-	-	-	91.0	-	-	-	-	-	97.4	-	-	1	0	0
				FL-1	32-32	1	52-52	31-31	8.4	-	-	-	-	-	91.7	-	-	-	-	-	93.5	-	-	1	0	0

number of trials summarized: 7 wheat, 2 spelt, 2 rye, 4 triticale

Supportive data from FUSASP trials

Table 3.2-101: Efficacy of GLOB2021dF against SEPTTR (PESSEV %) on cereals (wheat) at different leaf levels – 1 late application – – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	maj
MAR	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FLAG	PESSEV	1	21	-	6.6	-	-	85.7	-	-	90.5	-	-	87.5	-	-	0	1	0

Number of trials summarized: 1

Efficacy of GLOB2021dF against *Septoria tritici* (SEPTTR) on wheat

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products) and PP1/226(3) Number of efficacy trials

A total of 11 trials were conducted to evaluate the efficacy of GLOB2021dF against *Septoria tritici* (SEPTTR) on wheat. In all these trials, the disease infestation level in untreated plots was sufficient (at least 5% pest severity at one leaf stage) to validate the trials and reliably assess the efficacy of GLOB2021dF. Data demonstrated that the efficacy of GLOB2021dF, when applied twice at the proposed label rate of 0.8 L/ha, was acceptable at 90.2% (14-21 DAB), being statistically equivalent to, and in some cases superior to, the efficacy of standard products against SEPTTR.

As the zRMS, PL accepts the submitted data for this intended use. The concerned Member States within the maritime EPPO zone are kindly requested to decide whether to accept this efficacy data set.

Efficacy of GLOB2021dF against SEPTTR on triticale

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

The number of trials (five) conducted in the maritime EPPO zone was insufficient according to EPPO standard PP 1/226 (3) (Number of Efficacy Trials). In all these trials, the disease infestation level in untreated plots was adequate (at least 5% pest severity at one leaf stage) to validate the trials and reliably assess the efficacy of GLOB2021dF. Data demonstrated that the efficacy of GLOB2021dF, when applied twice at the proposed label rate of 0.8 L/ha, was acceptable at 89.6% (14-21 DAB), being statistically equivalent to, and in some cases superior to, the efficacy of standard products, which was 90.2%.

The concerned Member States belonging to the maritime EPPO zone are invited to decide whether to accept the limited number of efficacy trials GLOB2021dF against *Septoria tritici* (SEPTTR) in triticale based on extrapolation from wheat.

In Germany, *Septoria* in triticale is defined as *Septoria spp.* (SEPTSP), since *Zymoseptoria tritici* very rarely occurs in triticale; the dominant pathogen is *Parastagonospora nodorum*.

Efficacy of GLOB2021dF against SEPTTR on rye

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

The number of trials (two) conducted in the maritime EPPO zone was insufficient according to EPPO standard PP 1/226 (3) (Number of Efficacy Trials). In these trials, the applicant showed good efficacy of 89,6% for control *Septoria tritici* (SEPTTR). The concerned Member States belonging to the maritime EPPO zone are invited to decide whether to accept the limited number of efficacy trials, based on extrapolation from wheat.

Efficacy of GLOB2021dF against SEPTTR on spelt

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products)

The number of trials (two) conducted in the maritime EPPO zone was insufficient according to EPPO standard PP 1/226 (Number of Efficacy Trials). In these trials, the applicant showed good efficacy of 95,9% for control *Septoria tritici* (SEPTTR). The concerned Member States belonging to the maritime EPPO zone are invited to decide whether to accept the limited number of efficacy trials, based on extrapolation from winter wheat.

PUCCRE/PUCCRT/PUCCRR - *Puccinia recondita*, *Puccinia triticina* (syn. *Puccinia recondita f. sp. triticina*), *Puccinia recondita f. sp. recondita*

Infection by brown rusts *Puccinia recondita* and related “*forma specialis*” was verified at acceptable levels in a total of 6 trials in Maritime zone carried out in 2022 (1 on wheat) and 2023 (2 on rye, 2 on wheat, 1 on triticale), mainly after the second application. Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good, being numerically equivalent to the standard products based either on prothioconazole alone or on bixafen + triazole mixtures.

Table 3.2-102 Efficacy of GLOB2021dF against PUCCRE (PESSEV) on cereals (rye, wheat, triticale) at different leaf levels - Maritime EPPO Zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MAR	PUCCRE/PUCCRR	SECCW	All valid ass. (2-3w after B)	FL-1	32	1	42	21	5	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0
			All valid ass. (4-6w after B)	FLAG	32-32	1	50-50	29-29	60.9	60.9-60.9	60.9	-	-	-	96.3	-	-	-	-	-	100.0	-	-	1	0	0
MAR	PUCCRE	TRZAW	All valid ass. (2-3w after B)	FLAG	32	1	39	18	10.6	-	-	-	-	-	96.4	-	-	100.0	-	-	-	-	-	1	0	0
				FL-1	32	1	39	18	18.1	-	-	-	-	-	97.9	-	-	100.0	-	-	-	-	-	1	0	0
				FL-2	32	1	39	18	20	-	-	-	-	-	97.5	-	-	100.0	-	-	-	-	-	1	0	0
				All valid ass. (4-6w after B)	FLAG	32-37	2	47-55	34-47	64.1	62.5-65.6	64.1	-	-	-	83.3	69-97.5	83.3	95.0	94.7-95.2	95.0	-	-	-	1	1
MAR	PUCCRE	TTLWI	All valid ass. (4-6w after B)	FLAG	32.0	1	50.0	29.0	60.9	-	-	-	-	-	94.9	-	-	-	-	-	100.0	-	-	1	0	0

number of trials summarized: 6 (2 rye, 3 wheat, 1 triticale)

Efficacy of GLOB2021dF against *Puccinia recondita* f. sp. *Triticina*

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy) and PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

According to the applicant, three efficacy trials were conducted on wheat, two on rye, and one on triticale against brown rusts. EPPO guideline PP 1/226 (3), which advises on the 'Number of efficacy trials,' states that 10 (6-15) trials are required for a major pathogen in a major crop, and 3 (2-6) trials are needed for minor uses to demonstrate adequate efficacy.

Although some positive results were observed, the overall evidence is limited and does not adequately support the efficacy of GLOB2021dF at the proposed dose of 0.8 L/ha for control *Puccinia recondita* (PUCRE) on wheat, rye, and triticale.

PUCCSI/PUCST – *Puccinia striiformis tritici*, *Puccinia striiformis*

Infection by stripe (yellow) rusts *Puccinia striiformis* identified also by its “forma specialis” *Puccinia striiformis* f. sp. *tritici* was verified at acceptable levels in a total of 3 trials in 2022 and 1 trial in 2023 on the host crop wheat. Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good. Good results were observed even after a long time after the applications, i.e. 4 to 6 weeks, well protecting the flag leaf. The results were always equivalent to the standard products based either on prothioconazole alone or on bixafen + triazole mixtures.

Table 3.2-103: Efficacy of GLOB2021dF against PUCCSI/PUC CST (PESSEV) on wheat at different leaf levels – Maritime EPPO zone – 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	majo
MAR	PUCCSI/ PUCST	TRZAW	All valid ass. (2-3w after A)	FLAG	33	1	25	-	7.0	-	-	81.3	-	-	100.0	-	-	100.0	-	-	0	1	0
			All valid ass. (2-3w after B)	FLAG	32-33	2	37-38	14-21	4.6	3.5-5.6	4.6	100.0	100-100	100.0	100.0	100-100	100.0	100.0	100-100	100.0	0	2	0
				FL-1	32-33	2	38-49	14-24	9.7	7.5-11.8	9.7	93.3	86.5-100	93.3	100.0	100-100	100.0	100.0	100-100	100.0	0	2	0
			FL-2	32-32	1	38-38	14-14	11.3	11.3-11.3	11.3	100.0	100-100	100.0	100.0	100-100	100.0	100.0	100-100	100.0	0	1	0	
			All valid ass. (4-6w after B)	FLAG	33-33	1	50-50	34-34	8.6	8.6-8.6	8.6	82.4	82.4-82.4	82.4	95.3	95.3-95.3	95.3	92.6	92.6-92.6	92.6	0	1	0

Number of trials summarized: 3

Table 3.2-104: Efficacy of GLOB2021dF against PUCCSI/PUC CST (PESSEV) on wheat at different leaf levels – Maritime EPPO zone – 2023 data

EPPO zone		Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard			
	GLOB2021dF at 0.48 L/ha												GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures									
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major	
MAR		PUCCSI/	TRZAW	All valid ass. (2-3w after B)	FLAG	32	1	45	21	15.5	-	-	93.8	-	-	98.3	-	-	-	-	-	-	87.6	-	-	0	1	0
		PUC CST			FL-1	32-32	1	45	21	18.0	-	-	95.4	-	-	96.4	-	-	-	-	-	-	97.3	-	-	0	1	0

Number of trials summarized: 1

Efficacy of GLOB2021dF against *Puccinia striiformis tritici* on wheat

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products)

According to the applicant, three efficacy trials were conducted on wheat. EPPO guideline PP1/226 (3), which advises on the 'Number of efficacy trials', states that a number of 10 (6-15) trials for a major pathogen in a major crop and 3 (2-6) trials for minor uses are required to demonstrate adequate efficacy.

While some acceptable results were presented, the overall evidence is considered limited and insufficient to demonstrate the efficacy of GLOB2021dF at the claimed dose rate of 0.8 L/ha for effective control of *Puccinia striiformis tritici* on wheat.

PUCCHD – *Puccinia hordei*

Infection by brown rust *Puccinia hordei* on barley was verified at acceptable levels in a total of 2 trials on winter barley in 2022 and 2 trials in 2023 (1 on winter barley and one on spring barley). Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was good and in general comparable to those of standard products based on prothioconazole alone or on bixafen + triazole mixtures.

Table 3.2-105: Efficacy of GLOB2021dF against PUCCHD (PESSEV) on barley at different leaf levels – Maritime EPPO zone – 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard			
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha						
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	majo	
MAR	PUCCHD	HORVW	All valid ass. (2-3w after A)	FLAG	31	1	29	29	14.3	-	-	-	-	-	82.9	-	-	90.4	-	-	0	1	0	
				FL-1	31	1	29	29	12.5	-	-	-	-	-	87.5	-	-	65.0	-	-	0	1	0	
				FL-2	31	1	29	29	6.3	-	-	-	-	-	100.0	-	-	100.0	-	-	0	1	0	
			All valid ass. (2-3w after B)	FLAG	31	1	54	25	12.5	-	-	-	-	-	37.5*	-	-	90.8	-	-	1	0	0	
				FL-1	31-32	2	41-54	21-25	10.5	8.4-12.5	10.5	-	-	-	93.8	87.5-100	93.8	82.5	65-100	82.5	0	2	0	
				FL-2	31	1	54	25	16.8	-	-	-	-	-	68.3	-	-	80.0	-	-	0	1	0	
			All valid ass. (4-6w after B)	FLAG	32-32	1	52-52	32-32	17.5	17.5-17.5	17.5	-	-	-	91.8	91.8-91.8	91.8	96.8	96.8-96.8	96.8	1	0	0	

Number of trials summarized: 2

* if we consider the control based on the mean of all plots (APC) and not paired comparisons, the percentage of control would be 68%

Table 3.2-106: Efficacy of GLOB2021dF against PUCCHD (PESSEV) on barley at different leaf levels – Maritime EPPO zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MAR	PUCCHD	HORVW	All valid ass. (2-3w after B)	FLAG	32-32	1	33-33	12-12	7.5	7.5-7.5	7.5	-	-	-	75.4	75.4-75.4	75.4	-	-	-	95.6	95.6-95.6	95.6	1	0	0
			FL-2	33	1	37	23	6.8	-	-	-	-	-	88.8	-	-	97.8	-	-	-	-	-	-	0	1	0
			All valid ass. (4-6w after B)	FL-1	33	1	44	30	45	-	-	-	-	-	91.3	-	-	94.7	-	-	-	-	-	-	0	1

number of trials summarized: 1 winter + 1 spring barley

Efficacy of GLOB2021dF against *Puccinia hordei* on barley

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy) and PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

Infection by brown rust *Puccinia hordei* on barley was verified at acceptable levels in a total of three trials on winter barley in 2022 and 2023. EPPO guideline PP1/226 (3), which advises on the 'Number of efficacy trials', states that a number of 10 (6-15) trials for a major pathogen in a major crop and 3 (2-6) trials for minor uses are required to demonstrate adequate efficacy.

Although some positive results were observed, the overall evidence is limited and does not adequately support the efficacy of GLOB2021dF at the claimed dose rate of 0.8 L/ha for effective control of *Puccinia hordei* on barley.

PUCCCA – *Puccinia coronata* var. *avenae*

Data on crown rust of oats *Puccinia coronata* var. *avenae* is available from 1 trial in the Maritime EPPO zone, reaching total control. Reference is made to table presented below in the North-East EPPO zone section, where this trial is combined with other 5 trials, which provided high levels of control at the target rate of 0.8 L/ha, being always equivalent to the efficacy of the reference standards for the crop oat in the zone (bixafen+triazole mixtures).

The applicant deems that, taking into account the very limited number of plant protection products available for the control of crown rust of oats and the data provided from 5 trials in the North-east EPPO zone, the use against *Puccinia coronata* var. *avenae* in countries belonging to the Maritime zone can also be supported.

Efficacy of GLOB2021dF against *Puccinia coronata* var. *avenae*

No data have been presented for this use, which is not acceptable. EPPO guideline PP 1/226 (3), which advises on the 'Number of Efficacy Trials,' specifies that 10 trials (6-15) are required for a major pathogen in a major crop, and 3 trials (2-6) for minor uses to demonstrate adequate efficacy. The applicant has suggested that concerned Member States (cMS) may consider extrapolating data from the North-East EPPO zone.

PYRNAV - *Pyrenophora chaetomioides* (syn *P. avenae*)

Data on leaf blotch of oat *Pyrenophora chaetomioides* (syn *P. avenae*) is available from 1 trial in the Maritime EPPO zone, reaching close to 90% of control. Reference is made to table presented below in the North-East EPPO zone section, where this trial is combined with 5 trials carried out in Poland and Latvia, being always equivalent to the efficacy of the reference standards for the crop oat in the zone (bixafen+triazole mixtures).

The applicant deems that, taking into account the very limited number of plant protection products available for the control of leaf blotch of oats and the data provided from 5 trials in the North-east EPPO zone in addition to the trial in Maritime zone, the use against *Pyrenophora chaetomioides* (syn *P. avenae*) in countries belonging to the Maritime zone can also be supported.

Efficacy of GLOB2021dF against *Pyrenophora chaetomioides* (syn *P. avenae*)

No data have been presented for this use, which is not acceptable. EPPO guideline PP 1/226 (3), which advises on the 'Number of Efficacy Trials,' specifies that 10 trials (6-15) are required for a major pathogen in a major crop, and 3 trials (2-6) for minor uses to demonstrate adequate efficacy. The applicant has suggested that concerned Member States (cMS) may consider extrapolating data from the North-East EPPO zone.

PYRNTE - *Pyrenophora teres*

Infection by Net blotch of barley *Pyrenophora teres* was verified at acceptable levels in 7 trials carried out in the Maritime zone in 2023 (being 1 on spring barley). The trials were characterized by a late appearance of the disease. In support of France, reference is also made to one trial in Mediterranean zone.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was good and control levels were in general comparable to those of standard products based on prothioconazole alone or on bixafen + triazole mixtures.

Table 3.2-107: Efficacy of GLOB2021dF against PYRNTE on winter barley (PESSEV) at different leaf levels – Maritime EPPO Zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MAR	PYRNTE	HORVW	All valid ass. (2-3w after B)	FLAG	32-32	2	38-40	18-19	23.4	4.5-42.2	23.4	-	-	-	95.2	90.4-100	95.2	-	-	-	94.4	91.7-97	94.4	1	1	0
				FL-1	32-32	4	33-46	12-21	10.3	6.8-14.1	10.1	-	-	-	76.8	61.3-84.5	80.7	-	-	-	84.0	64.9-93.9	88.6	1	3	0
				FL-2	32-32	5	33-44	12-21	11.7	4.5-19.1	11.9	-	-	-	83.2	74.1-91.4	83.8	100.0	-	-	83.4 (n=4)	74.1-94.6	82.5	1	4	0
MAR	PYRNTE	HORVS	All valid ass. (4-6w after B)	FL-1	33.0	1	44.0	30.0	17.5	-	-	-	-	-	83.3	-	-	64.6	-	-	-	-	-	0	1	0
				FL-2	33.0	1	44.0	30.0	35.0	-	-	-	-	-	64.6	-	-	58.3	-	-	-	-	-	0	1	0

Number of trials summarized: 7 (6 winter, 1 spring barley)

Efficacy of GLOB2021dF against *Pyrenophora teres* on winter barley

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products) and PP1/226(3) Number of efficacy trials

Barley net blotch (*Pyrenophora teres*) infection was confirmed at acceptable levels in six trials on winter barley in 2023, with two applications. In these trials the applicant showed good efficacy, achieving 85.0% control of *Pyrenophora teres*. The Member States concerned within the maritime EPPO zone are invited to decide whether to accept the data on the basis of results from a single growing season.

RAMUCC – *Ramularia collo-cygni*

Infection by ramularia leaf spot of barley was verified at acceptable levels in a total of 4 trials in the Maritime zone in 2023 (including one trial on spring barley), mostly after the second application. Reference is also made to 1 trial performed in the northern part of Slovenia (South-East EPPO zone), very close to the Austrian border being considered relevant also for Maritime zone countries. In support of France, reference is also made to one trial in Mediterranean zone.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was moderate and, in general, equivalent to the efficacy of standard products based on prothioconazole alone or on bixafen + triazole mixtures.

Table 3.2-108 Efficacy of GLOB2021dF against RAMUCC (PESSEV) on cereals (barley) at different leaf levels – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <= compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MAR	RAMUCC	HORVW	All valid ass. (2-3w after B)	FLAG	31-32	2	40-40	15-19	28.3	4.9-51.6	28.3	-	-	-	62.4	33.7-91	62.4	-	-	-	67.1	41.9-92.2	67.1	0	2	0
			FL-1	31-32	2	40-40	15-19	36.6	7.6-65.6	36.6	-	-	-	57.7	29.1-86.2	57.7	-	-	-	70.6	46.5-94.6	70.6	1	1	0	
			FL-2	31-31	1	40-40	15-15	12.3	12.3-12.3	12.3	-	-	-	48.8	48.8-48.8	48.8	-	-	-	53.7	53.7-53.7	53.7	0	1	0	
			All valid ass. (4-6w after B)	FLAG	32-32	1	63-63	36-36	29.7	29.7-29.7	29.7	-	-	-	72.3	72.3-72.3	72.3	-	-	-	78.8	78.8-78.8	78.8	1	0	0
MAR	RAMUCC	HORVS	All valid ass. (2-3w after B)	FL-2	33	1	37	23	5	-	-	-	-	92.0	-	-	98.0	-	-	-	-	-	-	0	1	0
			All valid ass. (4-6w after B)	FL-1	33	1	44	30	10	-	-	-	-	61.3	-	-	72.5	-	-	-	-	-	-	0	1	0
			FL-2	33	1	44	30	15	-	-	-	-	71.7	-	-	66.7	-	-	-	-	-	-	0	1	0	

Number of trials summarized: 4 (3 winter barley, 1 spring barley)

Supportive data from SI close to Maritime zone border:

Table 3.2-109 Efficacy of GLOB2021dF against RAMUCC (PESSEV) on cereals (barley) at different leaf levels – Northern Slovenia data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	RAMUCC	HORVVW	All valid ass. (2-3w after A)	FL-1	32.0	1	24.0	24.0	7.5	-	-	100.0	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0
			FL-2	32-32	1	24-24	24-24	21.5	-	-	100.0	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0	
			FLAG	32-32	1	40-40	16-16	11.5	-	-	100.0	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0	
			All valid ass. (2-3w after B)	FL-1	32-32	1	40-40	16-16	29.4	-	-	100.0	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0
			FL-2	32-32	1	40-40	16-16	54.5	-	-	96.3	-	-	99.3	-	-	-	-	-	98.7	-	-	0	1	0	

Number of trials summarized: 1

Efficacy of GLOB2021dF against *Ramularia collo-cygni*

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products)

According to the applicant, three efficacy trials were conducted in one growing season on winter barley. EPPO guideline PP 1/226 (3), which advises on the 'Number of Efficacy Trials,' states that 10 trials (6-15) are required for a major pathogen in a major crop, and 3 trials (2-6) for minor uses to demonstrate adequate efficacy. While some favorable results were presented, this evidence is considered limited and insufficient to demonstrate the efficacy of GLOB2021dF at the claimed dose rate of 0.8 L/ha for effective control of *Ramularia collo-cygni* (RAMUCC) on barley.

RHYNSE - *Rhynchosporium secalis*

Infection by Leaf blotch of cereals *Rhynchosporium secalis* was verified at acceptable levels in a total of 8 trials carried out in 2023 (3 on winter barley, 4 on rye, 1 on triticale).

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good and in general comparable to those of standard products based on prothioconazole alone or on bixafen + triazole mixtures.

No specific EPPO extrapolation table is available on foliar and ear diseases. Nevertheless, the Dutch guidance states that for *Rhynchosporium secalis*, data on winter barley and spring barley are equally supportive because no differences exist in disease pressure or susceptibility. Therefore, results on major host winter barley will also support the use on spring barley.

Table 3.2-110: Efficacy of GLOB2021dF against RHYNSE (PESSEV) on cereals (barley, rye and triticale) at different leaf levels – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MAR	RHYNSE	HORVW	All valid ass. (2-3w after A)	FL-2	32-32	3	20-25	20-25	6.1	5.7-6.3	6.2	-	-	-	88.6	87.4-90	88.5	-	-	-	87.9	83.7-90	90.0	0	3	0
				FL-3	32-32	2	20-20	20-20	10.3	5.6-15	10.3	-	-	-	76.1	73-79.1	76.1	83.4 (n=1)	-	-	-	95.8 (n=1)	-	-	1	1
			All valid ass. (2-3w after B)	FLAG	32-32	1	38-38	18-18	18.0	18-18	18.0	-	-	-	98.0	98-98	98.0	-	-	-	98.0	98-98	98.0	0	1	0
				FL-1	32-32	2	38-46	18-21	28.1	6.1-1.4	28.1	-	-	-	89.0	80.3-68.3	89.0	-	-	-	93.7	88.9-76.7	93.7	0	2	0
				FL-2	32-32	1	38-38	18-18	62.5	62.5-62.5	62.5	-	-	-	90.2	90.2-90.2	90.2	-	-	-	96.5	96.5-96.5	96.5	0	1	0
MAR	RHYNSE	SECCW	All valid ass. (2-3w after A)	FL-2	32-32	2	21-25	21-25	5.3	5-5.6	5.3	-	-	-	96.8	96-97.5	96.8	-	-	-	98.8	97.5-100	98.8	0	2	0
				FL-3	32-32	1	24-24	24-24	8.8	8.8-8.8	8.8	-	-	-	85.8	85.8-85.8	85.8	-	-	-	66.3	66.3-66.3	66.3	0	0	1
			All valid ass. (2-3w after B)	FL-1	32-32	4	27-46	6-21	8.5	5.8-15.6	6.3	-	-	-	89.0	79.2-95.8	90.4	-	-	-	95.6	92.5-100	95.0	2	2	0
				FL-2	32-32	2	27-45	6-21	22.8	6.4-39.1	22.8	-	-	-	75.2	57.7-92.6	75.2	-	-	-	81.8	66.7-96.8	81.8	1	1	0
MAR	RHYNSE	TTLWI	All valid ass. (2-3w after A)	FL-2	32	1	21	21	4.7	-	-	-	-	-	78.4	-	-	-	-	-	68.9	-	-	0	1	0
				FL-1	32	1	42	21	8.1	-	-	-	-	-	95.2	-	-	-	-	-	93.7	-	-	0	1	0
			All valid ass. (2-3w after B)	FL-2	32	1	42	21	8.8	-	-	-	-	-	82.8	-	-	-	-	-	84.3	-	-	0	1	0

number of trials summarized: 8 (3 w barley, 4 rye, 1 triticale)

Efficacy of GLOB2021dF against *Rhynchosporium secalis*

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

According to the applicant, three efficacy trials were conducted on winter barley, four on rye and one on triticale conducted in 2023. EPPO guideline PP1/226 (3), which advises on the 'Number of efficacy trials', states that a number of 10 (6-15) trials for a major pathogen in a major crop and 3 (2-6) trials for minor uses are required to demonstrate adequate efficacy. These trials should be done across the range of climatic and environmental conditions likely to be encountered, and over at least 2 years. While some favorable results were presented, this evidence is considered limited and insufficient to demonstrate the efficacy of GLOB2021dF at the claimed dose rate of 0.8 L/ha for effective control of *Rhynchosporium secalis* on winter barley, rye, and triticale.

ERYSGR – *Blumeria graminis*

Infection by powdery mildew of cereals *Blumeria graminis* was verified at acceptable levels in 8 trials in the Maritime zone (3 on winter barley, 1 on rye, 2 on winter wheat, 1 on spelt, 1 on triticale) carried out during 2022 and 2023.

According to EPPO Guideline 1/226(3) the number of trials required to demonstrate the efficacy against a certain pest can be reduced for closely related pest or against the same pests on different crops. Case in point is powdery mildew of cereals (*Blumeria graminis*) and its host-specific forms ERYSGT (*Blumeria graminis* f. sp. *Tritici*, powdery mildew of wheat), ERYSGH (*Blumeria graminis* f. sp. *Hordei*, powdery mildew of barley) and ERYSGA (*Blumeria graminis* f. sp. *Avenae*, powdery mildew of oat). It is important to note that these are not sub-species but rather specialised varieties of the same pathogen with no morphological differences that allow them to be distinguished from one-another. Rather, the EPPO code that is given to the pathogen is inferred from the host it is observed on. Thus, the representative results split for individual host crops are presented afterwards.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was from moderate to good and on average equivalent to the efficacy of standard products based either on prothioconazole alone or on bixafen + triazole mixtures.

Table 3.2-111 Efficacy of GLOB2021dF against *Blumeria graminis* species (PESSEV) on cereals (wheat, barley, rye, spelt and triticale) at different leaf levels – Maritime EPPO Zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MAR	ERYSGR	HORVW	All valid ass. (2-3w after A)	FL-1	55-55	1	21-21	21-21	5.3	5.3-5.3	5.3	-	-	-	65.4	-	-	-	-	-	75.2	-	-	0	1	0
			All valid ass. (2-3w after B)	FL-2	32-32	2	38-41	17-20	8.3	5.3-11.3	8.3	-	-	-	98.8	97.5-100	98.8	100.0	100-100	100.0	-	-	-	0	2	0
MAR	ERYSGR	SECCW	All valid ass. (2-3w after A)	FL-2	32	1	21	21	5.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0
			All valid ass. (2-3w after B)	FL-3	32-32	1	21-21	21-21	41.6	-	-	-	-	-	87.0	-	-	90.9	-	-	-	-	-	0	1	0
MAR	ERYSGR	TRZAW	All valid ass. (2-3w after A)	FL-2	32-32	1	21-21	21-21	5.0	-	-	-	-	-	100.0	-	-	100.0	-	-	-	-	-	0	1	0
			All valid ass. (2-3w after B)	FL-2	32-32	2	38-44	14-22	16.7	11.6-21.8	16.7	-	-	-	84.5	83.4-85.5	84.5	88.6	-	-	100.0	-	-	1	1	0
MAR	ERYSGR	TRZSP	All valid ass. (2-3w after A)	FL-2	32	1	22	22	19	-	-	-	-	-	78.8	-	-	-	-	-	100.0	-	-	1	0	0
MAR	ERYSGR	TTLWI	All valid ass. (2-3w after A)	FL-2	32-32	1	21-21	21-21	19.0	-	-	-	-	-	96.7	-	-	-	-	-	100.0	-	-	0	1	0

number of trials summarized: 8 (3 w barley, 1 rye, 2 w wheat, 1 spelt, 1 triticale)

Efficacy of GLOB2021dF against *Blumeria graminis*

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

According to the applicant, three efficacy trials were conducted on winter barley, one on rye, two on winter wheat, one on spelt and one on triticale conducted in 2022 - 2023. EPPO guideline PP1/226 (3), which advises on the 'Number of efficacy trials', states that a number of 10 (6-15) trials for a major pathogen in a major crop and 3 (2-6) trials for minor uses are required to demonstrate adequate efficacy.

While some favorable results were presented, this evidence is considered limited and insufficient to demonstrate the efficacy of GLOB2021dF at the claimed dose rate of 0.8 L/ha for effective control of *Blumeria graminis* on winter barley, rye, winter wheat, spelt and triticale.

Summary (Maritime EPPO zone)

The summary tables below present the results shown above for the maximum proposed rate of 0.8 L/ha and combines, for each disease, the most biologically relevant results (i.e. FHB index (SEVIND) for *Fusarium* sp. and PESSEV % up to L-3 for other diseases) obtained across all timings and plant parts in a weighted mean. The overall susceptibility level of each disease is indicated.

Table 3.2-112 Overall efficacy and susceptibility level to GLOB2021dF at the target rate of 0.8 L/ha on cereals against Fusarium – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
MAR (2022)	FUSACU	TRZAW	All valid ass. BBCH 75-83	EAR	SEVIND	61-65	4	21-29	-	2752.9	278.1-7779	1477.3	66.1	27.9-92.1	72.2	79.6	47.5-92.6	89.2	76.3	47.7-97.5	80	-	-	-	0	4	0	82	10 (10)	Control
MAR (2023)	FUSASP	TRZAW	All valid ass. BBCH 75-83	EAR	SEVIND	61-63	6	20-29	20-29	1841.8	7.7-5248.8	282.1	-	-	-	82.8	49.3-100	88	-	-	-	81.9	38.3-96.5	89.1	1	5	0			

*68% considering the control based on the mean of all plots (APC) and not paired comparisons

Table 3.2-113 Overall efficacy and susceptibility level to GLOB2021dF at the target rate of 0.8 L/ha on cereals against leaf diseases – Maritime EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided	
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures									
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn				minor
MAR (2022)	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FLAG	PESSEV	33	1	25	-	9.5	-	-	100	-	-	100	-	-	100	-	-	-	-	-	0	1	0	82	31 (11)	Control	
				FL-1	PESSEV	33	1	25	-	11.6	-	-	48.4	-	-	98.3	-	-	100	-	-	-	-	-	0	1	0				
			All valid ass. (2-3w after B)	FL-2	PESSEV	33	1	25	-	53.8	-	-	33.5	-	-	32.7	-	-	33.9	-	-	-	-	-	-	0	1				0
				FLAG	PESSEV	33	1	49	24	5	-	-	76.3	-	-	100	-	-	100	-	-	-	-	-	-	0	1				0
				FL-1	PESSEV	32-33	3	37-49	14-24	10.8	6.3-14.9	11.3	86	79-100	79.1	90.1	79-100	91.4	86.3	77.7-90.8	90.3	-	-	-	-	0	3				0
FL-2	PESSEV	32-33	3	35-49	14-24	12.6	8.1-20	9.7	75.4	50.5-89.3	86.3	83.4	66.2-100	84.1	75.5	63.9-84.5	78.1	-	-	-	-	1	1	1							
MAR (2023)	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FL-2	PESSEV	32-32	4	21-24	21-24	13.6	5-25.9	11.7	-	-	-	83.4	51.5-100	91	-	-	-	78.7	46.6-100	84	1	3	0				
				FL-3	PESSEV	32-32	4	21-22	21-22	24.8	4.3-48.4	23.3	-	-	-	66.2	29-96.4	69.6	70.9	67.7-74.1	71	76.9 (n=3)	45.3-100	85	3	0	0				
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-32	1	45-45	21-21	4.5	4.5-4.5	4.5	-	-	-	100	100-100	100	-	-	-	100	100-100	100	0	1	0				
				FL-1	PESSEV	32-32	6	31-45	11-22	14.1	5.6-30.3	11.3	-	-	-	87	50-100	92.1	89.7	87.7-92.9	88.5	95.9	83.5-100	98.2	1	5	0				
			All valid ass. (4-6w after B)	FL-2	PESSEV	32-32	5	31-45	11-22	38	14.4-62.5	39.1	-	-	-	80.9	37.2-97.3	96	87.8	81.3-94.2	87.8	89.4	61.1-100	95.3	1	4	0				
				FLAG	PESSEV	33	1	66	38	10	-	-	-	-	-	69.4	-	-	60.6	-	-	-	-	-	0	1	0				
MAR (2023)	SEPTTR	TRZSP	All valid ass. (2-3w after A)	FL-2	PESSEV	32	1	22	22	7.5	-	-	-	-	-	100	-	-	-	-	-	100	-	-	0	1	0	94	6 (2)	Control	
				FL-3	PESSEV	32	1	22	22	38.8	-	-	-	-	-	80.8	-	-	-	-	-	79.9	-	-	0	1	0				
			All valid ass. (2-3w after B)	FLAG	PESSEV	32	1	28	7	14.7	-	-	-	-	-	100	-	-	-	-	-	100	-	-	0	1	0				
				FL-1	PESSEV	32	1	28	7	26.6	-	-	-	-	-	91.9	-	-	-	-	-	100	-	-	1	0	0				
			All valid ass. (4-6w after B)	FL-2	PESSEV	32	1	28	7	37.5	-	-	-	-	-	95	-	-	-	-	-	95	-	-	0	1	0				
				FLAG	PESSEV	32	1	50	29	75	-	-	-	-	-	96.7	-	-	-	-	-	100	-	-	1	0	0				

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
MAR (2023)	SEPTTR	SECCW	All valid ass. (2-3w after A)	FL-2	PESSEV	32	1	25	25	41.3	-	-	-	-	-	79.8	-	-	-	-	-	80.7	-	-	0	1	0	90	3 (2)	Control
			All valid ass. (2-3w after B)	FL-1	PESSEV	32	1	46	21	17.5	-	-	-	-	-	100	-	-	-	-	-	100	-	-	0	1	0			
			All valid ass. (4-6w after B)	FLAG	PESSEV	32	1	50	29	20.3	-	-	-	-	-	89.1	-	-	-	-	-	100	-	-	1	0	0			
MAR (2022)	SEPTTR	TTLWI	All valid ass. (2-3w after A)	FL-1	PESSEV	33	1	20	-	7	-	-	52.9	-	-	67	-	-	77.3	-	-	-	-	-	0	1	0	88	14 (5)	Control
			All valid ass. (2-3w after A)	FL-2	PESSEV	33	1	20	-	9.8	-	-	72.1	-	-	76.5	-	-	71.7	-	-	-	-	-	0	1	0			
			All valid ass. (2-3w after B)	FL-1	PESSEV	33	1	34	14	2.3	-	-	100	-	-	100	-	-	100	-	-	-	-	-	0	1	0			
			All valid ass. (2-3w after B)	FL-2	PESSEV	33	1	34	14	13	-	-	84.2	-	-	84.2	-	-	84.2	-	-	-	-	-	0	1	0			
MAR (2023)	SEPTTR	TTLWI	All valid ass. (2-3w after A)	FL-2	PESSEV	32-32	1	21-21	21-21	8	08-ago	8	-	-	-	98.7	98.7-98.7	98.7	-	-	-	98.7	98.7-98.7	98.7	0	1	0	88	14 (5)	Control
			All valid ass. (2-3w after A)	FL-3	PESSEV	32-32	1	21-21	21-21	41.9	-	-	-	-	-	80.2	-	-	-	-	-	81.6	-	-	0	1	0			
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-32	1	38-38	17-17	7.8	7.8-7.8	7.8	-	-	-	100	-	-	-	-	-	100	-	-	0	1	0			
			All valid ass. (2-3w after B)	FL-1	PESSEV	32-32	2	38-42	17-21	12.1	6.6-17.5	12.1	-	-	-	87.7	80.8-94.6	87.7	-	-	-	90.4	80.8-100	90.4	0	2	0			
			All valid ass. (2-3w after B)	FL-2	PESSEV	32-32	3	35-42	14-21	21.9	10.6-37.5	17.5	-	-	-	87.5	67.5-100	95	-	-	-	87.7	68.9-100	94.1	0	3	0			
			All valid ass. (4-6w after B)	FLAG	PESSEV	32-32	1	50-50	29-29	35.9	-	-	-	-	-	91	-	-	-	-	-	97.4	-	-	1	0	0			
			All valid ass. (4-6w after B)	FL-1	PESSEV	32-32	1	52-52	31-31	8.4	-	-	-	-	-	91.7	-	-	-	-	-	93.5	-	-	1	0	0			

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures										
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn				minor	equal
MAR (2022)	PUCCSI/PUCCST	TRZAW	All valid ass. (2-3w after A)	FLAG	PESSEV	33	1	25	-	7	-	-	81.3	-	-	100	-	-	100	-	-				0	1	0	88	9 (4)	Control		
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-33	2	37-38	14-21	4.6	3.5-5.6	4.6	100	100-100	100	100	100-100	100	100	100-100	100				0	2	0					
			FL-1	PESSEV	32-33	2	38-49	14-24	9.7	7.5-11.8	9.7	93.3	86.5-100	93.3	100	100-100	100	100	100-100	100				0	2	0						
			FL-2	PESSEV	32-32	1	38-38	14-14	11.3	-	-	100	-	-	100	-	-	100	-	-				0	1	0						
MAR (2023)	PUCCSI/PUCCST	TRZAW	All valid ass. (4-6w after B)	FLAG	PESSEV	33-33	1	50-50	34-34	8.6	-	-	82.4	-	-	95.3	-	-	92.6	-	-				0	1	0	87.6	97.3	0	1	0
			FL-1	PESSEV	32-32	1	45-45	21-21	18	-	-	95.4	-	-	96.4	-	-	-	-	-	87.6	-	-	0	1	0						
MAR (2023)	PUCCRE/PUCCRR	SECCW	All valid ass. (2-3w after B)	FL-1	PESSEV	32	1	42	21	5	-	-	-	-	-	100	-	-	-	-	100	-	-	0	1	0	92	10 (6)	Control			
			All valid ass. (4-6w after B)	FLAG	PESSEV	32-32	1	50-50	29-29	60.9	60.9-60.9	60.9	-	-	-	96.3	-	-	-	-	100	-	-	1	0	0						
		TRZAW	All valid ass. (2-3w after B)	FLAG	PESSEV	32	1	39	18	10.6	-	-	-	-	-	96.4	-	-	100	-	-	-	-	-	1	0				0		
			FL-1	PESSEV	32	1	39	18	18.1	-	-	-	-	-	97.9	-	-	100	-	-	-	-	-	1	0	0						
			FL-2	PESSEV	32	1	39	18	20	-	-	-	-	-	97.5	-	-	100	-	-	-	-	-	1	0	0						
		All valid ass. (4-6w after B)	FLAG	PESSEV	32-37	2	47-55	34-47	64.1	62.5-65.6	64.1	-	-	-	83.3	69-97.5	83.3	95	94.7-95.2	95	-	-	-	1	1	0						

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
		TTLWI	All valid ass. (4-6w after B)	FLAG	PESSEV	32	1	50	29	60.9	-	-	-	-	-	94.9	-	-	-	-	-	100	-	-	1	0	0			
MAR (2022)	PUCCHD	HORVW	All valid ass. (2-3w after A)	FLAG	PESSEV	31	1	29	29	14.3	-	-	-	-	-	82.9	-	-	90.4	-	-				0	1	0	86	11 (4)	Control
				FL-1	PESSEV	31	1	29	29	12.5	-	-	-	-	-	87.5	-	-	65	-	-				0	1	0			
				FL-2	PESSEV	31	1	29	29	6.3	-	-	-	-	-	100	-	-	100	-	-				0	1	0			
			All valid ass. (2-3w after B)	FLAG	PESSEV	31	1	54	25	12.5	-	-	-	-	-	37.5*	-	-	90.8	-	-				1	0	0			
				FL-1	PESSEV	31-32	2	41-54	21-25	10.5	8.4-12.5	10.5	-	-	-	93.8	87.5-100	93.8	82.5	65-100	82.5				0	2	0			
				FL-2	PESSEV	31	1	54	25	16.8	-	-	-	-	-	68.3	-	-	80	-	-				0	1	0			
			All valid ass. (4-6w after B)	FLAG	PESSEV	32-32	1	52-52	32-32	17.5	17.5-17.5	17.5	-	-	-	91.8	91.8-91.8	91.8	96.8	96.8-96.8	96.8				1	0	0			
MAR (2023)	PUCCHD	HORVW	All valid ass. (2-3w after B)	FLAG	PESSEV	32-32	1	33	12	7.5	7.5-7.5	7.5	-	-	-	75.4	75.4-75.4	75.4	-	-	-	95.6	95.6-95.6	95.6	1	0	0	82	13 (7)	Control
				FL-2	PESSEV	33	1	37	23	6.8	-	-	-	-	-	88.8	-	-	97.8	-	-	-	-	-	0	1	0			
			All valid ass. (4-6w after B)	FL-1	PESSEV	33	1	44	30	45	-	-	-	-	-	91.3	-	-	94.7	-	-	-	-	-	-	0	1			
MAR (2023)	PYRNTE	HORVW	All valid ass. (2-3w after B)	FLAG	PESSEV	32-32	2	38-40	18-19	23.4	4.5-42.2	23.4	-	-	-	95.2	90.4-100	95.2	-	-	-	94.4	91.7-97	94.4	1	1	0	82	13 (7)	Control
				FL-1	PESSEV	32-32	4	33-46	12-21	10.3	6.8-14.1	10.1	-	-	-	76.8	61.3-84.5	80.7	-	-	-	84	64.9-93.9	88.6	1	3	0			
				FL-2	PESSEV	32-32	5	33-44	12-21	11.7	4.5-19.1	11.9	-	-	-	83.2	74.1-91.4	83.8	100	-	-	83.4 (n=4)	74.1-94.6	82.5	1	4	0			
		HORVS	All valid ass. (4-6w after B)	FL-1	PESSEV	33	1	44	30	17.5	-	-	-	-	-	83.3	-	-	64.6	-	-	-	-	-	0	1	0			
FL-2	PESSEV			33	1	44	30	35	-	-	-	-	-	64.6	-	-	58.3	-	-	-	-	-	0	1	0					

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
MAR (2023)	RAMUCC	HORVW	All valid ass. (2-3w after B)	FLAG	PESSEV	31-32	2	40-40	15-19	28.3	4.9-51.6	28.3	-	-	-	62.4	33.7-91	62.4	-	-	-	67.1	41.9-92.2	67.1	0	2	0	78	14 (5)	Moderate control
			FL-1	PESSEV	31-32	2	40-40	15-19	36.6	7.6-65.6	36.6	-	-	-	57.7	29.1-86.2	57.7	-	-	-	70.6	46.5-94.6	70.6	1	1	0				
			FL-2	PESSEV	31-31	1	40-40	15-15	12.3	12.3-12.3	12.3	-	-	-	48.8	48.8-48.8	48.8	-	-	-	53.7	53.7-53.7	53.7	0	1	0				
		HORVS	All valid ass. (4-6w after B)	FLAG	PESSEV	32-32	1	63-63	36-36	29.7	29.7-29.7	29.7	-	-	-	72.3	72.3-72.3	72.3	-	-	-	78.8	78.8-78.8	78.8	1	0	0			
			All valid ass. (2-3w after B)	FL-2	PESSEV	33	1	37	23	5	-	-	-	-	-	92	-	-	98	-	-	-	-	-	0	1	0			
			All valid ass. (4-6w after B)	FL-1	PESSEV	33	1	44	30	10	-	-	-	-	-	61.3	-	-	72.5	-	-	-	-	-	0	1	0			
			FL-2	PESSEV	33	1	44	30	15	-	-	-	-	-	71.7	-	-	66.7	-	-	-	-	-	0	1	0				
			SE (2023 Close to MAR border)	RAMUCC	HORVW	All valid ass. (2-3w after A)	FL-1	PESSEV	32	1	24	24	7.5	-	-	100	-	-	100	-	-	-	100	-	-	0	1			
FL-2	PESSEV	32-32	1			24-24	24-24	21.5	-	-	100	-	-	100	-	-	-	100	-	-	0	1	0							
All valid ass. (2-3w after B)	FLAG	PESSEV	32-32			1	40-40	16-16	11.5	-	-	100	-	-	100	-	-	-	100	-	-	0	1	0						
FL-1	PESSEV	32-32	1			40-40	16-16	29.4	-	-	100	-	-	100	-	-	-	100	-	-	0	1	0							
FL-2	PESSEV	32-32	1			40-40	16-16	54.5	-	-	96.3	-	-	99.3	-	-	-	98.7	-	-	0	1	0							
MAR (2023)	RHYNSE	HORVW	All valid ass. (2-3w after A)			FL-2	PESSEV	32-32	3	20-25	20-25	6.1	5.7-6.3	6.2	-	-	-	88.6	87.4-90	88.5	-	-	-	87.9	83.7-90	90	0	3	0	
			FL-3	PESSEV	32-32	2	20-20	20-20	10.3	5.6-15	10.3	-	-	-	76.1	73-79.1	76.1	83.4 (n=1)	-	-	-	95.8 (n=1)	-	-	1	1	0			
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-32	1	38-38	18-18	18	18-18	18	-	-	-	98	98-98	98	-	-	-	98	98-98	98	0	1	0			
			FL-1	PESSEV	32-32	2	38-46	18-21	28.1	6.1-1.4	28.1	-	-	-	89	80.3-68.3	89	-	-	-	93.7	88.9-76.7	93.7	0	2	0				
			FL-2	PESSEV	32-32	1	38-38	18-18	62.5	62.5-62.5	62.5	-	-	-	90.2	90.2-90.2	90.2	-	-	-	96.5	96.5-96.5	96.5	0	1	0				

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided					
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures													
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn				mi-nor	equal	ma-jor		
		SECCW	All valid ass. (2-3w after A)	FL-2	PESSEV	32-32	2	21-25	21-25	5.3	5-5.6	5.3	-	-	-	96.8	96-97.5	96.8	-	-	-	98.8	97.5-100	98.8	0	2	0								
				FL-3	PESSEV	32-32	1	24-24	24-24	8.8	8.8-8.8	8.8	-	-	-	85.8	85.8-85.8	85.8	-	-	-	66.3	66.3-66.3	66.3	0	0	1								
			All valid ass. (2-3w after B)	FL-1	PESSEV	32-32	4	27-46	giu-21	8.5	5.8-15.6	6.3	-	-	-	89	79.2-95.8	90.4	-	-	-	95.6	92.5-100	95	2	2	0								
				FL-2	PESSEV	32-32	2	27-45	giu-21	22.8	6.4-39.1	22.8	-	-	-	75.2	57.7-92.6	75.2	-	-	-	81.8	66.7-96.8	81.8	1	1	0								
		TTLWI	All valid ass. (2-3w after A)	FL-2	PESSEV	32	1	21	21	4.7	-	-	-	-	-	78.4	-	-	-	-	-	-	68.9	-	-	0	1				0				
				FL-1	PESSEV	32	1	42	21	8.1	-	-	-	-	-	95.2	-	-	-	-	-	-	93.7	-	-	0	1				0				
			All valid ass. (2-3w after B)	FL-2	PESSEV	32	1	42	21	8.8	-	-	-	-	-	82.8	-	-	-	-	-	-	84.3	-	-	0	1				0				
		MAR (2023)	ERYSGR	HORVW	All valid ass. (2-3w after A)	FL-1	PESSEV	55-55	1	21-21	21-21	5.3	5.3-5.3	5.3	-	-	-	65.4	-	-	-	-	-	75.2	-	-	0				1	0	90	11 (8)	Control
						All valid ass. (2-3w after B)	FL-1	PESSEV	32-32	2	38-41	17-20	8.3	5.3-11.3	8.3	-	-	-	98.8	97.5-100	98.8	100	100-100	100	-	-	-				0	2			
					FL-2	PESSEV	32-32	1	38-38	17-17	7.6	-	-	-	-	-	100	-	-	100	-	-	-	-	-	0	1				0				
				SECCW	All valid ass. (2-3w after A)	FL-2	PESSEV	32	1	21	21	5	-	-	-	-	-	100	-	-	-	-	-	100	-	-	0				1	0			
All valid ass. (2-3w after B)	FL-2					PESSEV	32-32	1	21-21	21-21	5	-	-	-	-	-	100	-	-	100	-	-	-	-	-	0	1	0							
FL-3	PESSEV				32-32	1	21-21	21-21	41.6	-	-	-	-	-	87	-	-	90.9	-	-	-	-	-	0	1	0									
TRZAW	All valid ass. (2-3w after A)			FL-2	PESSEV	32-32	2	38-44	14-22	16.7	11.6-21.8	16.7	-	-	-	84.5	83.4-85.5	84.5	88.6	-	-	100	-	-	1	1	0								
	All valid ass.			FL-2	PESSEV	32-32	2	38-44	14-22	16.7	11.6-21.8	16.7	-	-	-	84.5	83.4-85.5	84.5	88.6	-	-	100	-	-	1	1	0								

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
			(2-3w after B)																											
		TRZSP	All valid ass. (2-3w after A)	FL-2	PESSEV	32	1	22	22	19	-	-	-	-	78.8	-	-	-	-	-	100	-	-	1	0	0				
		TTLWI	All valid ass. (2-3w after A)	FL-2	PESSEV	32-32	1	21-21	21-21	19	-	-	-	-	96.7	-	-	-	-	-	100	-	-	0	1	0				

*68% considering the control based on the mean of all plots (APC) and not paired comparisons

PUCCCA and PYRNAV on oats:

Data is available from 1 trial in the Maritime EPPO zone. Reference is made to the North-East EPPO zone section, where this trial is combined with other trials from N-E EPPO zone.

North-East EPPO Zone

A total of 40 trials were carried out in the North-East EPPO Zone to evaluate the efficacy of GLOB2021dF for the control of foliar and ear diseases on cereals. Those trials have been conducted during 2022 and 2023 in Poland, Estonia and Latvia.

Those were combined with the results of the Czech trials (34 trials) since this is a neighbouring country and considered as valid to Poland, the only MS in the Central zone belonging to the North-East climatic zone. The combined results from 64 trials are thus shown in the tables below. In the detailed tables presented in the Biological Assessment Dossier, trials highlighted in yellow are those conducted in the North-East EPPO Zone, while dark blue ones are those conducted in CZ.

During 2022 season, Protendo 300 EC (prothioconazole 300 EC) applied at 0.65 L/ha or Proline/Procer (prothioconazole 250 g/L) applied at 0.8 L/ha were included in all trials as a uniform reference except on oats. For this cereal, the reference product according to authorized uses in the countries where trials were performed is based on bixafen mixtures with a triazole. These mixtures were also used as uniform reference in nearly all 2023 trials and therefore results from this season are compared to products as Siltra Xpro and Aviator Xpro.

Data were summarized at the end of each table by an orthogonal comparison of the control achieved by maximum proposed rate of GLOB2021dF to the reference product at each relevant assessment timing. As a lower dose rate was tested only in part of the trials, these data are summarized only when representative and, if different, the relative number of trials is showed close to the mean value.

Results where the untreated check had a severity percentage below 5% or a second assessment falling within the same assessment timing window were not considered for means calculation and those data are shaded in grey in the BAD. Figures presented in italics for Untreated check in calculated control rows stand for the pressure.

Exceptionally, infestation between 4 and 5% were used when a tendency could be seen in disease development. The number of trials where product is statistically >, <, = compared to the reference standard is provided for each grouping.

Results

FUSASP – *Fusarium* spp.

Infection by *Fusarium* species was assessed in 10 valid trials on wheat (5 during 2022 and 5 during 2023) as well as 1 trial on triticale performed in the North-East EPPO climatic zone (1 additional trial in Estonia had not significant levels, KCP 6.2-73). In support of Poland, additional data from 6 trials conducted on wheat in CZ are summarized.

Data demonstrated that the efficacy of GLOB2021dF in controlling FHB at the proposed rate of 0.8 L/ha was good even after one single application at BBCH 61-65. Control levels were in general comparable to those of standard products based on prothioconazole alone or on bixafen + triazole mixtures.

Results also demonstrate the benefit of the treatment with GLOB2021dF in the amount of mycotoxins in the harvested grains. The dose rate of 0.8 L/ha resulted in 55 to 76 % average reduction in the content of mycotoxins compared to the untreated control in trials where relevant amounts of mycotoxins were found.

No specific EPPO extrapolation table is available on foliar and ear diseases. Nevertheless, the Dutch guidance states that for *Fusarium* spp., it is possible to extrapolate from winter wheat to spring wheat, rye, triticale and spelt because in these crops same diseases can be found and their susceptibility to infection is lower. Also on UK, extrapolation is acceptable from winter wheat to minor cereals including oats, spring

wheat, durum wheat, rye, triticale. Therefore, acceptability of the substantial data provided on winter wheat as well as supportive data on triticale in support of other crops may be taken into account by each cMS.

Table 3.2-114: Efficacy of GLOB2021dF against FUSASP (PESSEV) on wheat – 1 application– North-East EPPO Zone – 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
NE (+CZ)	FUSACU	TRZAW	All valid ass. BBCH 75-83	EAR	PESSEV	7	14-28	-	37.9	6.9-77.8	33.7	73.7 (n=2)	73.1-74.2	73.7	67.2	45-90	68.5	69.0	46.1-86.3	75.5	2	5	0

Number of trials summarized: 8 (7 valid trials)

Table 3.2-115: Efficacy of GLOB2021dF against FUSASP (PESSEV) on wheat – 1 application– North-East EPPO Zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
NE (+CZ)	FUSACU	TRZAW	All valid ass. BBCH 75-83	EAR	PESSEV	51-65	8	20-66	20-66	33.1	6.4-68.6	32.3	-	-	-	70.0	47.1-99.4	63.6	-	-	-	70.5	38.7-90.8	74.7	1	6	1
NE	FUSACU	TTLWI	All valid ass. BBCH 75-83	EAR	PESSEV	60	1	42	42	5.3	-	-	-	-	-	86.1	-	-	-	-	-	82.4	-	-	0	0	1

number of trials summarized: 4 wheat, 1 triticale NE+ 4 wheat CZ

Table 3.2-116: Efficacy of GLOB2021dF against FUSASP (FHB index -severity x incidence) on wheat – 1 application– North-East EPPO Zone – 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control (FHB index)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	mi-nor	equal	major
NE (+CZ)	FUSACU	TRZAW	All valid ass. BBCH 75-83	EAR	SEVIND	7	14-28	-	3430.2	278.1-7779	2884.7	89.8 (n=2)	87.4-92.1	89.8	80.7	60.4-95.5	87.8	81.4	58.1-97.5	90.1	1	6	0

Number of trials summarized: 8 (7 valid trials)

Table 3.2-117: Efficacy of GLOB2021dF against FUSASP (FHB index -severity x incidence) on wheat – 1 application– North-East EPPO Zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	majo
NE (+CZ)	FUSACU	TRZAW	All valid ass. BBCH 75-83	EAR	SEVIND	51-65	8	20-66	20-66	2053.3	1.6-5248.8	1166.0	-	-	-	82.7	58.9-100	82.7	-	-	-	84.5	57.5-96.5	92.2	1	7	0
NE	FUSACU	TTLWI	All valid ass. BBCH 75-83	EAR	SEVIND	60	1	42	42	313.2	-	-	-	-	-	91.5	-	-	-	-	-	89.5	-	-	0	1	0

number of trials summarized: 4 wheat, 1 triticale NE+ 4 wheat CZ

Table 3.2-118: Efficacy of GLOB2021dF against FUSASP (mycotoxin content) on wheat – 1 application– North-East EPPO Zone – 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control (PPM)			% control									No of trials where product is >, <, = compared to standard		
											GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha					
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
NE (+C7)	FUSACU	TRZAW	All*	Micotoxin (PPM)	4	65-103	-	2.8	0.8-6.6	1.9	-	-	-	75.5	58.4-88.9	77.3	78.5	68.2-91.5	77.1	0	4	0

Number of trials assessed: 7 (4 valid trials)

*3 trials not included in means calculation due to very low levels detected (below 0.5 PPM)

Table 3.2-119: Efficacy of GLOB2021dF against FUSASP (mycotoxin content) on wheat – 1 application– North-East EPPO Zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
NE (+CZ)	FUSACU	TRZAW	All*	SEED	Micotoxin (PPM)	51-65	4	76-97	76-97	12.3	2.1-39.9	3.6	-	-	-	54.6	2-79.1	68.7	-	-	-	65.0	6.7-91	81.2	0	1	0

number of trials summarized: 4 wheat, 1 triticale NE+ 4 wheat CZ

*5 trials not included in means calculation due to very low levels detected (below 0.5 PPM). 5 NE+2CZ

Efficacy of GLOB2021dF against *Fusarium spp.*

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products) and PP 1/226 (Number of efficacy trials).

Infection by *Fusarium* species was verified at acceptable levels in a total of ten trials conducted on wheat in 2022 and 2023. In all these trials, the disease infestation level in untreated plots was sufficient (at least 5% pest severity at one leaf stage) to validate the trials and reliably assess the efficacy of GLOB2021dF. The data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was acceptable, with a mean efficacy of 75.7% (n=10), even after a single application at BBCH 61-65. The results also showed that the efficacy of GLOB2021dF at the proposed label rate was statistically equivalent to, or in some cases superior to, standard products.

Additionally, GLOB2021dF treatment reduced mycotoxin levels in harvested grain. A dose rate of 0.8 L/ha resulted in an average reduction of 55% to 76% in mycotoxin levels compared to the untreated control in trials where significant levels of mycotoxins were present

SEPTTR – *Zymoseptoria tritici*

Infection by *Zymoseptoria tritici* was verified at acceptable levels in a total of 10 trials carried out during 2022 and 2023 in N-E zone. Those were combined with the results of the 16 Czech trials (3 trials on wheat carried out in 2022, 5 trials on wheat, 2 trials on spelt, 2 on rye, 4 on triticale carried out during 2023) since these are neighbouring countries and considered as valid to Poland, the only MS in the Central zone belonging to the North-East climatic zone. The combined results from 26 trials are thus shown in the tables below.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good, especially on the top leaves after the second application. Control levels were in general comparable to those of standard products based on prothioconazole alone or on bixafen + triazole mixtures.

In addition, results from 1 supportive trial targeted for *Fusarium* on wheat with a single late application (BBCH 61-65) indicate also a good control of SEPTTR.

No specific EPPO extrapolation table is available on foliar and ear diseases. Nevertheless, the Dutch guidance states that for leaf and ear diseases, it is possible to extrapolate from winter wheat to spring wheat, rye, triticale and spelt because in these crops same diseases can be found and their susceptibility to infection is lower. Also on UK, extrapolation is acceptable from winter wheat to minor cereals including oats, spring wheat, durum wheat, rye, triticale. Therefore, acceptability of the substantial data provided on winter wheat as well as supportive data on minor cereals in support of other crops may be taken into account by each cMS. In addition, based on practical experience it is known that if *Zymoseptoria tritici* can be well controlled, LEPTNO *Parastagonospora nodorum* (syn.= *Leptosphaeria nodorum*, leaf infection) can also be well controlled. Therefore, the data provided will support by extrapolation all used claimed in the table “All intended uses” in Part B – Section 0.

Table 3.2-120: Efficacy of GLOB2021dF against SEPTTR (PESSEV %) on cereals (wheat) at different leaf levels– North-East EPPO zone – 2022 data, 2 applications

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
NE (+CZ)	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FL-3	32-32	1	21-21	-	5.0	5-5	5.0	15.0	15-15	15.0	25.0	25-25	25.0	60.0	60-60	60.0	1	0	0
			All valid ass. (2-3w after B)	FL-1	32-33	2	37-38	14-21	10.6	6.3-14.9	10.6	89.6	79.1-100	89.6	95.7	91.4-100	95.7	90.6	90.3-90.8	90.6	0	2	0
				FL-2	32-32	3	35-38	14-15	7.3	4-9.7	8.1	72.9	50.5-89.3	78.9	81.2	66.2-100	77.3	72.4	63.9-78.1	75.3	1	1	1

Number of trials summarized: 1 N-E + 3 CZ

Table 3.2-121: Efficacy of GLOB2021dF against SEPTTR (PESSEV %) on cereals (wheat, spelt, rye, triticale) at different leaf levels– North-East EPPO zone – 2023 data, 2 applications

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FL-2	32-32	4	21-24	21-24	13.6	5-25.9	11.7	-	-	-	83.4	51.5-100	91.0	-	-	-	78.7	46.6-100	84	1	3	0
			FL-3	32-32	3	21-22	21-22	31.6	18.4-48.4	28.1	-	-	-	67.8	29-96.4	77.9	74.1	74.1-74.1	74	76.9	45.3-100	85	3	0	0	
			FLAG	32-32	1	45-45	21-21	4.5	4.5-4.5	4.5	-	-	-	100.0	100-100	100.0	-	-	-	100.0	100-100	100.0	0	1	0	
			All valid ass. (2-3w after B)	FL-1	32-32	6	31-45	10-22	14.1	5.6-30.3	11.3	-	-	-	87.0	50-100	92.1	89.7	87.7-92.9	88.5	95.9	83.5-100	98.2	1	5	0
			FL-2	32-32	5	31-45	10-22	38.0	14.4-62.5	39.1	-	-	-	80.9	37.2-97.3	96.0	87.8	81.3-94.2	87.8	89.4	61.1-100	95.3	1	4	0	
			All valid ass. (4-6w after B)	FL-1	32	1	75	43	8.8	-	-	-	-	-	93.4	-	-	-	-	-	100.0	-	-	0	1	0
NE (+CZ)	SEPTTR	TRZSP	All valid ass. (2-3w after A)	FL-2	32.0	1	22.0	22.0	7.5	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0	
			FL-3	32.0	1	22.0	22.0	38.8	-	-	-	-	80.8	-	-	-	-	-	79.9	-	-	0	1	0		
			FLAG	32.0	1	28.0	7.0	14.7	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0		
			All valid ass. (2-3w after B)	FL-1	32.0	1	28.0	7.0	26.6	-	-	-	-	91.9	-	-	-	-	-	100.0	-	-	1	0	0	
			FL-2	32.0	1	28.0	7.0	37.5	-	-	-	-	95.0	-	-	-	-	-	95.0	-	-	0	1	0		
			All valid ass. (4-6w after B)	FLAG	32.0	1	50.0	29.0	75.0	-	-	-	-	96.7	-	-	-	-	-	100.0	-	-	1	0	0	
NE (+CZ)	SEPTTR	SECCW	All valid ass. (2-3w after A)	FL-2	32.0	1	25.0	25.0	41.3	-	-	-	-	79.8	-	-	-	-	-	80.7	-	-	0	1	0	
			All valid ass. (2-3w after B)	FL-1	32.0	1	46.0	21.0	17.5	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0	
			All valid ass. (4-6w after B)	FLAG	32.0	1	50.0	29.0	20.3	-	-	-	-	89.1	-	-	-	-	-	100.0	-	-	1	0	0	
NE (+CZ)	SEPTTR	TTLWI		FLAG	32-32	1	25-25	25-25	10.0	-	-	-	-	-	90.0	-	-	-	-	-	95.0	-	-	0	1	0
			All valid ass. (2-3w after A)	FL-1	32-33	3	14-25	14-25	9.2	5-17.5	5.0	-	-	-	92.4	80-100	97.1	-	-	-	96.7	90-100	100.0	0	3	0
			FL-2	32-33	4	14-25	14-25	9.0	5-15	8.0	-	-	-	90.2	68.9-100	96.0	-	-	-	79.3	50-98.7	84.2	0	4	0	
			FL-3	32-32	1	21-21	21-21	41.9	-	-	-	-	80.2	-	-	-	-	-	81.6	-	-	0	1	0		
			All valid ass. (2-3w after B)	FLAG	32-33	3	38-46	17-21	12.2	5-23.8	7.8	-	-	-	98.6	95.8-100	100.0	-	-	-	99.7	99-100	100.0	0	3	0
			FL-1	32-33	4	38-46	17-21	14.8	6.6-25	13.8	-	-	-	83.5	62.5-96	87.7	-	-	-	82.2	50-100	89.4	0	4	0	
			FL-2	32-33	6	35-50	14-26	23.5	10-50	16.5	-	-	-	80.5	37.5-100	89.9	-	-	-	81.4	37.5-100	92.3	0	6	0	
			All valid ass. (4-6w after B)	FLAG	32-32	1	50-50	29-29	35.9	-	-	-	-	91.0	-	-	-	-	-	97.4	-	-	1	0	0	
			FL-1	32-32	1	52-52	31-31	8.4	-	-	-	-	91.7	-	-	-	-	-	93.5	-	-	1	0	0		

number of trials summarized: 6 wheat, 2 spelt, 2 rye, 7 triticale

Table 3.2-122: Efficacy of GLOB2021dF against SEPTTR (PESSEV %) on cereals (wheat) at different leaf levels– North-East EPPO zone – 2023 data, 1 application

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
NE	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FL-1	39-39	1	28-28	28-28	4.4	4.4-4.4	4.4	-	-	-	78.5	78.5-78.5	78.5	79.4	79.4-79.4	79.4	-	-	-	0	1	0
				FL-2	39-39	2	14-28	14-28	7.1	5.6-8.5	7.1	-	-	-	84.3	81.3-87.3	84.3	82.1	76.4-87.7	82.1	90.6	90.6-90.6	90.6	0	2	0
				FL-3	39-39	2	14-28	14-28	7.9	5.3-10.4	7.9	-	-	-	87.7	80.3-95	87.7	83.8	77.6-90	83.8	83.1	83.1-83.1	83.1	0	2	0
NE	SEPTTR	TRZAW	All valid ass. (4-6w after A)	FLAG	39-51	3	35-49	35-49	5.1	4.8-5.5	5.0	-	-	-	86.5	80-98.4	81.0	100.0 (n=1)	-	-	73.8 (n=2)	70-77.6	73.8	1	2	0
				FL-1	39-51	4	35-49	35-49	13.3	7.5-20.4	12.6	-	-	-	73.9	52.5-93.4	74.9	84.9 (n=2)	72-97.7	84.9	58.4 (n=3)	37.5-79.5	58.3	0	4	0

number of trials summarized: 5

Supportive data from FUSASP trials

Table 3.2-123: Efficacy of GLOB2021dF against SEPTTR (PESSEV %) on cereals (wheat) at different leaf levels – 1 late application – North-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
NE	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FLAGLE	PESSEV	1	21-21	-	7.8	7.8-7.8	7.8	-	-	-	66.3	66.3-66.3	66.3	66.3	66.3-66.3	66.3	0	1	0
				FL-1	PESSEV	1	21-21	-	15.3	15.3-15.3	15.3	-	-	-	41.4	41.4-41.4	41.4	50.3	50.3-50.3	50.3	1	0	0
				FL-2	PESSEV	1	21-21	-	27.9	27.9-27.9	27.9	-	-	-	45.8	45.8-45.8	45.8	46.6	46.6-46.6	46.6	0	1	0

Efficacy of GLOB2021dF against *Septoria tritici* (SEPTTR) on wheat

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products) and PP 1/226 (Number of efficacy trials).

A total of 10 trials were conducted to evaluate the efficacy of GLOB2021dF against *Septoria tritici* (SEPTTR) in wheat. In all these trials, the disease infestation level in untreated plots was sufficient (at least 5% pest severity at one leaf stage) to validate the trials and reliably assess the efficacy of GLOB2021dF. Data demonstrated that the efficacy of GLOB2021dF, when applied twice at the proposed label rate of 0.8 L/ha, was acceptable at 88.9%, being statistically equivalent to, and in some cases superior to, the efficacy of standard products against SEPTTR.

Efficacy of GLOB2021dF against *Septoria tritici* (SEPTTR) on triticale

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

A total of 7 trials were conducted to evaluate the efficacy of GLOB2021dF against *Septoria tritici* (SEPTTR) in triticale. In all these trials, the disease infestation level in untreated plots was sufficient (at least 5% pest severity at one leaf stage) to validate the trials and reliably assess the efficacy of GLOB2021dF. Data demonstrated that the efficacy of GLOB2021dF, when applied twice at the proposed label rate of 0.8 L/ha, was good at 87.5%, being statistically equivalent to, and in some cases superior to, the efficacy of standard products against SEPTTR.

Although the trials were conducted in only one growing season, use on triticale may be acceptable, given the efficacy of GLOB2021dF against SEPTTR in winter wheat.

The combination of prothioconazole and boscalid is not registered in Poland for use on spelt and rye. The data provided are insufficient.

PUCCRE/PUCCRT/PUCCRR - *Puccinia recondita*, *Puccinia triticina* (syn. *Puccinia recondita* f. sp. *tritricina*), *Puccinia recondita* f. sp. *recondita*

Infection by brown rusts *Puccinia recondita* and related “*forma specialis*” was verified at acceptable levels in a total of 3 trials in N-E zone (carried out in 2023 on rye) mainly after the second application. Those were combined with the results of 5 Czech trials (2 on rye, 2 on wheat, 1 on triticale carried out in 2023) since these are neighbouring countries and considered as valid to Poland, the only MS in the Central zone belonging to the North-East climatic zone. The combined results from 8 trials are thus shown in the tables below. Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good, being in general equivalent to the standard products based either on prothioconazole alone or on bixafen + triazole mixtures.

Table 3.2-124 Efficacy of GLOB2021dF against PUCCRE (PESSEV) on cereals (rye, wheat, triticale) at different leaf levels - North-East EPPO Zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
NE (+CZ)	PUCCRE/PUCCRR	SECCW	All valid ass. (2-3w after B)	FL-1	32	1	42	21	5	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0
			FL-3	32	1	35	14	5.4	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0	
			All valid ass. (4-6w after B)	FLAG	32-32	3	50-56	29-35	24.2	4-60.9	7.6	-	-	-	92.8	85-97	96.3	-	-	-	97.1	92.5-100	98.9	1	2	0
			FL-1	32	1	52	31	5.5	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0	
	PUCCRE	TRZAW	All valid ass. (4-6w after B)	FLAG	32-37	2	47-55	34-47	64.1	62.5-65.6	64.1	-	-	-	83.3	69-97.5	83.3	95.0	94.7-95.2	95.0	-	-	-	1	1	0
			PUCCRE	TTLWI	All valid ass. (4-6w after B)	FLAG	32.0	1	50.0	29.0	60.9	-	-	-	-	-	-	-	-	-	100.0	-	-	1	0	0

number of trials summarized: 3 NE (rye)+ 5CZ (2 rye, 2 wheat, 1 triticale)

Efficacy of GLOB2021dF against *Puccinia recondita* f. sp. *Triticina*

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

According to the applicant, five efficacy trials were conducted on rye, two on wheat, and one on triticale, all in 2023. EPPO guideline PP 1/226 (3), which advises on the 'Number of Efficacy Trials,' states that 10 trials (6-15) are required for a major pathogen in a major crop, and 3 trials (2-6) are needed for minor uses to demonstrate adequate efficacy. These trials should be conducted across a range of climatic and environmental conditions likely to be encountered, and over at least 2 years. While some favorable results were presented, this evidence is considered limited and insufficient to demonstrate the efficacy of GLOB2021dF at the claimed dose rate of 0.8 L/ha for effective control of *Puccinia recondita* (PUCRE) on wheat, rye, and triticale.

PUCCSI/PUCST – *Puccinia striiformis tritici*, *Puccinia striiformis*

Infection by stripe (yellow) rusts *Puccinia striiformis* identified also by its “*forma specialis*” *Puccinia striiformis* f. sp. *Tritici* was verified at acceptable levels in a total of 5 trials on wheat (3 in 2022 being 1 in N-E zone and 2 additional trials in CZ and 2 trials in 2023 being 1 in N-E zone and 1 additional trial in CZ). During the trials one or 2 applications were performed. Results are analysed after each application timing. Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good. Good results were observed even after a long time after the applications, i.e. 4 to 6 weeks, well protecting the flag leaf. The results were equivalent to the standard products based either on prothioconazole alone or on bixafen + triazole mixtures.

Table 3.2-125: Efficacy of GLOB2021dF against PUCCSI/PUC CST (PESSEV) on wheat at different leaf levels – North-East EPPO zone – 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	majo
NE (+CZ)	PUCCSI/ PUCST	TRZAW	All valid ass. (2-3w after B)	FLAG	32-33	2	37-38	14-21	4.6	3.5-5.6	4.6	100.0	100-100	100.0	100.0	100-100	100.0	100.0	100-100	100.0	0	2	0
				FL-1	32-32	2	37-38	14-15	6.1	4.6-7.5	6.1	96.3	92.5-100	96.3	99.2	98.3-100	99.2	97.7	95.4-100	97.7	0	2	0
				FL-2	32-32	2	37-38	14-15	8.2	5.1-11.3	8.2	94.4	88.8-100	94.4	99.0	98-100	99.0	98.0	95.9-100	98.0	0	2	0
			All valid ass. (4-6w after B)	FLAG	32-33	2	50-56	34-34	10.5	8.6-12.4	10.5	70.2	57.9-82.4	70.2	81.9	68.4-95.3	81.9	90.2	87.7-92.6	90.2	1	1	0

Number of trials summarized: 1 N-E + 2 CZ

Table 3.2-126: Efficacy of GLOB2021dF against PUCCSI/PUC CST (PESSEV) on wheat at different leaf levels – North-East EPPO zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard			
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures						
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major	
NE	PUCCSI/PUCST	TRZAW	All valid ass. (2-3w after A)	FL-1	39-39	1	14-14	14-14	5.0	-	-	-	-	-	-	-	-	-	-	-	-	93.2	-	-	0	1	0
			FL-2	39	1	14	14	5.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	85.5	-	-	0	1
NE (CZ)	PUCCSI/PUCST	TRZAW	All valid ass. (2-3w after B)	FLAG	32	1	45	21	15.5	-	-	-	-	-	-	-	-	-	-	-	-	87.6	-	-	0	1	0
			FL-1	32-32	1	45	21	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	97.3	-	-	0	1
NE	PUCCSI/PUCST	TRZAW	All valid ass. (4-6w after A)	FLAG	39	1	35	35	5.8	-	-	-	-	-	-	-	-	-	-	-	-	87.1	-	-	0	1	0

number of trials summarized: 1 NE + 1 CZ

Efficacy of GLOB2021dF against *Puccinia striiformis tritici* on wheat

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

According to the applicant, five valid efficacy trials were conducted on wheat. EPPO guideline PP1/226 (3), which advises on the 'Number of efficacy trials', states that a number of 10 (6-15) trials for a major pathogen in a major crop and 3 (2-6) trials for minor uses are required to demonstrate adequate efficacy. While these trials have been presented, these data are not considered sufficient to confirm the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha for effective control of *Puccinia striiformis tritici* on wheat.

PUCCHD – *Puccinia hordei*

Infection by brown rust *Puccinia hordei* on barley was verified at acceptable levels in a total of 4 trials in N-E zone (one carried out in 2022 and 3 on 2023, of which 2 on spring barley). Those were combined with the results of 2 Czech trials (one trial carried out in 2022 and one during 2023) since these are neighbouring countries and considered as valid to Poland, the only MS in the Central zone belonging to the North-East climatic zone. The combined results from 6 trials are thus shown in the tables below. During the trials one or 2 applications were performed. Results are analysed after each application timing.

Some trials were characterized by a late appearance of the disease. Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good and in general equivalent to the standard products based either on prothioconazole alone or on bixafen + triazole mixtures.

Table 3.2-127: Efficacy of GLOB2021dF against PUCCHD (PESSEV) on barley at different leaf levels – North-East EPPO zone – 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
NE (+CZ)	PUCCHD	HORVW	All valid ass. (2-3w after B)	FL-1	32-32	1	41-41	21-21	8.4	8.4-8.4	8.4	-	-	-	100.0	100-100	100.0	100.0	100-100	100.0	0	1	0
			All valid ass. (4-6w after B)	FLAG	32-32	2	52-53	32-32	13.4	9.2-17.5	13.4	59.9 (n=1)	59.9-59.9	59.9	88.8	85.7-91.8	88.8	97.1	96.8-97.3	97.1	1	1	0

Number of trials summarized: 1 N-E + 1 CZ

Table 3.2-128: Efficacy of GLOB2021dF against PUCCHD (PESSEV) on barley at different leaf levels – North-East EPPO zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
NE	PUCCHD	HORVW	All valid ass. (2-3w after A)	FL-2	45-45	1	14-14	14-14	5.2	-	-	-	-	-	91.3	-	-	-	-	-	100.0	-	-	0	1	0
				FL-3	45-45	1	14-14	14-14	6.3	-	-	-	-	-	87.6	-	-	-	-	-	94.0	-	-	0	1	0
NE (+CZ)	PUCCHD	HORVW	All valid ass. (2-3w after B)	FLAG	32-32	1	33-33	12-12	7.5	-	-	-	-	-	75.4	-	-	-	-	-	95.6	-	-	1	0	0
				FLAG	55	1	14	14	12.9	-	-	-	-	-	91.3	-	-	-	-	-	97.6	-	-	1	0	0
NE	PUCCHD	HORVS	All valid ass. (2-3w after A)	FL-1	37-55	2	14-16	14-16	10.3	7.4-13.1	10.3	-	-	-	96.4	92.8-100	96.4	-	-	-	98.8	97.6-100	98.8	1	1	0
				FL-2	37-55	2	14-16	14-16	13.7	10.9-16.5	13.7	-	-	-	94.4	91.3-97.4	94.4	-	-	-	97.4	96.9-97.8	97.4	0	2	0

number of trials summarized: 3 NE (1 winter, 2 spring barley) + 1 CZ winter barley

Efficacy of GLOB2021dF against *Puccinia hordei*

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy) and PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

Infection by brown rust *Puccinia hordei* on barley was verified at acceptable levels in a total of 4 trials on winter barley and two trials on spring barley. EPPO guideline PP1/226 (3), which advises on the 'Number of efficacy trials', states that a number of 10 (6-15) trials for a major pathogen in a major crop and 3 (2-6) trials for minor uses are required to demonstrate adequate efficacy.

While these trials have been presented, these data are not considered sufficient to confirm the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha for effective control of *Puccinia hordei* on barley.

PUCCCA – *Puccinia coronata* var. *avenae*

Data on crown rust of oats *Puccinia coronata* var. *avenae* is available from 5 trials in the North-East zone in 2022 and 2023. Those were combined with the results of 1 Czech trial carried out in 2023 since this is a neighbouring country and considered as valid to Poland, the only MS in the Central zone belonging to the North-East climatic zone for a total of 6 trials. Results showed high levels of control at the target rate of 0.8 L/ha, being always equivalent to the efficacy of the reference standards for the crop oat in the zone (bixafen+triazole mixtures).

Table 3.2-129: Efficacy of GLOB2021dF against PUCCCA (PESSEV) on cereals (oats) at different leaf levels – North-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha			bixafen+triazole mixtures at 1.2 L/ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
NE	PUCCCA	AVESA	All valid ass. (2-3w after A)	FL-1	32-59	2	21-22	21-22	6.9	6.3-7.5	6.9	-	-	-	85.6	76.2-95	85.6	-	-	-	90.8	81.5-100	90.8	0	2	0
			FL-2	32-37	4	19-22	19-22	4.8	4.3-5	5.0	-	-	-	98.8	95-100	100.0	-	-	-	93.8	75-100	100.0	0	4	0	
NE	PUCCCA	AVESA	All valid ass. (2-3w after B)	FLAG	32-37	4	32-43	13-21	10.3	5-22.5	6.9	-	-	-	96.6	90-100	98.3	-	-	-	84.8	40-100	99.5	0	4	0
				FL-1	32-37	4	32-43	13-21	9.6	7.5-12.5	9.3	-	-	-	87.5	50-100	100.0	-	-	-	84.2	37.5-100	99.7	0	4	0
				FL-2	32	1	32	13	17.5	-	-	-	-	-	62.5	-	-	-	-	-	62.5	-	-	0	1	0
NE (+CZ)	PUCCCA	AVESA	All valid ass. (4-6w after B)	FL-1	32	1	48	31	20.5	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0

number of trials summarized: 5 NE+1 CZ

Efficacy of GLOB2021dF against *Puccinia coronata* var. *avenae* on oats

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products) and PP 1/226 (Number of efficacy trials).

A total of six trials were conducted to evaluate the efficacy of GLOB2021dF against *Puccinia coronata* var. *avenae* on oats. In all these trials, the disease infestation level in untreated plots was sufficient (at least 5% pest severity at one leaf stage) to validate the trials and reliably assess the efficacy of GLOB2021dF. Data demonstrated that the efficacy of GLOB2021dF, when applied twice at the proposed label rate of 0.8 L/ha, was very good at 82.0% (14-21 DAB), being statistically equivalent to, and in some cases superior to, the efficacy of standard products against PUCCCA.

PYRNAV – *Pyrenophora chaetomioides* (syn *P. avenae*)

Infection by leaf blotch of oat *Pyrenophora chaetomioides* (syn *P. avenae*) was verified at acceptable levels in 5 trials in the North-East zone in 2022 and 2023. Those were combined with the results of 1 Czech trial carried out in 2023 since this is a neighbouring country and considered as valid to Poland, the only MS in the Central zone belonging to the North-East climatic zone for a total of 6 trials. Results showed high levels of control at the target rate of 0.8 L/ha, especially after the second application, being always equivalent to the efficacy of the reference standards for the crop oat in the zone (bixafen+triazole mixtures).

Table 3.2-130: Efficacy of GLOB2021dF against PYRNAV (PESSEV) on cereals (oats) at different leaf levels – North-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha			bixafen+triazole mixtures at 1.2 L/ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
NE	PYRNAV	AVESA	All valid ass. (2-3w after A)	FLAG	32	1	22	22	6.3	-	-	-	-	-	70.0	-	-	-	-	-	77.5	-	-	0	1	0
				FL-1	32-59	2	21-22	21-22	13.6	8.3-18.8	13.6	-	-	-	70.0	49.6-90.4	70.0	-	-	-	78.4	63.5-93.3	78.4	0	2	0
				FL-2	32-59	4	14-22	14-22	12.1	5-23.8	9.8	-	-	-	76.0	59.3-92.9	75.9	-	-	-	80.4	58.1-93.5	84.9	0	4	0
				FL-3	32-32	2	15-20	15-20	6.4	5-7.8	6.4	-	-	-	75.5	50.9-100	75.5	-	-	-	64.8	34.6-95	64.8	0	2	0
NE	PYRNAV	AVESA	All valid ass. (2-3w after B)	FLAG	32-37	2	35-43	14-21	11.1	4.6-17.5	11.1	-	-	-	90.4	90-90.8	90.4	-	-	-	96.8	95.8-97.8	96.8	0	2	0
NE (+CZ)	PYRNAV	AVESA	All valid ass. (2-3w after B)	FL-1	32-37	4	35-54	14-33	13.5	5.2-22.5	13.2	-	-	-	89.2	78.4-100	89.3	-	-	-	94.6	90.2-100	94.1	0	4	0
				FL-2	32-32	4	38-54	16-33	17.3	5.5-25.6	19.0	-	-	-	88.6	81.3-94.4	89.3	-	-	-	94.1	87.7-100	94.3	0	4	0

number of trials summarized: 5 NE+1 CZ

Efficacy of GLOB2021dF against *Pyrenophora chaetomioides* (syn *P. avenae*) on oats

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products) and PP 1/226 (Number of efficacy trials).

A total of six trials were conducted to evaluate the efficacy of GLOB2021dF against *Pyrenophora chaetomioides* (syn *P. avenae*) on oats. In all these trials, the disease infestation level in untreated plots was sufficient (at least 5% pest severity at one leaf stage) to validate the trials and reliably assess the efficacy of GLOB2021dF. Data demonstrated that the efficacy of GLOB2021dF, when applied twice at the proposed label rate of 0.8 L/ha, was very good at 89,4%, being statistically comparable to, the efficacy of standard products against PYRNAV.

PYRNTE – *Pyrenophora teres*

Infection by Net blotch of barley *Pyrenophora teres* was verified at acceptable levels in 4 trials on barley in 2022 (3 in N-E zone and 1 additional trial in CZ) and 8 trials in 2023 (3 in N-E zone, of which one spring barley, and 5 additional trials in CZ). Most trials were characterized by a late appearance of the disease.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was moderate to good. Control levels were always comparable to those of standard products based on prothioconazole and in general comparable to the standard products based on bixafen + triazole mixtures.

No specific EPPO extrapolation table is available on foliar and ear diseases. Nevertheless, according to EPPO Guideline 1/226(3) the number of trials required to demonstrate the efficacy against a certain pest can be reduced for closely related pest or against the same pests on different crops. Case in point is net blotch of barley (PYRNTE, *Pyrenophora teres*) and it's leaf-specific form *Pyrenophora teres f. sp. maculata* (PYRNTM). It is important to note that these are not different species or sub-species but rather specialised varieties of the same pathogen. Given that PYRNTE is prevalent in European conditions, data provided here can be extrapolated to cover also PYRNTM on barley.

Table 3.2-131: Efficacy of GLOB2021dF against PYRNTE on winter barley (PESSEV) at different leaf levels – North-East EPPO Zone – 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1 st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
NE (+CZ)	PYRNTE	HORVW	All valid ass. (2-3w after A)	FL-3	32-33	2	21-23	21-23	6.5	5.7-7.2	6.5	40.1	27.8-52.3	40.1	53.3	32.2-74.4	53.3	56.4	42.6-70.1	56.4	0	2	0
			All valid ass. (2-3w after B)	FL-2	32-33	2	38-41	17-21	9.7	5-14.4	9.7	65.5 (n=1)	65.5-65.5	65.5	91.9	83.8-100	91.9	93.7	87.3-100	93.7	0	2	0
			All valid ass. (4-6w after B)	FLAG	32-33	2	50-50	27-29	11.5	10.6-12.3	11.5	45.6	33.3-57.8	45.6	54.3	39.4-69.2	54.3	61.4	52.1-70.6	61.4	0	2	0
				FL-1	32-33	4	50-53	27-32	17.3	8-29.1	16.1	50.0 (n=3)	43.3-55.9	50.8	67.5	52.2-98.7	59.6	65.3	48.7-96.8	57.8	0	4	0

Number of trials summarized: 3 N-E + 1 CZ

Table 3.2-132: Efficacy of GLOB2021dF against PYRNTE on winter and spring barley (PESSEV) at different leaf levels – North-East EPPO Zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)															No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
NE (+CZ)	PYRNTE	HORVW	All valid ass. (2-3w after A)	FL-1	33-33	1	14-14	14-14	5.0	-	-	-	-	-	25.0	-	-	-	-	-	65.0	-	-	0	1	0
				FL-2	33-45	2	14-14	14-14	7.2	5.6-8.8	7.2	-	-	-	50.7	25-76.4	50.7	-	-	-	66.4	45-87.8	66.4	0	2	0
				FL-3	45-45	1	14-14	14-14	7.1	-	-	-	-	-	82.5	-	-	-	-	-	90.3	-	-	0	1	0
			All valid ass. (2-3w after B)	FLAG	32-33	3	26-40	7-19	18.1	4.5-42.2	7.5	-	-	-	96.8	90.4-100	100.0	-	-	-	96.2	91.7-100	97.0	1	2	0
				FL-1	32-33	5	26-46	7-21	9.7	6.8-14.1	7.5	-	-	-	66.4	25-84.5	77.5	-	-	-	84.7	64.9-93.9	87.5	1	4	0
				FL-2	32-33	5	26-44	7-21	12.8	7.3-19.1	11.9	-	-	-	73.9	37.5-91.4	78.8	-	-	-	76.7	50-94.6	79.9	1	4	0
NE	PYRNTE	HORVS	All valid ass. (2-3w after A)	FLAG	37	1	26	26	5.5	-	-	-	-	-	87.9	-	-	-	-	-	100.0	-	-	1	0	0
				FL-1	37	1	26	26	15.4	-	-	-	-	-	92.3	-	-	-	-	-	96.3	-	-	0	1	0
				FL-2	37	1	26	26	18.1	-	-	-	-	-	83.7	-	-	-	-	-	86.5	-	-	0	1	0

number of trials summarized: 3 NE (2 winter, 1 spring barley) + 5 CZ (winter barley)

Efficacy of GLOB2021dF against *Pyrenophora teres* on barley

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products) and PP 1/226 (Number of efficacy trials).

A total of eleven trials were conducted to evaluate the efficacy of GLOB2021dF against *Pyrenophora teres* on winter barley, and one on spring barley conducted in 2022 - 2023. In all trials, the disease infestation level in untreated plots was sufficient (at least 5% pest severity at one leaf stage) to validate the trials and reliably assess the efficacy of GLOB2021dF. The data demonstrated that the efficacy of GLOB2021dF, when applied twice at the proposed label rate of 0.8 L/ha, was good at 79.0%, though slightly lower than that of standard products, which was 85.9%.

A single application on spring barley showed very good efficacy at 88.0%. However, the combination of protioconazole and boscalid is not registered in Poland for use on winter or spring barley, and there is insufficient data for the use of GLOB2021dF on spring barley.

RAMUCC - *Ramularia collo-cygni*

Infection by ramularia leaf spot of barley was verified at acceptable levels, mostly after the second application, in 1 trial carried out during 2022 in the N-E. Those were combined with the results of the Czech trials (3 trials on barley carried out in 2022 and 2023) since these are neighbouring countries and considered as valid to Poland, the only MS in the Central zone belonging to the North-East climatic zone. The combined results from 4 trials are thus shown in the table below.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was moderate and, in general, equivalent to the efficacy of standard products based on bixafen + triazole mixtures.

Table 3.2-133 Efficacy of GLOB2021dF against RAMUCC (PESSEV) on cereals (barley) at different leaf levels – North-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
NE (+CZ)	RAMUCC	HORVW	All valid ass. (2-3w after B)	FLAG	31-32	2	40-40	15-19	28.3	4.9-51.6	28.3	-	-	-	62.4	33.7-91	62.4	-	-	-	67.1	41.9-92.2	67.1	0	2	0
				FL-1	31-32	3	40-42	15-20	26.5	6.3-65.6	7.6	-	-	-	53.5	29.1-86.2	45.1	-	-	-	62.8	46.5-94.6	47.2	1	2	0
				FL-2	31-32	2	40-42	15-20	11.1	9.8-12.3	11.1	-	-	-	46.0	43.2-48.8	46.0	-	-	-	48.1	42.4-53.7	48.1	0	2	0
			All valid ass. (4-6w after B)	FLAG	32-32	1	63-63	36-36	29.7	-	-	-	-	-	-	72.3	-	-	-	-	-	78.8	-	-	1	0

Number of trials summarized: 1 NE + 3 CZ

Efficacy of GLOB2021dF against *Ramularia collo-cygni*

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy) and PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

According to the applicant, four efficacy trials were conducted on barley. EPPO guideline PP1/226 (3), which advises on the 'Number of efficacy trials', states that a number of 10 (6-15) trials for a major pathogen in a major crop and 3 (2-6) trials for minor uses are required to demonstrate adequate efficacy.

While these trials have been presented, these data are not considered sufficient to confirm the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha for effective control of *RAMUCC* on barley.

RHYNSE - *Rhynchosporium secalis*

Infection by Leaf blotch of cereals *Rhynchosporium secalis* was verified at acceptable levels in a total of 4 trials on barley in 2022 and 5 trials in 2023 (2 winter barley, 3 rye) in N-E zone. Those were combined with the results of 7 Czech trials (2 on winter barley, 4 on rye, 1 on triticale carried out during 2023) since these are neighbouring countries and considered as valid to Poland, the only MS in the Central zone belonging to the North-East climatic zone. Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was moderate to good and, always equivalent to the efficacy of standard products based on prothioconazole and in most of the assessments equivalent to the standard products based on bixafen + triazole mixtures.

No specific EPPO extrapolation table is available on foliar and ear diseases. Nevertheless, the Dutch guidance states that for *Rhynchosporium secalis*, data on winter barley and spring barley are equally supportive because no differences exist in disease pressure or susceptibility. Therefore, results on major host winter barley will also support the use on spring barley.

Table 3.2-134: Efficacy of GLOB2021dF against RHYNSE (PESSEV) on cereals (barley) at different leaf levels – North-East EPPO zone – 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
NE	RHYNSE	HORVW	All valid ass. (2-3w after B)	FL-1	32	1	42	20	5.9	-	-	54.1	-	-	75.8	-	-	67.0	-	-	0	1	0
			FL-2	32-32	2	35-42	14-20	8.5	5.4-11.5	8.5	71.0	70.9-71.1	71.0	87.9	76.9-98.8	87.9	82.1	69.9-94.2	82.1	0	2	0	
			All valid ass. (4-6w after B)	FLAG	32	1	50	27	10.0	-	-	58.0	-	-	75.8	-	-	60.6	-	-	0	1	0

Number of trials summarized: 4 N-E

Table 3.2-135: Efficacy of GLOB2021dF against RHYNSE (PESSEV) on cereals (barley, rye, triticale) at different leaf levels – North-East EPPO zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
NE (+CZ)	RHYNSE	HORVW	All valid ass. (2-3w after A)	FL-2	32-33	4	14-25	14-25	6.1	5.7-6.3	6.3	-	-	-	91.5	87.4-100	89.3	-	-	-	90.9	83.7-100	90.0	0	4	0
				FL-3	32-33	2	14-20	14-20	21.3	15-27.5	21.3	-	-	-	55.3	37.5-73	55.3	-	-	-	79.2	62.5-95.8	79.2	1	1	0
			All valid ass. (2-3w after B)	FLAG	32-32	2	37-38	14-18	12.3	6.5-18	12.3	-	-	-	85.7	73.3-98	85.7	-	-	-	85.7	73.3-98	85.7	0	2	0
				FL-1	32-32	3	26-46	7-21	20.1	4.3-6.5	6.1	-	-	-	81.0	65-73.3	80.3	-	-	-	95.8	88.9-76.7	98.5	0	3	0
				FL-2	32-33	2	26-38	7-18	35.7	8.8-62.5	35.7	-	-	-	67.6	45-90.2	67.6	-	-	-	70.8	45-96.5	70.8	0	2	0
NE (+CZ)	RHYNSE	SECCW	All valid ass. (2-3w after A)	FL-2	32-32	2	21-25	21-25	5.3	5-5.6	5.3	-	-	-	96.8	96-97.5	96.8	-	-	-	98.8	97.5-100	98.8	0	2	0
				FL-3	32-32	2	21-24	21-24	8.6	8.3-8.8	8.6	-	-	-	80.7	75.5-85.8	80.7	-	-	-	63.8	61.2-66.3	63.8	0	1	1
			All valid ass. (2-3w after B)	FL-1	32-32	4	27-46	6-21	8.5	5.8-15.6	6.3	-	-	-	89.0	79.2-95.8	90.4	-	-	-	95.6	92.5-100	95.0	2	2	0
				FL-2	32-32	3	27-45	6-21	16.6	4.3-39.1	6.4	-	-	-	79.4	57.7-92.6	87.9	-	-	-	80.5	66.7-96.8	78.0	1	2	0
			All valid ass. (4-6w after B)	FLAG	32	1	52	31	10	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0
NE (CZ)	RHYNSE	TTLWI	All valid ass. (2-3w after A)	FL-2	32	1	21	21	4.7	-	-	-	-	-	78.4	-	-	-	-	-	68.9	-	-	0	1	0
			All valid ass. (2-3w after B)	FL-1	32	1	42	21	8.1	-	-	-	-	-	95.2	-	-	-	-	-	93.7	-	-	0	1	0
				FL-2	32	1	42	21	8.8	-	-	-	-	-	82.8	-	-	-	-	-	84.3	-	-	0	1	0

Number of trials summarized: 5 NE (2 w barley, 3 rye) + 7 CZ (2 w barley, 4 rye, 1 triticale)

Efficacy of GLOB2021dF against *Rhynchosporium secalis* on winter barley

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products) and PP 1/226 (Number of efficacy trials).

A total of eight trials were conducted to evaluate the efficacy of GLOB2021dF against *Rhynchosporium secalis* on winter barley, conducted in 2022 - 2023. In all trials, the disease infestation level in untreated plots was sufficient (at least 5% pest severity at one leaf stage) to validate the trials and reliably assess the efficacy of GLOB2021dF. The data demonstrated that the efficacy of GLOB2021dF, when applied twice at the proposed label rate of 0.8 L/ha, was good at 81.2% (14-21DAB), though slightly lower than that of standard products, which was 84.7%.

Efficacy of GLOB2021dF against *Rhynchosporium secalis* on rye

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy), PP 1/223 (Introduction to the efficacy evaluation of plant protection products) and PP 1/226 (Number of efficacy trials).

A total of seven trials were conducted to evaluate the efficacy of GLOB2021dF against *Rhynchosporium secalis* on rye, conducted in 2023. In all trials, the disease infestation level in untreated plots was sufficient (at least 5% pest severity at one leaf stage) to validate the trials and reliably assess the efficacy of GLOB2021dF. The data demonstrated that the efficacy of GLOB2021dF, when applied twice at the proposed label rate of 0.8 L/ha, was good at 84.2% (14-21DAB), though slightly lower than that of standard products, which was 88,0%.

Due to the very similar disease development patterns, pressure, crop physiology, and agronomic practices between winter barley and rye, the data generated on *Rhynchosporium secalis* control in winter barley provides supportive evidence for the efficacy of GLOB2021dF against this disease in rye. Therefore, trials conducted in one growing season are sufficient, and its use against *Rhynchosporium secalis* in rye is considered acceptable.

However, the combination of prothioconazole and boscalid is not registered in Poland and a single result indicates that there is insufficient data for the use of GLOB2021dF on triticale against *Rhynchosporium secalis*.

ERYSGR - *Blumeria graminis*

Infection by powdery mildew of cereals *Blumeria graminis* was verified at acceptable levels in a total of 6 trials carried out during 2022 and 2023 in N-E zone. Those were combined with the results of 5 Czech trials since this is a neighbouring country and considered as valid to Poland, the only MS in the Central zone belonging to the North-East climatic zone. The combined results from 11 trials are thus shown in the tables below covering (1 on winter barley, 2 on rye, 4 on winter wheat, 1 on spelt, 3 on triticale). In most of the trials 2 applications were performed.

According to EPPO Guideline 1/226(3) the number of trials required to demonstrate the efficacy against a certain pest can be reduced for closely related pest or against the same pests on different crops. Case in point is powdery mildew of cereals (*Blumeria graminis*) and its host-specific forms ERYSGT (*Blumeria graminis* f. sp. *tritici*, powdery mildew of wheat), ERYSGH (*Blumeria graminis* f. sp. *hordei*, powdery mildew of barley) and ERYSGA (*Blumeria graminis* f. sp. *avenae*, powdery mildew of oat). It is important to note that these are not sub-species but rather specialised varieties of the same pathogen with no morphological differences that allow them to be distinguished from one-another. Rather, the EPPO code that is given to the pathogen is inferred from the host it is observed on. Thus, the representative results split for individual host crops are presented afterwards.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was from moderate to good and in the vast majority of cases equivalent to the efficacy of standard products based either on prothioconazole alone or on bixafen + triazole mixtures.

Table 3.2-136 Efficacy of GLOB2021dF against *Blumeria graminis* species (PESSEV) on cereals (wheat, barley, rye, spelt and triticale) at different leaf levels – North-East EPPO Zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard			
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures						
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major	
NE	ERYSGR	HORVW	All valid ass. (2-3w after A)	FL-1	32-32	1	22-22	22-22	7.1	-	-	37.0	-	-	74.0	-	-	-	-	-	41.9	-	-	0	1	0	
			FL-2	32	1	22	22	16.3	-	-	17.9	-	-	77.4	-	-	-	-	-	41.4	-	-	0	1	0		
			FL-3	32-32	1	22-22	22-22	5.6	-	-	26.7	-	-	100.0	-	-	-	-	-	66.7	-	-	0	1	0		
			All valid ass. (2-3w after B)	FLAG	32	1	37	14	12.5	-	-	37.3	-	-	81.7	-	-	-	-	-	85.7	-	-	0	1	0	
NE (+CZ)	ERYSGR	SECCW	All valid ass. (2-3w after A)	FL-2	32	1	21	21	5.0	-	-	100.0	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0	
			All valid ass. (2-3w after B)	FLAG	32	1	52	31	5.0	-	-	100.0	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0	
				FL-1	32	1	52	31	15.0	-	-	76.7	-	-	76.7	-	-	-	-	-	83.3	-	-	0	1	0	
NE (+CZ)	ERYSGR	TRZAW	All valid ass. (2-3w after A)	FL-2	32-32	1	21-21	21-21	5.0	-	-	100.0	-	-	100.0	-	-	100.0	-	-	-	-	-	-	0	1	0
			FL-3	32-32	1	21-21	21-21	41.6	-	-	78.1	-	-	87.0	-	-	90.9	-	-	-	-	-	-	0	1	0	
			All valid ass. (2-3w after B)	FL-2	32-32	3	37-44	14-22	13.7	7.6-21.8	11.6	77.2	72.5-80.3	78.7	83.4	81.4-85.5	83.4	87.7 (n=2)	86.7-88.6	87.7	92.9 (n=2)	85.7-100	92.9	1	2	0	
			All valid ass. (4-6w after B)	FLAG	39-39	1	43-43	43-43	6.9	-	-	-	-	-	95.0	-	-	100.0	-	-	-	-	-	0	0	0	
NE (+CZ)	ERYSGR	TRZSP	All valid ass. (2-3w after A)	FL-2	32	1	22	22	19	-	-	76.2	-	-	78.8	-	-	-	-	-	100.0	-	-	1	0	0	
NE (+CZ)	ERYSGR	TTLWI		FLAG	32	1	25	25	5	-	-	-	-	-	100.0	-	-	-	-	-	95.0	-	-	0	1	0	
			All valid ass. (2-3w after A)	FL-1	32-32	3	14-25	14-25	7.7	6.8-8.8	7.5	-	-	-	83.3	75-90	85.0	-	-	-	86.8	72.9-95	92.5	0	3	0	
				FL-2	32-32	4	14-25	14-25	19.5	15-23.8	19.5	-	-	-	90.1	72.9-96.7	95.4	-	-	-	90.0	64.6-100	97.8	0	4	0	
				FLAG	65	1	21	25	7.5	-	-	-	-	-	95.0	-	-	-	-	-	97.5	-	-	0	1	0	
			All valid ass. (2-3w after B)	FL-1	32-32	2	34-46	20-21	10.2	10-10.3	10.2	-	-	-	93.4	90-96.7	93.4	-	-	-	95.9	95-96.7	95.9	0	2	0	
				FL-2	65	1	21	25	15	-	-	-	-	-	93.3	-	-	-	-	-	96.7	-	-	0	1	0	

number of trials summarized: 11 (1 w barley, 2 rye, 4 w wheat, 1 spelt, 3 triticale)

Efficacy of GLOB2021dF against ERYSGR - *Blumeria graminis*

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy) and PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

Efficacy data for *Blumeria graminis* are presented from one trial on winter barley, two on rye, four on winter wheat, one on spelt, and three on triticale. According to EPPO guideline PP1/226 (3), which advises on the 'Number of efficacy trials', 10 trials (6-15) for a major pathogen in a major crop and 3 trials (2-6) for minor uses are required to demonstrate adequate efficacy.

Despite the trials presented, this evidence is considered insufficient to demonstrate the efficacy of GLOB2021dF at the claimed dose rate of 0.8 L/ha for effective control of ERYSGR in barley, rye, winter wheat, spelt, and triticale.

Summary (North-East EPPO zone)

The summary tables below present the results shown above for the maximum proposed rate of 0.8 L/ha and combines, for each disease, the most biologically relevant results (i.e. FHB index (SEVIND) for *Fusarium* sp. and PESSEV % up to L-3 for other diseases) obtained across all timings and plant parts in a weighted mean. The overall susceptibility level of each disease is indicated.

Table 3.2-137 Overall efficacy and susceptibility level to GLOB2021dF at the target rate of 0.8 L/ha on cereals against Fusarium - North-East EPPO zone

EPPO zone	Target code	Crop code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
NE (+CZ) (2022)	FUSACU	TRZAW	All valid ass. BBCH 75-83	EAR	SEVIND	61-65	7	14-28	-	3430.2	278.1-7779	2884.7	-	-	-	80.7	60.4-95.5	87.8	81.4	58.1-97.5	90.1				1	6	0	82	16 (16)	Control
NE (+CZ) (2023)	FUSACU	TRZAW	All valid ass. BBCH 75-83	EAR	SEVIND	51-65	8	20-66	20-66	2053.3	1.6-5248.8	1166	-	-	-	82.7	58.9-100	82.7	-	-	-	84.5	57.5-96.5	92.2	1	7	0			
		ITLWI	All valid ass. BBCH 75-83	EAR	SEVIND	60	1	42	42	313.2	-	-	-	-	-	91.5	-	-	-	-	-	89.5	-	-	0	1	0			

Table 3.2-138 Overall efficacy and susceptibility level to GLOB2021dF at the target rate of 0.8 L/ha on cereals against leaf diseases - North-East EPPO zone

EPPO zone	Target code	Crop code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major						
NE (+CZ) (2022)	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FL-3	PESSEV	32-32	1	21-21	-	5	-	-	15	-	-	25	-	-	60	-	-				1	0	0	81	39 (16)	Control
			All valid ass. (2-3w after B)	FL-1	PESSEV	32-33	2	37-38	14-21	10.6	6.3-14.9	10.6	89.6	79.1-100	89.6	95.7	91.4-100	95.7	90.6	90.3-90.8	90.6				0	2	0			
				FL-2	PESSEV	32-32	3	35-38	14-15	7.3	4-9.7	8.1	72.9	50.5-89.3	78.9	81.2	66.2-100	77.3	72.4	63.9-78.1	75.3				1	1	1			
NE (2022)	SEPTTR	TRZAW	All valid ass. (2-3w after A -late appl.)	FLAGLE	PESSEV	61-65	1	21	-	7.8	-	-	-	-	-	66.3	-	-	66.3	-	-				0	1	0			
NE (+CZ) (2023)	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FL-2	PESSEV	32-32	4	21-24	21-24	13.6	5-25.9	11.7	-	-	-	83.4	51.5-100	91	-	-	-	78.7	46.6-100	84	1	3	0			
				FL-3	PESSEV	32-32	3	21-22	21-22	31.6	18.4-48.4	28.1	-	-	-	67.8	29-96.4	77.9	74.1	74.1-74.1	74	76.9	45.3-100	85	3	0	0			
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-32	1	45-45	21-21	4.5	4.5-4.5	4.5	-	-	-	100	100-100	100	-	-	-	100	100-100	100	0	1	0			
				FL-1	PESSEV	32-32	6	31-45	11-22	14.1	5.6-30.3	11.3	-	-	-	87	50-100	92.1	89.7	87.7-92.9	88.5	95.9	83.5-100	98.2	1	5	0			
				FL-2	PESSEV	32-32	5	31-45	11-22	38	14.4-62.5	39.1	-	-	-	80.9	37.2-97.3	96	87.8	81.3-94.2	87.8	89.4	61.1-100	95.3	1	4	0			
			All valid ass. (4-6w after B)	FL-1	PESSEV	32	1	75	43	8.8	-	-	-	-	-	93.4	-	-	-	-	-	100	-	-	0	1	0			
			All valid ass. (2-3w after A)	FL-1	PESSEV	39-39	1	28-28	28-28	4.4	4.4-4.4	4.4	-	-	-	78.5	78.5-78.5	78.5	79.4	79.4-79.4	79.4	-	-	-	0	1	0			
				FL-2	PESSEV	39-39	2	14-28	14-28	7.1	5.6-8.5	7.1	-	-	-	84.3	81.3-87.3	84.3	82.1	76.4-87.7	82.1	90.6	90.6-90.6	90.6	0	2	0			
				FL-3	PESSEV	39-39	2	14-28	14-28	7.9	5.3-10.4	7.9	-	-	-	87.7	80.3-95	87.7	83.8	77.6-90	83.8	83.1	83.1-83.1	83.1	0	2	0			
			All valid ass. (4-6w after A)	FLAG	PESSEV	39-51	3	35-49	35-49	5.1	4.8-5.5	5	-	-	-	86.5	80-98.4	81	100 (n=1)	-	-	73.8 (n=2)	70-77.6	73.8	1	2	0			
				FL-1	PESSEV	39-51	4	35-49	35-49	13.3	7.5-20.4	12.6	-	-	-	73.9	52.5-93.4	74.9	84.9 (n=2)	72-97.7	84.9	58.4 (n=3)	37.5-79.5	58.3	0	4	0			

EPPO zone	Target code	Crop code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major						
NE (+CZ) (2023)	SEPTTR	TRZSP	All valid ass. (2-3w after A)	FL-2	PESSEV	32	1	22	22	7.5	-	-	-	-	-	100	-	-	-	-	-	100	-	-	0	1	0	94	6 (2)	Control
				FL-3	PESSEV	32	1	22	22	38.8	-	-	-	-	-	80.8	-	-	-	-	-	79.9	-	-	0	1	0			
			All valid ass. (2-3w after B)	FLAG	PESSEV	32	1	28	7	14.7	-	-	-	-	-	100	-	-	-	-	-	100	-	-	0	1	0			
				FL-1	PESSEV	32	1	28	7	26.6	-	-	-	-	-	91.9	-	-	-	-	-	100	-	-	1	0	0			
			FL-2	PESSEV	32	1	28	7	37.5	-	-	-	-	-	95	-	-	-	-	-	95	-	-	0	1	0				
			All valid ass. (4-6w after B)	FLAG	PESSEV	32	1	50	29	75	-	-	-	-	-	96.7	-	-	-	-	-	100	-	-	1	0	0			
NE (+CZ) (2023)	SEPTTR	SECCW	All valid ass. (2-3w after A)	FL-2	PESSEV	32	1	25	25	41.3	-	-	-	-	-	79.8	-	-	-	-	-	80.7	-	-	0	1	0	90	3 (2)	Control
			All valid ass. (2-3w after B)	FL-1	PESSEV	32	1	46	21	17.5	-	-	-	-	-	100	-	-	-	-	-	100	-	-	0	1	0			
			All valid ass. (4-6w after B)	FLAG	PESSEV	32	1	50	29	20.3	-	-	-	-	-	89.1	-	-	-	-	-	100	-	-	1	0	0			
NE (+CZ) (2023)	SEPTTR	TTLWI	All valid ass. (2-3w after A)	FLAG	PESSEV	32-32	1	25-25	25-25	10	-	-	-	-	-	90	-	-	-	-	-	95	-	-	0	1	0	88	24 (7)	Control
				FL-1	PESSEV	32-33	3	14-25	14-25	9.2	5-17.5	5	-	-	-	92.4	80-100	97.1	-	-	-	96.7	90-100	100	0	3	0			
				FL-2	PESSEV	32-33	4	14-25	14-25	9	5-15	8	-	-	-	90.2	68.9-100	96	-	-	-	79.3	50-98.7	84.2	0	4	0			
				FL-3	PESSEV	32-32	1	21-21	21-21	41.9	-	-	-	-	-	80.2	-	-	-	-	-	81.6	-	-	0	1	0			
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-33	3	38-46	17-21	12.2	5-23.8	7.8	-	-	-	98.6	95.8-100	100	-	-	-	99.7	99-100	100	0	3	0			
				FL-1	PESSEV	32-33	4	38-46	17-21	14.8	6.6-25	13.8	-	-	-	83.5	62.5-96	87.7	-	-	-	82.2	50-100	89.4	0	4	0			
				FL-2	PESSEV	32-33	6	35-50	14-26	23.5	ott-50	16.5	-	-	-	80.5	37.5-100	89.9	-	-	-	81.4	37.5-100	92.3	0	6	0			
				All valid ass. (4-6w after B)	FLAG	PESSEV	32-32	1	50-50	29-29	35.9	-	-	-	-	-	91	-	-	-	-	-	97.4	-	-	1	0			
FL-1	PESSEV	32-32	1		52-52	31-31	8.4	-	-	-	-	-	91.7	-	-	-	-	-	93.5	-	-	1	0	0						

EPPO zone	Target code	Crop code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
NE (+CZ) (2023)	PUCCRE/PUCCRR	SECCW	All valid ass. (2-3w after B)	FL-1	PESSEV	32	1	42	21	5	-	-	-	-	-	100	-	-	-	-	-	100	-	-	0	1	0	91	9 (8)	Control
			FL-3	PESSEV	32	1	35	14	5.4	-	-	-	-	-	100	-	-	-	-	-	100	-	-	0	1	0				
			All valid ass. (4-6w after B)	FLAG	PESSEV	32-32	3	50-56	29-35	24.2	4-60.9	7.6	-	-	-	92.8	85-97	96.3	-	-	-	97.1	92.5-100	98.9	1	2	0			
			FL-1	PESSEV	32	1	52	31	5.5	-	-	-	-	-	100	-	-	-	-	-	100	-	-	0	1	0				
		TRZAW	All valid ass. (4-6w after B)	FLAG	PESSEV	32-37	2	47-55	34-47	64.1	62.5-65.6	64.1	-	-	-	83.3	69-97.5	83.3	95	94.7-95.2	95	-	-	-	1	1	0			
			TTLWI	FLAG	PESSEV	32	1	50	29	60.9	-	-	-	-	-	94.9	-	-	-	-	-	100	-	-	1	0	0			
NE (+CZ) (2022)	PUCCSI/PUCCST	TRZAW	All valid ass. (2-3w after B)	FLAG	PESSEV	32-33	2	37-38	14-21	4.6	3.5-5.6	4.6	100	100-100	100	100	100-100	100	100	100-100	100				0	2	0		13 (5)	Control
			FL-1	PESSEV	32-32	2	37-38	14-15	6.1	4.6-7.5	6.1	96.3	92.5-100	96.3	99.2	98.3-100	99.2	97.7	95.4-100	97.7				0	2	0				
			FL-2	PESSEV	32-32	2	37-38	14-15	8.2	5.1-11.3	8.2	94.4	88.8-100	94.4	99	98-100	99	98	95.9-100	98				0	2	0				
			All valid ass. (4-6w after B)	FLAG	PESSEV	32-33	2	50-56	34-34	10.5	8.6-12.4	10.5	70.2	57.9-82.4	70.2	81.9	68.4-95.3	81.9	90.2	87.7-92.6	90.2				1	1	0			
NE (+CZ) (2023)	PUCCSI/PUCCST	TRZAW	All valid ass. (2-3w after A)	FL-1	PESSEV	39-39	1	14	14	5	-	-	-	-	-	96	-	-	-	-	-	93.2	-	-	0	1	0	94		
			FL-2	PESSEV	39	1	14	14	5.3	-	-	-	-	-	86.5	-	-	-	-	-	85.5	-	-	0	1	0				
			All valid ass. (2-3w after B)	FLAG	PESSEV	32	1	45	21	15.5	-	-	-	-	-	98.3	-	-	-	-	-	87.6	-	-	0	1	0			
			FL-1	PESSEV	32-32	1	45	21	18	-	-	95.4	-	-	96.4	-	-	-	-	-	97.3	-	-	0	1	0				
			All valid ass. (4-6w after A)	FLAG	PESSEV	39	1	35	35	5.8	-	-	-	-	-	88.6	-	-	-	-	-	87.1	-	-	0	1	0			
NE (+CZ) (2022)	PUCCHD	HORVW	All valid ass. (2-3w after B)	FL-1	PESSEV	32-32	1	41-41	21-21	8.4	8.4-8.4	8.4	-	-	-	100	100-100	100	100	100-100	100	-	-	-	0	1	0	91	11 (6)	Control
			All valid ass. (4-6w after B)	FLAG	PESSEV	32-32	2	52-53	32-32	13.4	9.2-17.5	13.4	59.9 (n=1)	59.9-59.9	59.9	88.8	85.7-91.8	88.8	97.1	96.8-97.3	97.1	-	-	-	1	1	0			

EPPO zone	Target code	Crop code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
NE (+CZ) (2023)	PUCCHD	HORVW	All valid ass. (2-3w after A)	FL-2	PESSEV	45-45	1	14-14	14-14	5.2	-	-	-	-	-	91.3	-	-	-	-	-	100	-	-	0	1	0			
			FL-3	PESSEV	45-45	1	14-14	14-14	6.3	-	-	-	-	-	87.6	-	-	-	-	-	94	-	-	0	1	0				
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-32	1	33	12	7.5	-	-	-	-	-	75.4	-	-	-	-	-	95.6	-	-	1	0	0			
NE	PUCCHD	HORVS	All valid ass. (2-3w after A)	FLAG	PESSEV	55	1	14	14	12.9	-	-	-	-	-	91.3	-	-	-	-	-	97.6	-	-	1	0	0			
			FL-1	PESSEV	37-55	2	14-16	14-16	10.3	7.4-13.1	10.3	-	-	-	96.4	92.8-100	96.4	-	-	-	98.8	97.6-100	98.8	1	1	0				
			FL-2	PESSEV	37-55	2	14-16	14-16	13.7	10.9-16.5	13.7	-	-	-	94.4	91.3-97.4	94.4	-	-	-	97.4	96.9-97.8	97.4	0	2	0				
NE (+CZ) (2022-2023)	PUCCCA	AVESA	All valid ass. (2-3w after A)	FL-1	PESSEV	32-59	2	21-22	21-22	6.9	6.3-7.5	6.9	-	-	-	85.6	76.2-95	85.6	-	-	-	90.8	81.5-100	90.8	0	2	0	92	16 (6)	Control
			FL-2	PESSEV	32-37	4	19-22	19-22	4.8	4.3-5	5	-	-	-	98.8	95-100	100	-	-	-	93.8	75-100	100	0	4	0				
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-37	4	32-43	13-21	10.3	5-22.5	6.9	-	-	-	96.6	90-100	98.3	-	-	-	84.8	40-100	99.5	0	4	0			
			FL-1	PESSEV	32-37	4	32-43	13-21	9.6	7.5-12.5	9.3	-	-	-	87.5	50-100	100	-	-	-	84.2	37.5-100	99.7	0	4	0				
			FL-2	PESSEV	32	1	32	13	17.5	-	-	-	-	-	62.5	-	-	-	-	-	62.5	-	-	0	1	0				
			All valid ass. (4-6w after B)	FL-1	PESSEV	32	1	48	31	20.5	-	-	-	-	-	100	-	-	-	-	-	100	-	-	0	1	0			

EPPO zone	Target code	Crop code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures										
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major					
NE (+CZ) (2022-2023)	PYRNAV	AVESA	All valid ass. (2-3w after A)	FLAG	PESSEV	32	1	22	22	6.3	-	-	-	-	-	-	70	-	-	-	-	-	-	77.5	-	-	0	1	0	82	19 (6)	Control
			FL-1	PESSEV	32-59	2	21-22	21-22	13.6	8.3-18.8	13.6	-	-	-	-	70	49.6-90.4	70	-	-	-	78.4	63.5-93.3	78.4	0	2	0					
			FL-2	PESSEV	32-59	4	14-22	14-22	12.1	5-23.8	9.8	-	-	-	-	76	59.3-92.9	75.9	-	-	-	80.4	58.1-93.5	84.9	0	4	0					
			FL-3	PESSEV	32-32	2	15-20	15-20	6.4	5-7.8	6.4	-	-	-	-	75.5	50.9-100	75.5	-	-	-	64.8	34.6-95	64.8	0	2	0					
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-37	2	35-43	14-21	11.1	4.6-17.5	11.1	-	-	-	-	90.4	90-90.8	90.4	-	-	-	96.8	95.8-97.8	96.8	0	2	0				
			FL-1	PESSEV	32-37	4	35-54	14-33	13.5	5.2-22.5	13.2	-	-	-	-	89.2	78.4-100	89.3	-	-	-	94.6	90.2-100	94.1	0	4	0					
FL-2	PESSEV	32-32	4	38-54	16-33	17.3	5.5-25.6	19	-	-	-	-	88.6	81.3-94.4	89.3	-	-	-	94.1	87.7-100	94.3	0	4	0								
NE (+CZ) (2022)	PYRNTE	HORVV	All valid ass. (2-3w after A)	FL-3	PESSEV	32-33	2	21-23	21-23	6.5	5.7-7.2	6.5	40.1	27.8-52.3	40.1	53.3	32.2-74.4	53.3	56.4	42.6-70.1	56.4	-	-	-	0	2	0	71	30 (12)	Moderate control		
			All valid ass. (2-3w after B)	FL-2	PESSEV	32-33	2	38-41	17-21	9.7	5-14.4	9.7	65.5 (n=1)	65.5-65.5	65.5	91.9	83.8-100	91.9	93.7	87.3-100	93.7	-	-	-	0	2	0					
			All valid ass. (4-6w after B)	FLAG	PESSEV	32-33	2	50-50	27-29	11.5	10.6-12.3	11.5	45.6	33.3-57.8	45.6	54.3	39.4-69.2	54.3	61.4	52.1-70.6	61.4	-	-	-	0	2	0					
			FL-1	PESSEV	32-33	4	50-53	27-32	17.3	8-29.1	16.1	50 (n=3)	43.3-55.9	50.8	67.5	52.2-98.7	59.6	65.3	48.7-96.8	57.8				0	4	0						
NE (+CZ) (2023)	PYRNTE	HORVV	All valid ass. (2-3w after A)	FL-1	PESSEV	33-33	1	14-14	14-14	5	-	-	-	-	-	25	-	-	-	-	-	65	-	-	0	1	0	71	30 (12)	Moderate control		
			FL-2	PESSEV	33-45	2	14-14	14-14	7.2	5.6-8.8	7.2	-	-	-	-	50.7	25-76.4	50.7	-	-	-	66.4	45-87.8	66.4	0	2	0					
			FL-3	PESSEV	45-45	1	14-14	14-14	7.1	-	-	-	-	-	82.5	-	-	-	-	-	90.3	-	-	0	1	0						
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-33	3	26-40	7-19	18.1	4.5-42.2	7.5	-	-	-	-	96.8	90.4-100	100	-	-	-	96.2	91.7-100	97	1	2				0	
			FL-1	PESSEV	32-33	5	26-46	7-21	9.7	6.8-14.1	7.5	-	-	-	-	66.4	25-84.5	77.5	-	-	-	84.7	64.9-93.9	87.5	1	4	0					
			FL-2	PESSEV	32-33	5	26-44	7-21	12.8	7.3-19.1	11.9	-	-	-	-	73.9	37.5-91.4	78.8	-	-	-	76.7	50-94.6	79.9	1	4	0					
NE	PYRNTE	HORVS	All valid ass. (2-3w after A)	FLAG	PESSEV	37	1	26	26	5.5	-	-	-	-	-	87.9	-	-	-	-	-	100	-	-	1	0	0	71	30 (12)	Moderate control		
			FL-1	PESSEV	37	1	26	26	15.4	-	-	-	-	-	92.3	-	-	-	-	-	96.3	-	-	0	1	0						
			FL-2	PESSEV	37	1	26	26	18.1	-	-	-	-	-	83.7	-	-	-	-	-	86.5	-	-	0	1	0						

EPPO zone	Target code	Crop code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	mi-nor	equal	ma-jor			
NE (+CZ)	RAMUCC	HORVW	All valid ass. (2-3w after B)	FL-1	PESSEV	31-32	2	40-40	15-19	28.3	4.9-51.6	28.3	-	-	-	62.4	33.7-91	62.4	-	-	-	67.1	41.9-92.2	67.1	0	2	0	56	8(4)	Some control
			FL-2	PESSEV	31-32	3	40-42	15-20	26.5	6.3-65.6	7.6	-	-	-	53.5	29.1-86.2	45.1	-	-	-	62.8	46.5-94.6	47.2	1	2	0				
			FL-2	PESSEV	31-32	2	40-42	15-20	11.1	9.8-12.3	11.1	-	-	-	46	43.2-48.8	46	-	-	-	48.1	42.4-53.7	48.1	0	2	0				
			All valid ass. (4-6w after B)	FLAG	PESSEV	32-32	1	63-63	36-36	29.7	-	-	-	-	-	-	72.3	-	-	-	-	-	78.8	-	-	1	0			
NE (2022)	RHYNSE	HORVW	All valid ass. (2-3w after B)	FL-1	PESSEV	32	1	42	20	5.9	-	-	54.1	-	-	75.8	-	-	67	-	-				0	1	0			
			FL-2	PESSEV	32-32	2	35-42	14-20	8.5	5.4-11.5	8.5	71	70.9-71.1	71	87.9	76.9-98.8	87.9	82.1	69.9-94.2	82.1				0	2	0				
			All valid ass. (4-6w after B)	FLAG	PESSEV	32	1	50	27	10	-	-	58	-	-	75.8	-	-	60.6	-	-				0	1	0			
NE (+CZ) (2023)	RHYNSE	HORVW	All valid ass. (2-3w after A)	FL-2	PESSEV	32-33	4	14-25	14-25	6.1	5.7-6.3	6.3	-	-	-	91.5	87.4-100	89.3	-	-	-	90.9	83.7-100	90	0	4	0	83	32 (16)	Control
			FL-3	PESSEV	32-33	2	14-20	14-20	21.3	15-27.5	21.3	-	-	-	55.3	37.5-73	55.3	-	-	-	79.2	62.5-95.8	79.2	1	1	0				
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-32	2	37-38	14-18	12.3	6.5-18	12.3	-	-	-	85.7	73.3-98	85.7	-	-	-	85.7	73.3-98	85.7	0	2	0			
			FL-1	PESSEV	32-32	3	26-46	7-21	20.1	4.3-6.5	6.1	-	-	-	81	65-73.3	80.3	-	-	-	95.8	88.9-76.7	98.5	0	3	0				
			FL-2	PESSEV	32-33	2	26-38	7-18	35.7	8.8-62.5	35.7	-	-	-	67.6	45-90.2	67.6	-	-	-	70.8	45-96.5	70.8	0	2	0				
		SECCW	All valid ass. (2-3w after A)	FL-2	PESSEV	32-32	2	21-25	21-25	5.3	5-5.6	5.3	-	-	-	96.8	96-97.5	96.8	-	-	-	98.8	97.5-100	98.8	0	2	0			
			FL-3	PESSEV	32-32	2	21-24	21-24	8.6	8.3-8.8	8.6	-	-	-	80.7	75.5-85.8	80.7	-	-	-	63.8	61.2-66.3	63.8	0	1	1				
			All valid ass. (2-3w after B)	FL-1	PESSEV	32-32	4	27-46	6-21	8.5	5.8-15.6	6.3	-	-	-	89	79.2-95.8	90.4	-	-	-	95.6	92.5-100	95	2	2	0			
			FL-2	PESSEV	32-32	3	27-45	6-21	16.6	4.3-39.1	6.4	-	-	-	79.4	57.7-92.6	87.9	-	-	-	80.5	66.7-96.8	78	1	2	0				
			All valid ass. (4-6w after B)	FLAG	PESSEV	32	1	52	31	10	-	-	-	-	-	-	100	-	-	-	-	-	100	-	-	0	1			
TTLWI	All valid ass. (2-3w after A)	FL-2	PESSEV	32	1	21	21	4.7	-	-	-	-	-	-	78.4	-	-	-	-	-	68.9	-	-	0	1	0				

EPPO zone	Target code	Crop code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
NE (+CZ) (2022-2023)	ERYSGR	HORVW	All valid ass. (2-3w after B)	FL-1	PESSEV	32	1	42	21	8.1	-	-	-	-	-	95.2	-	-	-	-	-	93.7	-	-	0	1	0	89	26 (11)	Control
			FL-2	PESSEV	32	1	42	21	8.8	-	-	-	-	-	82.8	-	-	-	-	-	84.3	-	-	0	1	0				
			All valid ass. (2-3w after A)	FL-1	PESSEV	32-32	1	22-22	22-22	7.1	-	-	37	-	-	74	-	-	-	-	-	41.9	-	-	0	1	0			
			FL-2	PESSEV	32	1	22	22	16.3	-	-	17.9	-	-	77.4	-	-	-	-	-	41.4	-	-	0	1	0				
			FL-3	PESSEV	32-32	1	22-22	22-22	5.6	-	-	26.7	-	-	100	-	-	-	-	-	66.7	-	-	0	1	0				
			All valid ass. (2-3w after B)	FLAG	PESSEV	32	1	37	14	12.5	-	-	37.3	-	-	81.7	-	-	-	-	-	85.7	-	-	0	1	0			
		SECCW	All valid ass. (2-3w after A)	FL-2	PESSEV	32	1	21	21	5	-	-	100	-	-	100	-	-	-	-	-	100	-	-	0	1	0			
			All valid ass. (2-3w after B)	FLAG	PESSEV	32	1	52	31	5	-	-	100	-	-	100	-	-	-	-	-	100	-	-	0	1	0			
			FL-1	PESSEV	32	1	52	31	15	-	-	76.7	-	-	76.7	-	-	-	-	-	83.3	-	-	0	1	0				
		TRZAW	All valid ass. (2-3w after A)	FL-2	PESSEV	32-32	1	21-21	21-21	5	-	-	100	-	-	100	-	-	100	-	-	-	-	-	0	1	0			
			FL-3	PESSEV	32-32	1	21-21	21-21	41.6	-	-	78.1	-	-	87	-	-	90.9	-	-	-	-	-	0	1	0				
			All valid ass. (2-3w after B)	FL-2	PESSEV	32-32	3	37-44	14-22	13.7	7.6-21.8	11.6	77.2	72.5-80.3	78.7	83.4	81.4-85.5	83.4	87.7 (n=2)	86.7-88.6	87.7 (n=2)	92.9 (n=2)	85.7-100	92.9	1	2	0			
			All valid ass. (4-6w after B)	FLAG	PESSEV	39-39	1	43-43	43-43	6.9	-	-	-	-	-	95	-	-	100	-	-	-	-	-	0	0	0			
		TRZSP	All valid ass. (2-3w after A)	FL-2	PESSEV	32	1	22	22	19	-	-	76.2	-	-	78.8	-	-	-	-	-	100	-	-	1	0	0			
		TTLWI	All valid ass. (2-3w after A)	FLAG	PESSEV	32	1	25	25	5	-	-	-	-	-	100	-	-	-	-	-	95	-	-	0	1	0			
			FL-1	PESSEV	32-32	3	14-25	14-25	7.7	6.8-8.8	7.5	-	-	-	83.3	75-90	85	-	-	-	86.8	72.9-95	92.5	0	3	0				
			FL-2	PESSEV	32-32	4	14-25	14-25	19.5	15-23.8	19.5	-	-	-	90.1	72.9-96.7	95.4	-	-	-	90	64.6-100	97.8	0	4	0				

EPPO zone	Target code	Crop code	Group- ing	Part rated	Type	Crop BBCH at 1st appl.	Nb. Tri- als	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All tim- ings, rating types and parts	Nb. of assess- ments (nb.tri- als)	Control pro- vided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
			All valid ass. (2-3w after B)	FLAG	PESSEV	65	1	21	25	7.5	-	-	-	-	-	95	-	-	-	-	-	97.5	-	-	0	1	0			
				FL-1	PESSEV	32-32	2	34-46	20-21	10.2	10-10.3	10.2	-	-	-	93.4	90-96.7	93.4	-	-	-	95.9	95-96.7	95.9	0	2	0			
				FL-2	PESSEV	65	1	21	25	15	-	-	-	-	-	93.3	-	-	-	-	-	96.7	-	-	0	1	0			

Mediterranean EPPO Zone

A total of 28 trials were carried out in the Mediterranean EPPO Zone to evaluate the efficacy of GLOB2021dF for the control of foliar and ear diseases on cereals. Those trials have been conducted during 2022 and 2023 in Croatia, Greece, Italy, Portugal and the Mediterranean coast of Slovenia.

During 2022 season, Protendo 300 EC (prothioconazole 300 EC) applied at 0.65 L/ha or Proline/Praktis (prothioconazole 250 g/L) applied at 0.8 L/ha were included in all trials as a uniform reference. During 2023 season, in most trials the test product was compared to products based on bixafen mixtures with a triazole as Siltra Xpro and Aviator Xpro.

Data were summarized at the end of each table by an orthogonal comparison of the control achieved by maximum proposed rate of GLOB2021dF to the reference product at each relevant assessment timing. As a lower dose rate was tested only in part of the trials, these data are summarized only when representative and, if different, the relative number of trials is showed close to the mean value.

Results where the untreated check had a severity percentage below 5% or a second assessment falling within the same assessment timing window were not considered for means calculation and those data are shaded in grey in the BAD. Figures presented in italics for Untreated check in calculated control rows stand for the pressure.

Exceptionally, infestation between 4 and 5% were used when a tendency could be seen in disease development. The number of trials where product is statistically >, <, = compared to the reference standard is provided for each grouping.

Results

FUSASP – *Fusarium* spp.

Infection by *Fusarium* species was assessed in total 7 trials (5 trials in 2022 and 2 trials in 2023, being 4 trials on soft wheat and 3 on durum wheat). Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good even after one single application at BBCH 61-65. Control levels were in general comparable to those of standard products based on prothioconazole alone or on bixafen + triazole mixtures. 1 trial in Greece had low severity levels, nevertheless the incidence of 6.5% was totally controlled by the test product at 0.8 L/ha (KCP 6.2-92, data not summarized below as no significant severity).

Results also demonstrate the benefit of the treatment with GLOB2021dF in the amount of mycotoxins in the harvested grains. The dose rate of 0.8 L/ha resulted in 26 to 93% reduction in the content of mycotoxins compared to the untreated control in 2 trials where relevant amounts of mycotoxins were found.

No specific EPPO extrapolation table is available on foliar and ear diseases. Nevertheless, the Dutch guidance states that for *Fusarium* spp., it is possible to extrapolate from winter wheat to spring wheat, rye, triticale and spelt because in these crops same diseases can be found and their susceptibility to infection is lower. Also on UK, extrapolation is acceptable from winter wheat to minor cereals including oats, spring wheat, durum wheat, rye, triticale. Therefore, acceptability of the data provided on winter wheat to other crops may be taken into account by each CMS.

Table 3.2-139: Efficacy of GLOB2021dF against FUSASP (PESSEV) on wheat - 1 application– Mediterranean EPPO Zone – 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
MED	FUSACU	TRZAW	All valid ass. BBCH 75-83	EAR	PESSEV	4	21-29	-	21.4	7.4-46.8	15.8	-	-	-	87.9	71.8-100	89.8	89.4	80.1-100	88.7	1	3	0

Number of trials summarized: 5 (4 valid trials)

Table 3.2-140: Efficacy of GLOB2021dF against FUSASP (PESSEV) on wheat - 1 application– Mediterranean EPPO Zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	FUSACU	TRZDW	All valid ass. BBCH 75-83	EAR	PESSEV	61-61	2	21-24	21-24	19.8	18.1-21.5	19.8	-	-	-	73.8	56.7-90.9	73.8	74 (n=1)	-	-	96.3 (n=1)	-	-	1	1	0

number of trials summarized: 2 on durum wheat

Table 3.2-141: Efficacy of GLOB2021dF against FUSASP (FHB index -severity x incidence) on wheat - 1 application– Mediterranean EPPO Zone – 2022

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control (FHB index)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
MED	FUSACU	TRZAW	All valid ass. BRCH 75-83	EAR	SEVIND	4	21-29	-	1273.8	120.1-3333.7	820.7	-	-	-	93.3	80-100	96.6	95.1	89.3-100	95.6	1	3	0

Number of trials summarized: 5 (4 valid trials)

Table 3.2-142: Efficacy of GLOB2021dF against FUSASP (FHB index -severity x incidence) on wheat - 1 application– Mediterranean EPPO Zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	FUSACU	TRZDW	All valid ass. BBCH 75-83	EAR	SEVIND	61-61	2	21-24	21-24	1645.0	1548.8-1741.2	1645.0	-	-	-	79.8	63.3-96.2	79.8	81.5 (n=1)	-	-	99.3 (n=1)	-	-	1	1	0

number of trials summarized: 2 on durum wheat

Table 3.2-143: Efficacy of GLOB2021dF against FUSASP (mycotoxin content) on wheat - 1 application– Mediterranean EPPO Zone – 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Nb. trials	DAA-A	DAA-B	Infestation in the untreated control (PPM)			% control									No of trials where product is >, <, = compared to standard		
											GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha					
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	FUSACU	TRZAW	All*	Micotoxin (PPM)	1	78-78	-	1.4	-	-	-	-	-	92.9	-	-	90.3	-	-	0	1	0

*4 trials not included in means calculation due to very low levels detected (below 0.5 PPM)

Number of trials summarized: 9 (2 valid trials)

Table 3.2-144: Efficacy of GLOB2021dF against FUSASP (mycotoxin content) on wheat - 1 application– Mediterranean EPPO Zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	FUSACU	TRZDW	All*	SEED	Mico-toxin (PPM)	61-61	1	135-135	135-135	1.7	-	-	-	-	-	25.7	-	-	47.9	-	-	-	-	-	1	0	0

number of trials summarized: 2 on durum wheat

*1 trial not included in means calculation due to very low levels detected (below 0.5 PPM)

SEPTTR - *Zymoseptoria tritici*

Infection by *Zymoseptoria tritici* was verified at acceptable levels in a total of 5 trials in 2022 (4 on soft wheat and 1 on durum wheat) as well as 5 trials in 2023 (1 on wheat, 3 on durum wheat, 1 on triticale). In most of the trials 2 applications were performed. Given the homogeneity of results, data from both types of wheat were gathered in 2022 data summaries. Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good, especially on top leaves after the 2nd application. Control levels were always comparable to standard products based on prothioconazole alone or on bixafen + triazole mixtures.

No specific EPPO extrapolation table is available on foliar and ear diseases. Nevertheless, the Dutch guidance states that for leaf and ear diseases, it is possible to extrapolate from winter wheat to spring wheat, rye, triticale and spelt because in these crops same diseases can be found and their susceptibility to infection is lower. Also on UK, extrapolation is acceptable from winter wheat to minor cereals including oats, spring wheat, durum wheat, rye, triticale. Therefore, acceptability of the substantial data provided on winter wheat as well as supportive data on minor cereals in support of other crops may be taken into account by each cMS. In addition, based on practical experience it is known that if *Zymoseptoria tritici* can be well controlled, LEPTNO *Parastagonospora nodorum* (syn.= *Leptosphaeria nodorum*, leaf infection) can also be well controlled. Therefore, the data provided will support by extrapolation all used claimed in the table “All intended uses” in Part B – Section 0.

Table 3.2-145: Efficacy of GLOB2021dF against SEPTTR (PESSEV %) on cereals (soft and durum wheat) at different leaf levels– Mediterranean EPPO zone – 2022 data – 2 applications

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FL-1	32-36	3	21-22	-	6.7	5.1-7.5	7.5	76.4	43.1-100	86.0	76.5	38.2-100	91.4	83.9	59.5-100	92.2	0	3	0
		TRZAW/ TRZDW(1)	All valid ass. (2-3w after A)	FL-2	32-36	5	21-22	-	10.8	5.3-22.3	6.9	73.7	28.4-88.8	84.7	80.5	22.2-97.6	93.1	82.9	40.2-96.5	92.8	0	5	0
			FL-3	32-32	2	21-21	-	11.6	11.2-11.9	11.6	83.4	77.1-89.6	83.4	96.8	95.7-97.9	96.8	95.8	93.8-97.7	95.8	0	2	0	
			FLAG	32-36	5	36-42	14-21	7.0	5.2-9.7	6.8	84.2	75.6-100	78.8	95.3	88.9-100	95.5	95.0	89.9-100	95.2	0	5	0	
			All valid ass. (2-3w after B)	FL-1	32-36	5	36-42	14-21	14.1	6.1-17.9	14.9	84.1	70.6-94.3	84.9	92.3	77.7-98.3	95.8	92.0	81-95.4	94.6	0	5	0
			FL-2	32-36	5	36-42	14-21	26.2	9.3-32.3	30.5	81.9	60.4-90.5	89.5	87.4	58.4-97.7	92.7	88.3	63.8-98	92.7	0	5	0	

number of trials summarized: 10

Table 3.2-146: Efficacy of GLOB2021dF against SEPTTR (PESSEV %) on cereals (soft and durum wheat) at different leaf levels– Mediterranean EPPO zone – 2023 data – 2 applications

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	SEPTTR	TRZDW	All valid ass. (2-3w after A)	FL-2	32-32	2	21-21	21-21	10.5	5.8-15.1	10.5	-	-	-	91.6	88.3-94.9	91.6	-	-	-	91.7	88.8-94.6	91.7	0	2	0
			FL-3	32-32	1	21-21	21-21	10.1	-	-	-	-	-	-	82.9	-	-	-	-	-	80.8	-	-	0	1	0
			All valid ass. (2-3w after B)	FLAG	32-32	2	35-42	14-21	12.0	10.2-13.8	12.0	-	-	-	94.9	89.8-100	94.9	-	-	-	82.7	82.1-83.3	82.7	0	1	1
			FL-1	32-32	2	35-42	14-21	18.0	16-20	18.0	-	-	-	93.1	87.9-98.3	93.1	-	-	-	87.6	82.6-92.5	87.6	0	1	1	
			FL-2	32-32	1	42-42	21-21	32.5	-	-	-	-	-	96.4	-	-	-	-	-	92.5	-	-	0	1	0	
			All valid ass. (2-3w after A)	FLAG	32	1	14	14	20.2	-	-	79.8	-	-	86.9	-	-	-	-	-	87.3	-	-	0	1	0
MED	SEPTTR	TTLWI	FL-1	32	1	14	14	23.9	-	-	74.2	-	-	89.2	-	-	-	-	-	87.1	-	-	0	1	0	
			FL-2	32	1	14	14	27	-	-	76.6	-	-	85.9	-	-	-	-	85.0	-	-	0	1	0		
			All valid ass. (2-3w after B)	FLAG	32	1	49	21	35.9	-	-	80.8	-	-	87.4	-	-	-	-	85.7	-	-	0	1	0	
			FL-1	32	1	49	21	39.5	-	-	83.0	-	-	90.1	-	-	-	-	88.6	-	-	0	1	0		
			FL-2	32	1	49	21	43.9	-	-	81.6	-	-	87.0	-	-	-	-	87.0	-	-	0	1	0		

number of trials summarized: 2 durum wheat, 1 triticale

Table 3.2-147: Efficacy of GLOB2021dF against SEPTTR (PESSEV %) on cereals (soft and durum wheat) at different leaf levels– Mediterranean EPPO zone – 2023 data – 1 application

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FL-2	39-39	1	14-14	14-14	8.7	-	-	-	-	-	95.3	-	-	87.2	-	-	-	-	-	0	0	1
			All valid ass. (4-6w after A)	FL-1	39-39	1	28-28	28-28	5.0	-	-	-	-	-	97.1	-	-	92.0	-	-	-	-	-	0	1	0
				FL-2	39-39	1	28-28	28-28	24.9	-	-	-	-	-	96.3	-	-	92.9	-	-	-	-	-	0	1	0
MED	SEPTTR	TRZDW	All valid ass. (2-3w after A)	FL-2	39	1	15	15	5.8	-	-	-	-	-	89.1	-	-	74.3	-	-	-	-	-	0	0	1
			FL-3	39	1	15	15	11.8	-	-	-	-	-	78.4	-	-	73.2	-	-	-	-	-	0	1	0	
			All valid ass. (4-6w after A)	FLAG	39	1	42	42	5.9	-	-	-	-	-	81.7	-	-	68.3	-	-	-	-	-	0	0	1
				FL-1	39	1	42	42	13	-	-	-	-	-	80.0	-	-	75.6	-	-	-	-	-	0	0	1

number of trials summarized: 1 wheat, 1 durum wheat

PYRNTE - *Pyrenophora teres*

Infection by Net blotch of barley *Pyrenophora teres* was verified at acceptable levels in 1 trial carried out in the Mediterranean zone in 2022. The trial was characterized by a moderate pressure.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was moderate and control levels were always statistically comparable to those of standard products based on prothioconazole alone as well as on bixafen + triazole mixtures.

No specific EPPO extrapolation table is available on foliar and ear diseases. Nevertheless, according to EPPO Guideline 1/226(3) the number of trials required to demonstrate the efficacy against a certain pest can be reduced for closely related pest or against the same pests on different crops. Case in point is net blotch of barley (PYRNTE, *Pyrenophora teres*) and it's leaf-specific form *Pyrenophora teres f. sp. maculata* (PYRNTM). It is important to note that these are not different species or sub-species but rather specialised varieties of the same pathogen. Given that PYRNTE is prevalent in European conditions, data provided here can be extrapolated to cover also PYRNTM on barley.

Table 3.2-148: Efficacy of GLOB2021dF against PYRNTE on winter barley (PESSEV) at different leaf levels – Maritime EPPO Zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)															No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
MED	PYRNTE	HORVW	All valid ass. (2-3w after A)	FL-2	33	1	21	21	6.8	-	-	39.6	-	-	60.4	-	-	60.4	-	-	73.9	-	-	0	1	0
			FL-3	33	1	21	21	17.5	-	-	55.4	-	-	74.2	-	-	80.4	-	-	86.7	-	-	0	1	0	
			FLAG	33	1	42	21	16.9	-	-	63.1	-	-	69.4	-	-	72.3	-	-	88.4	-	-	0	1	0	
			All valid ass. (2-3w after B)	FL-1	33	1	42	21	19.8	-	-	66.8	-	-	69.9	-	-	73.6	-	-	75.8	-	-	0	1	0
			FL-2	33	1	42	21	32.9	-	-	56.5	-	-	64.4	-	-	66.2	-	-	73.4	-	-	0	1	0	

Number of trials summarized: 1

RAMUCC - *Ramularia collo-cygni*

Infection by ramularia leaf spot of barley was verified at acceptable levels, after the second application, in 1 trial in the Mediterranean zone in 2022.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good and equal to the efficacy of the standard products based on prothioconazole alone.

Table 3.2-149 Efficacy of GLOB2021dF against RAMUCC (PESSEV) on cereals (barley) at different leaf levels - Mediterranean EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	RAMUCC	HORVW	All valid ass. (2-3w after B)	FL-1	33-33	1	32-32	13-13	4.8	4.8-4.8	4.8	100.0	-	-	100.0	-	-	100.0	-	-	-	-	-	0	1	0
				FL-2	33-33	1	32-32	13-13	9.3	9.3-9.3	9.3	90.3	-	-	100.0	-	-	100.0	-	-	-	-	-	0	1	0
			All valid ass. (4-6w after B)	FLAG	33-33	1	45-45	26-26	4.0	4-4	4.0	100.0	-	-	100.0	-	-	100.0	-	-	-	-	-	0	1	0

Number of trials summarized: 1

RHYNSE - *Rhynchosporium secalis*

Infection by Leaf blotch of cereals *Rhynchosporium secalis* was verified at acceptable levels in a total of 4 trials in 2022 and 6 trials in 2023 (9 on winter barley and 1 on rye), characterized by a moderate to high pressure level.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good and in general comparable to those of standard products based on prothioconazole alone or on bixafen + triazole mixtures.

No specific EPPO extrapolation table is available on foliar and ear diseases. Nevertheless, the Dutch guidance states that for *Rhynchosporium secalis*, data on winter barley and spring barley are equally supportive because no differences exist in disease pressure or susceptibility. Therefore, results on major host winter barley will also support the use on spring barley.

Table 3.2-150: Efficacy of GLOB2021dF against RHYNSE (PESSEV) on cereals (barley) at different leaf levels – Mediterranean EPPO zone – 2022 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control									No of trials where product is >, <, = compared to standard			
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha						
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major	
MED	RHYNSE	HORVW	All valid ass. (2-3w after A)	FLAG	37	1	22	22	4.0	-	-	98.7	-	-	-	99.4	-	-	97.5	-	-	0	1	0
				FL-1	32-37	3	21-22	21-22	8.5	5-10.3	10.2	85.4	67.8-97.1	91.4	85.0	63.1-98.4	93.4	84.4	62.9-99	91.2	0	3	0	
				FL-2	32-37	4	19-22	19-22	13.1	5.1-21.8	12.8	88.8	79-100	88.1	89.2	72.4-100	92.2	88.3	70.3-100	91.5	0	4	0	
			All valid ass. (2-3w after B)	FLAG	32-37	3	37-41	15-20	12.9	5.2-27.5	6.1	86.8	66.1-100	94.3	96.0	90.6-100	97.5	95.6	91.8-100	94.9	0	2	1	
				FL-1	32-37	3	37-41	15-20	22.9	9.5-42.1	17.1	82.1	61.8-92.4	92.1	91.4	82.4-97.8	93.9	90.6	84.2-94.8	92.9	0	2	1	
				FL-2	32-37	3	37-41	15-20	31.3	18-51.2	24.8	80.0	59-92.8	88.2	89.2	79.3-95.2	93.0	89.3	82-94.7	91.3	0	3	0	

Table 3.2-151: Efficacy of GLOB2021dF against RHYNSE (PESSEV) on cereals (barley, rye) at different leaf levels – Mediterranean EPPO zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
MED	RHYNSE	HORVW	All valid ass. (2-3w after A)	FLAG	32-32	2	21-21	21-21	17.7	14-21.3	17.7	-	-	-	85.5	82.2-88.8	85.5	-	-	-	85.4	81.7-89.1	85.4	0	2	0
				FL-2	32-32	5	21-22	21-22	16.8	5.2-33.4	10.0	-	-	-	86.6	78.9-95.7	87.8	-	-	-	90.0	79.8-96.7	94.6	2	2	1
			All valid ass. (2-3w after B)	FLAG	32-32	5	38-42	16-21	19.1	6.2-29.8	25.0	-	-	-	93.3	84.9-100	95.6	-	-	-	93.7	85.4-100	97.6	0	5	0
				FL-1	32-32	5	38-42	16-21	22.6	10.9-29.8	15.1	-	-	-	92.4	85.3-100	95.0	-	-	-	93.3	86.2-100	95.0	1	4	0
				FL-2	32-32	3	42-42	21-21	36.1	23.7-44.2	40.4	-	-	-	90.9	86.2-96.5	89.9	-	-	-	91.0	87-96.7	89.2	0	3	0
MED	RHYNSE	SECCW	All valid ass. (2-3w after A)	FLAG	32	1	21	21	8	-	-	-	-	-	88.1	-	-	-	-	-	87.2	-	-	0	1	0
				FL-1	32	1	21	21	18.9	-	-	-	-	-	87.0	-	-	-	-	-	84.4	-	-	0	0	1
			All valid ass. (2-3w after B)	FL-2	32-32	1	21-21	21-21	24.2	-	-	-	-	-	85.8	-	-	-	-	-	84.2	-	-	0	1	0
				FLAG	32	1	42	21	26.5	-	-	-	-	-	85.4	-	-	-	-	-	87.9	-	-	0	1	0
				FL-1	32-32	1	42-42	21-21	34.4	-	-	-	-	-	88.9	-	-	-	-	-	87.1	-	-	0	1	0
				FL-2	32-32	1	42-42	21-21	35.2	-	-	-	-	-	87.4	-	-	-	-	-	87.2	-	-	0	1	0

number of trials summarized: 6 (5 w barley, 1 rye)

Summary (Mediterranean EPPO zone)

The summary tables below present the results shown above for the maximum proposed rate of 0.8 L/ha and combines, for each disease, the most biologically relevant results (i.e. FHB index (SEVIND) for *Fusarium* sp. and PESSEV % up to L-3 for other diseases) obtained across all timings and plant parts in a weighted mean. The overall susceptibility level of each disease is indicated.

Table 3.2-152 Overall efficacy and susceptibility level to GLOB2021dF at the target rate of 0.8 L/ha on cereals against Fusarium- Mediterranean EPPO zone

EPPO zone	Target code	Crop code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
MED (2022)	FUSACU	TRZAW	All valid ass. BBCH 75-83	EAR	SEVIND	61-65	4	21-29	-	1273.8	120.1-3333.7	820.7	-	-	-	93.3	80-100	96.6	95.1	89.3-100	95.6				1	3	0	89	6 (6**)	Control provided
MED (2023)	FUSACU	TRZDW	All valid ass. BBCH 75-83	EAR	SEVIND	61-61	2	21-24	21-24	1645	1548.8-1741.2	1645	-	-	-	79.8	63.3-96.2	79.8	81.5 (n=1)	-	-	99.3 (n=1)	-	-	1	1	0			

* 7 trials submitted. 1 trial in Greece had low severity levels, nevertheless the incidence of 6.5% was totally controlled by the test product at 0.8 L/ha

Table 3.2-153 Overall efficacy and susceptibility level to GLOB2021dF at the target rate of 0.8 L/ha on cereals against leaf diseases- Mediterranean EPPO zone

EPPO zone	Target code	Crop code	Group-ing	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All tim-ings, rating types and parts	Nb. of assess-ments (nb.tri-als)	Control provided			
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures											
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn				minor	equal	major
MED (2022)	SEPTTR	TRZAW/ TRZDW	All valid ass. (2-3w after A)	FL-1	PESSEV	32-36	3	21-22	-	6.7	5.1-7.5	7.5	76.4	43.1-100	86	76.5	38.2-100	91.4	83.9	59.5-100	92.2	-	-	-	0	3	0			Control			
				FL-2	PESSEV	32-36	5	21-22	-	10.8	5.3-22.3	6.9	73.7	28.4-88.8	84.7	80.5	22.2-97.6	93.1	82.9	40.2-96.5	92.8	-	-	-	0	5	0						
			All valid ass. (2-3w after B)	FL-3	PESSEV	32-32	2	21-21	-	11.6	11.2-11.9	11.6	83.4	77.1-89.6	83.4	96.8	95.7-97.9	96.8	95.8	93.8-97.7	95.8	-	-	-	0	2	0						
				FLAG	PESSEV	32-36	5	36-42	14-21	7	5.2-9.7	6.8	84.2	75.6-100	78.8	95.3	88.9-100	95.5	95	89.9-100	95.2	-	-	-	0	5	0						
			FL-1	PESSEV	32-36	5	36-42	14-21	14.1	6.1-17.9	14.9	84.1	70.6-94.3	84.9	92.3	77.7-98.3	95.8	92	81-95.4	94.6	-	-	-	0	5	0							
			FL-2	PESSEV	32-36	5	36-42	14-21	26.2	9.3-32.3	30.5	81.9	60.4-90.5	89.5	87.4	58.4-97.7	92.7	88.3	63.8-98	92.7	-	-	-	0	5	0							
MED (2023)	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FL-2	PESSEV	39-39	1	14-14	14-14	8.7	-	-	-	-	-	95.3	-	-	87.2	-	-	-	-	-	0	0	1					40 (9)	Control
				FL-1	PESSEV	39-39	1	28-28	28-28	5	-	-	-	-	-	97.1	-	-	92	-	-	-	-	-	0	1	0						
			All valid ass. (4-6w after A)	FL-2	PESSEV	39-39	1	28-28	28-28	24.9	-	-	-	-	-	96.3	-	-	92.9	-	-	-	-	-	0	1	0						
All valid ass. (2-3w after A)	FL-2	PESSEV		39	1	15	15	5.8	-	-	-	-	-	89.1	-	-	74.3	-	-	-	-	-	0	0	1								
	All valid ass. (4-6w after A)	FL-3	PESSEV	39	1	15	15	11.8	-	-	-	-	-	78.4	-	-	73.2	-	-	-	-	-	0	1	0								
MED (2023)		SEPTTR	TRZDW	All valid ass. (2-3w after A)	FLAG	PESSEV	39	1	42	42	5.9	-	-	-	-	-	81.7	-	-	68.3	-	-	-	-	-	0	0						
	FL-1				PESSEV	39	1	42	42	13	-	-	-	-	-	80	-	-	75.6	-	-	-	-	-	0	0	1						
	All valid ass. (2-3w after A)			FL-2	PESSEV	32-32	2	21-21	21-21	10.5	5.3-15.1	5.8	-	-	-	91.6	88.3-94.9	91.6	-	-	-	91.7	88.8-94.6	91.7	0	2	0						
				FL-3	PESSEV	32-32	1	21-21	21-21	10.1	-	-	-	-	-	82.9	-	-	-	-	-	80.8	-	-	0	1	0						
	All valid ass. (2-3w after B)			FLAG	PESSEV	32-32	2	35-42	14-21	12	10.2-13.8	10.2	-	-	-	94.9	89.8-100	94.9	-	-	-	82.7	82.1-83.3	82.7	0	1	1						
				FL-1	PESSEV	32-32	2	35-42	14-21	18	16-20	16	-	-	-	93.1	87.9-98.3	93.1	-	-	-	87.6	82.6-92.5	87.6	0	1	1						
MED (2023)	SEPTTR	TTLWI	All valid ass. (2-3w after A)	FL-2	PESSEV	32	1	14	14	27	-	-	76.6	-	-	85.9	-	-	-	-	-	85	-	-	0	1	0		6 (1)	Control			
				FLAG	PESSEV	32	1	49	21	35.9	-	-	80.8	-	-	87.4	-	-	-	-	-	85.7	-	-	0	1	0						
			All valid ass. (2-3w after B)	FL-1	PESSEV	32	1	49	21	39.5	-	-	83	-	-	90.1	-	-	-	-	-	88.6	-	-	0	1	0						
				FL-2	PESSEV	32	1	49	21	43.9	-	-	81.6	-	-	87	-	-	-	-	-	87	-	-	0	1	0						
				FL-1	PESSEV	32	1	14	14	23.9	-	-	74.2	-	-	89.2	-	-	-	-	-	87.1	-	-	0	1	0						
				FL-2	PESSEV	32	1	14	14	27	-	-	76.6	-	-	85.9	-	-	-	-	-	85	-	-	0	1	0						

EPPO zone	Target code	Crop code	Group- ing	Part rated	Type	Crop BBCH at 1st appl.	Nb. Tri- als	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assess- ments (nb.tri- als)	Control pro- vided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	min- or	equal	major			
MED (2022)	PYRNTE	HORVW	All valid ass. (2-3w after A)	FL-2	PESSEV	33	1	21	21	6.8	-	-	39.6	-	-	60.4	-	-	60.4	-	-	73.9	-	-	0	1	0	68	5 (1)	Moder- ate contro
				FL-3	PESSEV	33	1	21	21	17.5	-	-	55.4	-	-	74.2	-	-	80.4	-	-	86.7	-	-	0	1	0			
			All valid ass. (2-3w after B)	FLAG	PESSEV	33	1	42	21	16.9	-	-	63.1	-	-	69.4	-	-	72.3	-	-	88.4	-	-	0	1	0			
				FL-1	PESSEV	33	1	42	21	19.8	-	-	66.8	-	-	69.9	-	-	73.6	-	-	75.8	-	-	0	1	0			
				FL-2	PESSEV	33	1	42	21	32.9	-	-	56.5	-	-	64.4	-	-	66.2	-	-	73.4	-	-	0	1	0			
MED (2022)	RAMUCC	HORVW	All valid ass. (2-3w after B)	FL-1	PESSEV	33-33	1	32	13	4.8	-	-	100	-	-	100	-	-	100	-	-	-	-	-	0	1	0	100	3 (1)	Control
				FL-2	PESSEV	33-33	1	32	13	9.3	-	-	90.3	-	-	100	-	-	100	-	-	-	-	-	0	1	0			
			All valid ass. (4-6w after B)	FLAG	PESSEV	33-33	1	45	26	4	-	-	100	-	-	100	-	-	100	-	-	-	-	-	0	1	0			
MED (2022)	RHYNSE	HORVW	All valid ass. (2-3w after A)	FLAG	PESSEV	37	1	22	22	4	-	-	98.7	-	-	99.4	-	-	97.5	-	-				0	1	0	90	45 (10)	Control
				FL-1	PESSEV	32-37	3	21-22	21-22	8.5	5-10.3	10.2	85.4	67.8-97.1	91.4	85	63.1-98.4	93.4	84.4	62.9-99	91.2				0	3	0			
			All valid ass. (2-3w after B)	FL-2	PESSEV	32-37	4	19-22	19-22	13.1	5.1-21.8	12.8	88.8	79-100	88.1	89.2	72.4-100	92.2	88.3	70.3-100	91.5				0	4	0			
				FLAG	PESSEV	32-37	3	37-41	15-20	12.9	5.2-27.5	6.1	86.8	66.1-100	94.3	96	90.6-100	97.5	95.6	91.8-100	94.9				0	2	1			
				FL-1	PESSEV	32-37	3	37-41	15-20	22.9	9.5-42.1	17.1	82.1	61.8-92.4	92.1	91.4	82.4-97.8	93.9	90.6	84.2-94.8	92.9				0	2	1			
				FL-2	PESSEV	32-37	3	37-41	15-20	31.3	18-51.2	24.8	80	59-92.8	88.2	89.2	79.3-95.2	93	89.3	82-94.7	91.3				0	3	0			
MED (2023)	RHYNSE	HORVW	All valid ass. (2-3w after A)	FLAG	PESSEV	32-32	2	21-21	21-21	17.7	14-21.3	17.7	-	-	-	85.5	82.2-88.8	85.5	-	-	-	85.4	81.7-89.1	85.4	0	2	0	90	45 (10)	Control
				FL-1	PESSEV	32-32	2	21-21	21-21	25	24-26	25	-	-	-	85.8	84.4-87.2	85.8	-	-	-	83.6	81.4-85.8	83.6	0	1	1			
			All valid ass. (2-3w after B)	FL-2	PESSEV	32-32	5	21-22	21-22	16.8	5.2-33.4	10	-	-	-	86.6	78.9-95.7	87.8	-	-	-	90	79.8-96.7	94.6	2	2	1			
				FLAG	PESSEV	32-32	5	38-42	16-21	19.1	6.2-29.8	25	-	-	-	93.3	84.9-100	95.6	-	-	-	93.7	85.4-100	97.6	0	5	0			
				FL-1	PESSEV	32-32	5	38-42	16-21	22.6	10.9-29.8	15.1	-	-	-	92.4	85.3-100	95	-	-	-	93.3	86.2-100	95	1	4	0			
				FL-2	PESSEV	32-32	3	42-42	21-21	36.1	23.7-44.2	40.4	-	-	-	90.9	86.2-96.5	89.9	-	-	-	91	87-96.7	89.2	0	3	0			
MED (2023)	RHYNSE	SECCW	All valid ass. (2-3w after A)	FLAG	PESSEV	32	1	21	21	8	-	-	-	-	-	88.1	-	-	-	-	-	87.2	-	-	0	1	0	90	45 (10)	Control
				FL-1	PESSEV	32	1	21	21	18.9	-	-	-	-	-	87	-	-	-	-	-	84.4	-	-	0	0	1			
			All valid ass. (2-3w after B)	FL-2	PESSEV	32-32	1	21-21	21-21	24.2	-	-	-	-	-	85.8	-	-	-	-	-	84.2	-	-	0	1	0			
				FLAG	PESSEV	32	1	42	21	26.5	-	-	-	-	-	85.4	-	-	-	-	-	87.9	-	-	0	1	0			
				FL-1	PESSEV	32-32	1	42-42	21-21	34.4	-	-	-	-	-	88.9	-	-	-	-	-	87.1	-	-	0	1	0			
				FL-2	PESSEV	32-32	1	42-42	21-21	35.2	-	-	-	-	-	87.4	-	-	-	-	-	87.2	-	-	0	1	0			

South-East EPPO Zone

A total of 16 trials were carried out in the South-East EPPO Zone to evaluate the efficacy of GLOB2021dF for the control of foliar and ear diseases on cereals. Those trials were conducted during 2023 in Hungary, Romania and Slovenia.

Given the long history of use of both active substances, one season data may be sufficient to support the requested uses.

Reference product based on bixafen mixtures with a triazole (e.g. products as Siltra Xpro and Aviator Xpro) were included as reference in most of the trials presented for the South-East zone. Proline (prothioconazole 250 g/L) applied at 0.8 L/ha was also used as reference standard in part of the trials against SEPTTR.

Data were summarized at the end of each table by an orthogonal comparison of the control achieved by the proposed rate of GLOB2021dF to the reference products at each relevant assessment timing. In the South-East zone, a lower dose rate was tested in most of the trials and are as well summarized below.

Results where the untreated check had a severity percentage below 5% or a second assessment falling within the same assessment timing window were not considered for means calculation and those data are shaded in grey in the BAD. Figures presented in italics for Untreated check in calculated control rows stand for the pressure.

Exceptionally, infestation between 4 and 5% were used when a tendency could be seen in disease development. The number of trials where product is statistically >, <, = compared to the reference standard is provided for each grouping.

Results

FUSASP – *Fusarium* spp.

Infection by *Fusarium* species was assessed in 3 trials in 2023. Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good even after one single application at BBCH 61-65. Control levels were always comparable to those of standard products based on bixafen + triazole mixtures.

Results also demonstrate the benefit of the treatment with GLOB2021dF in the amount of mycotoxins in the harvested grains. The dose rate of 0.8 L/ha resulted in 76% reduction in the content of mycotoxins compared to the untreated control in one trial where relevant amounts of mycotoxins were found.

No specific EPPO extrapolation table is available on foliar and ear diseases. Nevertheless, the Dutch guidance states that for *Fusarium* spp., it is possible to extrapolate from winter wheat to spring wheat, rye, triticale and spelt because in these crops same diseases can be found and their susceptibility to infection is lower. Also on UK, extrapolation is acceptable from winter wheat to minor cereals including oats, spring wheat, durum wheat, rye, triticale. Therefore, acceptability of the data provided on winter wheat to other crops may be taken into account by each CMS.

Table 3.2-154: Efficacy of GLOB2021dF against FUSASP (PESSEV) on wheat - 1 application– South-East EPPO Zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	FUSASP	TRZAW	All valid ass. BBCH 75-83	EAR	PESSEV	61-61	3	21-31	21-31	15.3	10.2-24.9	10.7	88.2	79.6-96.2	88.7	93.1	82.2-99	98.1	-	-	-	92.3	80.5-99.7	96.7	0	3	0

Number of trials summarized: 3 wheat

Table 3.2-155: Efficacy of GLOB2021dF against FUSASP (FHB index -severity x incidence) on wheat - 1 application– South-East EPPO Zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	FUSASP	TRZAW	All valid ass. BBCH 75-83	EAR	SEVIND	61-61	3	21-31	21-31	917.1	275-1401.7	1074.5	94.8	88.9-99	96.4	97.0	91.3-99.9	99.7	-	-	-	96.3	89.6-100	99.2	0	3	0

Number of trials summarized: 3 wheat

Table 3.2-156: Efficacy of GLOB2021dF against FUSASP (mycotoxin content) on wheat - 1 application– South-East EPPO Zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	FUSASP	TRZAW	All*	SEED	Micotoxin (PPM)	61-61	1	75-75	75-75	2.0	2-2	2.0	72.3	72.3-72.3	72.3	76.2	76.2-76.2	76.2	-	-	-	75.8	75.8-75.8	75.8	0	1	0

* trials not included in means calculation due to very low levels detected (below 0.5 PPM)

Number of trials summarized: 3 wheat

Efficacy of GLOB2021dF against *Fusarium spp.*

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy) and PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

Infection by *Fusarium* species was verified at acceptable levels in a total of three trials in 2023, all conducted on wheat. In all these trials, the disease infestation level in untreated plots was sufficient (at least 5% pest severity at one leaf stage) to validate the trials and reliably assess the efficacy of GLOB2021dF. Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good, with a mean efficacy of 93.1% (n=3), even after a single application at BBCH 61-65. The results also showed that the efficacy of GLOB2021dF at the proposed label rate was statistically equivalent to, or in some cases superior to, standard products.

Additionally, GLOB2021dF treatment reduced mycotoxin levels in harvested grain. A dose rate of 0.8 L/ha resulted in an average reduction of 76% in mycotoxin levels compared to the untreated control in trials where significant levels of mycotoxins were present.

The concerned Member States concerned may consider accepting fewer trials conducted within one growing season or extrapolating data from other EPPO zones.

SEPTTR - *Zymoseptoria tritici*

Infection by *Zymoseptoria tritici* was verified at acceptable levels in a total of 8 trials in 2023 carried out on wheat in the S-E zone. In most of the trials 2 applications were performed. Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good, especially on the top leaves after the second application. Control levels were always comparable to those of standard products based on prothioconazole and in most of the assessments equivalent to the standard products based on bixafen + triazole mixtures.

No specific EPPO extrapolation table is available on foliar and ear diseases. Nevertheless, the Dutch guidance states that for leaf and ear diseases, it is possible to extrapolate from winter wheat to spring wheat, rye, triticale and spelt because in these crops same diseases can be found and their susceptibility to infection is lower. Also on UK, extrapolation is acceptable from winter wheat to minor cereals including oats, spring wheat, durum wheat, rye, triticale. Therefore, acceptability of the substantial data provided on winter wheat in support of other crops may be taken into account by each cMS. In addition, based on practical experience it is known that if *Zymoseptoria tritici* can be well controlled, LEPTNO *Parastagonospora nodorum* (syn.= *Leptosphaeria nodorum*, leaf infection) can also be well controlled. Therefore, the data provided will support by extrapolation all used claimed in the table “All intended uses” in Part B – Section 0.

Table 3.2-157: Efficacy of GLOB2021dF against SEPTTR (PESSEV %) on cereals (soft wheat) at different leaf levels– South-East EPPO zone – 2023 data – 2 applications

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard				
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures							
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	majo		
SE	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FLAG	31-31	1	21-21	21-21	7.6	7.6-7.6	7.6	70.4	70.4-70.4	70.4	68.6	68.6-68.6	68.6	-	-	-	100.0	100-100	100.0	1	0	0		
				FL-1	31-31	1	21-21	21-21	14.3	14.3-14.3	14.3	60.8	60.8-60.8	60.8	84.9	84.9-84.9	84.9	-	-	-	87.5	87.5-87.5	87.5	0	1	0		
				FL-2	31-32	4	19-23	19-23	16.3	4.1-36.1	12.6	77.3	42.3-100	83.5	80.9	45.7-100	88.9	-	-	-	82.9	47.6-100	91.9	0	4	0		
			All valid ass. (2-3w after B)	FL-3	31-33	3	19-23	19-23	29.6	7.4-43.8	37.5	54.3	36-77.1	49.8	65.5	38.1-97.5	60.8	-	-	-	71.2	39.5-100	74.0	0	3	0		
				FLAG	31-33	3	43-52	20-25	11.8	6-20.4	9.0	57.9	53.7-64.4	55.7	66.8	55.1-82.9	62.4	-	-	-	90.9	83.9-96.4	92.3	1	2	0		
				FL-1	31-33	4	41-52	18-25	22.1	16.3-38	17.1	64.8	46.9-100	56.2	77.1	50.5-100	78.9	-	-	-	89.0	78.3-100	88.8	1	3	0		
			All valid ass. (4-6w after B)	FL-2	31-33	6	34-52	15-25	32.8	5.3-53.6	40.8	65.7	30.2-95.7	65.0	73.2	45.7-99.4	75.1	-	-	-	81.5	50.8-100	84.1	1	5	0		
				FLAG	31-33	2	56-57	33-38	43.5	11.9-75	43.5	83.2	82.1-84.3	83.2	90.9	88.3-93.4	90.9	-	-	-	97.4	94.8-100	97.4	1	1	0		

number of trials summarized: 6 wheat

Table 3.2-158: Efficacy of GLOB2021dF against SEPTTR (PESSEV %) on cereals (soft wheat) at different leaf levels– South-East EPPO zone – 2023 data – 1 application

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mix-tures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	SEPTTR	TRZAW	All valid ass.	FLAG	39-39	1	16-16	16-16	5.2	5.2-5.2	5.2	-	-	-	80.4	-	-	69.8	-	-	-	-	0	1	0	
			(2-3w after A)	FL-1	39-39	2	14-16	14-16	6.9	5-8.7	6.9	-	-	-	75.6	59.5-91.7	75.6	77.9	63.4-92.4	77.9	-	-	-	0	2	0
				FL-2	39-39	2	14-16	14-16	9.9	8.2-11.5	9.9	-	-	-	61.5	30.2-92.7	61.5	61.7	31.6-91.8	61.7	-	-	-	0	2	0
			All valid ass.	FLAG	39	1	28	28	7.8	-	-	-	-	-	64.9	-	-	66.8	-	-	-	-	0	1	0	
			(4-6w after A)	FL-1	39-39	2	28-28	28-28	10.8	10.5-11	10.8	-	-	-	65.5	53.6-77.3	65.5	66.7	57.2-76.2	66.7	-	-	-	0	2	0
				FL-2	39-39	2	28-28	28-28	17.3	15.6-19	17.3	-	-	-	55.8	37.4-74.2	55.8	58.0	43.8-72.1	58.0	-	-	-	0	2	0

number of trials summarized: 2 wheat

Efficacy of GLOB2021dF against *Zymoseptoria tritici*

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy) and PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

Efficacy data for *Zymoseptoria tritici* are presented from a six valid trials conducted in one growing season 2023 carried out on wheat in the South-East zone. In all these trials, the disease infestation level in untreated plots was sufficient (at least 5% pest severity at one leaf stage) to validate the trials and reliably assess the efficacy of GLOB2021dF. The data demonstrated that the efficacy of GLOB2021dF, when applied twice at the proposed label rate of 0.8 L/ha, was moderate at 72.3% (n=6), though lower than that of standard products, which was 87.1%.

The concerned Member States concerned may consider accepting trials conducted within one growing season or extrapolating data from other EPPO zones.

PUCCSI/PUC CST – *Puccinia striiformis tritici*, *Puccinia striiformis*

Infection by stripe (yellow) rusts *Puccinia striiformis* identified also by its “*forma specialis*” *Puccinia striiformis* f. sp. *tritici* was verified at acceptable levels in a total of 2 trials in 2023 on wheat. One of those trials was aimed for the control of Fusarium with a single late application (BBCH 61-65), however high levels of PUC CST were observed. Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good and even one late application still provided moderate control. The results were always equivalent to the standard products based on bixafen + triazole mixtures.

Table 3.2-159: Efficacy of GLOB2021dF against PUCCSI/PUC CST (PESSEV) on wheat at different leaf levels – South-East EPPO zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	PUCCSI/ PUC CST	TRZAW	All valid ass. (2-3w after A)	FLAG	33	1	23	23	5.8	-	-	81.7	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0
			FL-1	33-33	1	23-23	23-23	5.5	-	-	100.0	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0	
			All valid ass. (2-3w after B)	FL-1	33-33	1	43-43	20-20	5.0	-	-	100.0	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0
			FL-2	33-33	1	43-43	20-20	11.0	-	-	97.5	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0	

number of trials summarized: 1 wheat

Supportive data from FUSASP trials

Table 3.2-160: Efficacy of GLOB2021dF against PUCCSI/PUC CST (PESSEV) on cereals (wheat) at different leaf levels – 1 late application – South-East EPPO zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	PUCCST	TRZAW	All valid ass. (2-3w after A)	FLAG	61	1	15	15	21.7	-	-	74.1	-	-	75.8	-	-	-	-	-	72.0	-	-	0	1	0
			FL-1	61	1	15	15	16.6	-	-	76.4	-	-	74.4	-	-	-	-	-	76.1	-	-	0	1	0	
			FL-2	61	1	15	15	13.4	-	-	81.8	-	-	72.8	-	-	-	-	-	70.7	-	-	0	1	0	

number of trials summarized: 1 wheat

Efficacy of GLOB2021dF against *Puccinia striiformis* on wheat

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy) and PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

Efficacy data for *Puccinia striiformis* are presented from one wheat trial conducted in 2023. According to EPPO guideline PP1/226 (3), which advises on the 'Number of efficacy trials,' 10 trials (6-15) for a major pathogen in a major crop and 3 trials (2-6) for minor uses are required to demonstrate adequate efficacy. These trials should be conducted across a range of climatic and environmental conditions likely to be encountered, and over at least 2 years. While favorable result was presented, this evidence is considered limited and insufficient to demonstrate the efficacy of GLOB2021dF at the claimed dose rate of 0.8 L/ha for effective control of PUCCSI in winter wheat.

PUCCHD – *Puccinia hordei*

Infection by brown rust *Puccinia hordei* on barley was verified in one trial on winter barley in 2023. The disease reached significant levels only after the second application. Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good and comparable to that of standard product based on bixafen + triazole mixture.

Table 3.2-161: Efficacy of GLOB2021dF against PUCCHD (PESSEV) on cereals (barley) at different leaf levels – South-East EPPO zone – 2023 data

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	PUCCHD	HORVW	All valid ass. (2-3w after B)	FLAG	32-32	1	43-43	21-21	5.2	5.2-5.2	5.2	-	-	-	80.3	-	-	-	-	-	85.5	-	-	0	1	0
				FL-1	32-32	1	43-43	21-21	6.6	6.6-6.6	6.6	-	-	-	73.0	-	-	-	-	-	77.6	-	-	0	1	0
				FL-2	32-32	1	43-43	21-21	8.0	8-8	8.0	-	-	-	71.1	-	-	-	-	-	70.1	-	-	0	1	0

number of trials summarized: 1

Efficacy of GLOB2021dF against *Puccinia hordei* on winter barley

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy) and PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

Efficacy data for *Puccinia hordei* is presented from one winter barley trial conducted in 2023. According to EPPO guideline PP1/226 (3), which advises on the 'Number of efficacy trials,' 10 trials (6-15) for a major pathogen in a major crop and 3 trials (2-6) for minor uses are required to demonstrate adequate efficacy. These trials should be conducted across a range of climatic and environmental conditions likely to be encountered, and over at least 2 years. Although one trial is presented, this evidence is deemed inadequate to confirm the efficacy of GLOB2021dF at the proposed dose rate of 0.8 L/ha for controlling *Puccinia hordei* on winter barley.

PYRNTE - *Pyrenophora teres*

Infection by Net blotch of barley *Pyrenophora teres* was verified at acceptable levels in 2 trials carried out in the South-East zone in 2023. Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was good and control levels were in general comparable to those of standard products based on bixafen + triazole mixtures.

No specific EPPO extrapolation table is available on foliar and ear diseases. Nevertheless, according to EPPO Guideline 1/226(3) the number of trials required to demonstrate the efficacy against a certain pest can be reduced for closely related pest or against the same pests on different crops. Case in point is net blotch of barley (PYRNTE, *Pyrenophora teres*) and it's leaf-specific form *Pyrenophora teres f. sp. maculata* (PYRNTM). It is important to note that these are not different species or sub-species but rather specialised varieties of the same pathogen. Given that PYRNTE is prevalent in European conditions, data provided here can be extrapolated to cover also PYRNTM on barley.

Table 3.2-162: Efficacy of GLOB2021dF against PYRNTE on winter barley (PESSEV) at different leaf levels – South-East EPPO Zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major
SE	PYRNTE	HORVW	All valid ass. (2-3w after A)	FL-2	32-32	2	22-24	22-24	19.6	6.2-33	19.6	74.1	49.2-98.9	74.1	82.8	65.6-100	82.8	-	-	-	84.7	69.4-100	84.7	0	2	0
			All valid ass. (2-3w after B)	FL-1	32-32	2	40-43	16-21	10.1	5.2-15	10.1	76.4	52.8-100	76.4	84.1	68.2-100	84.1	-	-	-	88.3	76.5-100	88.3	0	2	0
				FL-2	32-32	2	40-43	16-21	30.4	9.3-51.5	30.4	68.6	44.1-93.1	68.6	73.1	48-98.1	73.1	-	-	-	85.8	74.2-97.3	85.8	1	1	0

Number of trials summarized: 2

Efficacy of GLOB2021dF against *Pyrenophora teres*

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy) and PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

Efficacy data for *Pyrenophora teres* are presented from two winter barley trials conducted in 2023. According to EPPO guideline PP1/226 (3), which advises on the 'Number of efficacy trials,' 10 trials (6-15) for a major pathogen in a major crop and 3 trials (2-6) for minor uses are required to demonstrate adequate efficacy. These trials should be conducted across a range of climatic and environmental conditions likely to be encountered, and over at least 2 years. While these trials have been presented, these data are not considered sufficient to confirm the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha for effective control of of PYRNTE in winter barley.

RAMUCC - *Ramularia collo-cygni*

Infection by ramularia leaf spot of barley was verified at acceptable levels in a total of 3 trials in the South-East zone in 2023 on winter barley, mostly after the second application.

Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was very good and always equivalent to the efficacy of standard products based on bixafen + triazole mixtures.

Table 3.2-163 Efficacy of GLOB2021dF against RAMUCC (PESSEV) on cereals (barley) at different leaf levels - South-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	RAMUCC	HORVW	All valid ass. (2-3w after A)	FL-1	32.0	1	24.0	24.0	7.5	-	-	100.0	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0
				FL-2	32-32	1	24-24	24-24	21.5	-	-	100.0	-	-	100.0	-	-	-	-	-	100.0	-	-	0	1	0
			All valid ass. (2-3w after B)	FLAG	32-32	2	40-41	16-21	15.6	11.5-19.7	15.6	96.9	93.7-100	96.9	99.4	98.7-100	99.4	-	-	-	99.4	98.8-100	99.4	0	2	0
				FL-1	32-32	2	40-41	16-21	39.7	29.4-50	39.7	82.2	64.3-100	82.2	98.0	96-100	98.0	-	-	-	98.5	96.9-100	98.5	0	2	0
				FL-2	32-32	3	40-43	16-21	52.8	4-100	54.5	63.2	25-96.3	68.2	82.0	71.7-99.3	75.0	-	-	-	76.1	50-98.7	79.7	0	3	0

Number of trials summarized: 3

Efficacy of GLOB2021dF against *Ramularia collo-cygni*

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy) and PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

Efficacy data for *Ramularia collo-cygni* are presented from three winter barley trials conducted in 2023. According to EPPO guideline PP1/226 (3), which advises on the 'Number of efficacy trials,' 10 trials (6-15) for a major pathogen in a major crop and 3 trials (2-6) for minor uses are required to demonstrate adequate efficacy. These trials should be conducted across a range of climatic and environmental conditions likely to be encountered, and over at least 2 years. While these trials have been presented, these data are not considered sufficient to confirm the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha for effective control of RAMUCC in winter barley.

RHYNSE - *Rhynchosporium secalis*

Infection by Leaf blotch of cereals *Rhynchosporium secalis* was verified at acceptable levels in a total of 4 trials in 2023 on winter barley. Data demonstrated that the efficacy of GLOB2021dF at the proposed rate of 0.8 L/ha was good and in general comparable to those of standard products based on bixafen + triazole mixtures.

No specific EPPO extrapolation table is available on foliar and ear diseases. Nevertheless, the Dutch guidance states that for *Rhynchosporium secalis*, data on winter barley and spring barley are equally supportive because no differences exist in disease pressure or susceptibility. Therefore, results on major host winter barley will also support the use on spring barley.

Table 3.2-164: Efficacy of GLOB2021dF against RHYNSE (PESSEV) on cereals (barley) at different leaf levels – South-East EPPO zone

EPPO zone	Target code	Crop Code	Grouping	Part rated	Crop BBCH at 1st appl.	Nb. trials	Days After First Appl.	Days After Last Appl.	Infestation in the untreated control (PESSEV%)			% control												No of trials where product is >, <, = compared to standard		
												GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures					
									Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	RHYNSE	HORVW	All valid ass. (2-3w after A)	FL-1	32-32	2	21-21	21-21	4.6	4-5.2	4.6	100.0	100-100	100.0	100.0	100-100	100.0	-	-	-	100.0	100-100	100.0	0	2	0
			FL-2	32-32	4	14-22	14-22	8.7	4.2-11.8	9.4	76.4	45.7-93.4	83.3	74.8	33.1-96	85.1	-	-	-	81.3	72.3-87.7	82.5	1	1	2	
			All valid ass.	FLAG	32-32	2	41-43	21-22	10.9	9.9-11.8	10.9	74.6	65.8-83.4	74.6	80.6	76.5-84.6	80.6	-	-	-	92.2	84.4-100	92.2	1	1	0

			(2-3w after B)	FL-1	32-32	3	41-43	21-22	15.4	12.3-11.8	16.0	73.1	53.3-83.4	68.4	84.8	74.1-84.6	80.3	-	-	-	87.1	77.7-100	83.7	0	3	0
				FL-2	32-32	3	42-43	21-22	15.8	5.2-22.1	20.0	72.1	51.6-94.4	70.3	75.4	57.6-95.6	72.9	-	-	-	76.7	64.1-91.7	74.3	0	3	0

number of trials summarized: 4

Efficacy of GLOB2021dF against *Rhynchosporium secalis*

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) PP 1/214 (Principles of acceptable efficacy) and PP 1/223 (Introduction to the efficacy evaluation of plant protection products).

Efficacy data for *Rhynchosporium secalis* are presented from four winter barley trial conducted in 2023. According to EPPO guideline PP1/226 (3), which advises on the 'Number of efficacy trials,' 10 trials (6-15) for a major pathogen in a major crop and 3 trials (2-6) for minor uses are required to demonstrate adequate efficacy. These trials should be conducted across a range of climatic and environmental conditions likely to be encountered, and over at least 2 years. Although four trials is presented, this evidence is deemed inadequate to confirm the efficacy of GLOB2021dF at the claimed dose rate of 0.8 L/ha for effective control of RHYNSE in winter barley.

Summary (South-East EPPO zone)

The summary tables below present the results shown above for the maximum proposed rate of 0.8 L/ha and combines, for each disease, the most biologically relevant results (i.e. FHB index (SEVIND) for *Fusarium* sp. and PESSEV % up to L-3 for other diseases) obtained across all timings and plant parts in a weighted mean. The overall susceptibility level of each disease is indicated.

Table 3.2-165 Overall efficacy and susceptibility level to GLOB2021dF at the target rate of 0.8 L/ha on cereals against Fusarium- South-East EPPO zone

EPPO zone	Target code	Crop code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	minor	equal	major			
SE (2023)	FUSASP	TRZAW	All valid ass. BBCH 75-83	EAR	SEVIND	61-61	3	21-31	21-31	917.1	275-1401.7	1074.5	94.8	88.9-99	96.4	97	91.3-99.9	99.7	-	-	-	96.3	89.6-100	99.2	0	3	0	97	3 (3)	Control

Table 3.2-166 Overall efficacy and susceptibility level to GLOB2021dF at the target rate of 0.8 L/ha on cereals against leaf diseases- South-East EPPO zone

EPPO zone	Target code	Crop code	Group- ing	Part rated	Type	Crop BBCH at 1st appl.	Nb. Tri- als	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <=, compared to standard			All tim- ings, rating types and parts	Nb. of assess- ments (nb.tri- als)	Control provided	
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures									
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn				minor
SE (2023)	SEPTTR	TRZAW	All valid ass. (2-3w after A)	FLAG	PESSEV	31	1	21	21	7.6	7.6-7.6	7.6	70.4	-	-	68.6	-	-	-	-	-	-	100	-	-	1	0	0	73	34 (8)	Moder- ate control
				FL-1	PESSEV	31	1	21	21	14.3	14.3-14.3	14.3	60.8	-	-	84.9	-	-	-	-	-	-	87.5	-	-	0	1	0			
				FL-2	PESSEV	31-32	4	19-23	19-23	16.3	4.1-36.1	12.6	77.3	42.3-100	83.5	80.9	45.7-100	88.9	-	-	-	82.9	47.6-100	91.9	0	4	0				
			All valid ass. (2-3w after B)	FLAG	PESSEV	31-33	3	19-23	19-23	29.6	7.4-43.8	37.5	54.3	36-77.1	49.8	65.5	38.1-97.5	60.8	-	-	-	71.2	39.5-100	74	0	3	0				
				FL-3	PESSEV	31-33	3	43-52	20-25	11.8	6-20.4	9	57.9	53.7-64.4	55.7	66.8	55.1-82.9	62.4	-	-	-	90.9	83.9-96.4	92.3	1	2	0				
				FL-1	PESSEV	31-33	4	41-52	18-25	22.1	16.3-38	17.1	64.8	46.9-100	56.2	77.1	50.5-100	78.9	-	-	-	89	78.3-100	88.8	1	3	0				
			All valid ass. (4-6w after B)	FL-2	PESSEV	31-33	6	34-52	15-25	32.8	5.3-53.6	40.8	65.7	30.2-95.7	65	73.2	45.7-99.4	75.1	-	-	-	81.5	50.8-100	84.1	1	5	0				
				FLAG	PESSEV	31-33	2	56-57	33-38	43.5	11.9-75	43.5	83.2	82.1-84.3	83.2	90.9	88.3-93.4	90.9	-	-	-	97.4	94.8-100	97.4	1	1	0				
				FL-1	PESSEV	39	1	16	16	5.2	5.2-5.2	5.2	-	-	-	80.4	-	-	69.8	-	-	-	-	-	0	1	0				
			All valid ass. (2-3w after A)	FL-1	PESSEV	39-39	2	14-16	14-16	6.9	5-8.7	6.9	-	-	-	75.6	59.5-91.7	75.6	77.9	63.4-92.4	77.9	-	-	-	0	2	0				
				FL-2	PESSEV	39-39	2	14-16	14-16	9.9	8.2-11.5	9.9	-	-	-	61.5	30.2-92.7	61.5	61.7	31.6-91.8	61.7	-	-	-	0	2	0				
				FLAG	PESSEV	39	1	28	28	7.8	-	-	-	-	-	64.9	-	-	66.8	-	-	-	-	-	0	1	0				
All valid ass. (4-6w after A)	FL-1	PESSEV	39-39	2	28-28	28-28	10.8	10.5-11	10.8	-	-	-	65.5	53.6-77.3	65.5	66.7	57.2-76.2	66.7	-	-	-	0	2	0							
	FL-2	PESSEV	39-39	2	28-28	28-28	17.3	15.6-19	17.3	-	-	-	55.8	37.4-74.2	55.8	58	43.8-72.1	58	-	-	-	0	2	0							
SE (2023)	PUCCSI/ PUCCST	TRZAW	All valid ass. (2-3w after A)	FLAG	PESSEV	33	1	23	23	5.8	-	-	81.7	-	-	100	-	-	-	-	-	100	-	-	0	1	0	89	7 (2)	Control	
				FL-1	PESSEV	33	1	23	23	5.5	-	-	100	-	-	100	-	-	-	-	-	100	-	-	0	1	0				
			All valid ass. (2-3w after B)	FL-1	PESSEV	33	1	43	20	5	-	-	100	-	-	100	-	-	-	-	-	100	-	-	0	1	0				
				FL-2	PESSEV	33	1	43	20	11	-	-	97.5	-	-	100	-	-	-	-	-	100	-	-	0	1	0				
			All valid ass. (2-3w after A)	FLAG	PESSEV	61	1	15	15	21.7	-	-	74.1	-	-	75.8	-	-	-	-	-	72	-	-	0	1	0				
				FL-1	PESSEV	61	1	15	15	16.6	-	-	76.4	-	-	74.4	-	-	-	-	-	76.1	-	-	0	1	0				
SE (2023)	PUCCHD	HORVW	All valid ass. (2-3w after B)	FLAG	PESSEV	32	1	43	21	5.2	5.2-5.2	5.2	-	-	-	80.3	-	-	-	-	-	85.5	-	-	0	1	0	75	3 (1)	Moder- ate control	
				FL-1	PESSEV	32	1	43	21	6.6	6.6-6.6	6.6	-	-	-	73	-	-	-	-	-	77.6	-	-	0	1	0				
				FL-2	PESSEV	32	1	43	21	8	08-ago	8	-	-	-	71.1	-	-	-	-	-	70.1	-	-	0	1	0				

EPPO zone	Target code	Crop code	Grouping	Part rated	Type	Crop BBCH at 1st appl.	Nb. Trials	DAA-A	DAA-B	Infestation in the untreated control			% control												No of trials where product is >, <, = compared to standard			All timings, rating types and parts	Nb. of assessments (nb.trials)	Control provided
													GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha			bixafen+triazole mixtures								
										Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn			
SE (2023)	PYRNTE	HORVW	All valid ass. (2-3w after A)	FL-2	PESSEV	32-32	2	22-24	22-24	19.6	6.2-33	19.6	74.1	49.2-98.9	74.1	82.8	65.6-100	82.8	-	-	-	84.7	69.4-100	84.7	0	2	0	80	6 (2)	Control
			All valid ass. (2-3w after B)	FL-1	PESSEV	32-32	2	40-43	16-21	10.1	5.2-15	10.1	76.4	52.8-100	76.4	84.1	68.2-100	84.1	-	-	-	88.3	76.5-100	88.3	0	2	0			
			FL-2	PESSEV	32-32	2	40-43	16-21	30.4	9.3-51.5	30.4	68.6	44.1-93.1	68.6	73.1	48-98.1	73.1	-	-	-	85.8	74.2-97.3	85.8	1	1	0				
SE (2023)	RAMUCC	HORVW	All valid ass. (2-3w after A)	FL-1	PESSEV	32	1	24	24	7.5	-	-	100	-	-	100	-	-	-	-	-	100	-	-	0	1	0	93	9 (3)	Control
			FL-2	PESSEV	32	1	24	24	21.5	-	-	100	-	-	100	-	-	-	-	-	100	-	-	0	1	0				
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-32	2	40-41	16-21	15.6	11.5-19.7	15.6	96.9	93.7-100	96.9	99.4	98.7-100	99.4	-	-	-	99.4	98.8-100	99.4	0	2	0			
			FL-1	PESSEV	32-32	2	40-41	16-21	39.7	29.4-50	39.7	82.2	64.3-100	82.2	98	96-100	98	-	-	-	98.5	96.9-100	98.5	0	2	0				
			FL-2	PESSEV	32-32	3	40-43	16-21	52.8	4-100	54.5	63.2	25-96.3	68.2	82	71.7-99.3	75	-	-	-	76.1	50-98.7	79.7	0	3	0				
SE (2023)	RHYNSE	HORVW	All valid ass. (2-3w after A)	FL-1	PESSEV	32-32	2	21-21	21-21	4.6	4-5.2	4.6	100	100-100	100	100	100-100	100	-	-	-	100	100-100	100	0	2	0	82	14 (4)	Control
			FL-2	PESSEV	32-32	4	14-22	14-22	8.7	4.2-11.8	9.4	76.4	45.7-93.4	83.3	74.8	33.1-96	85.1	-	-	-	81.3	72.3-87.7	82.5	1	1	2				
			All valid ass. (2-3w after B)	FLAG	PESSEV	32-32	2	41-43	21-22	10.9	9.9-11.8	10.9	74.6	65.8-83.4	74.6	80.6	76.5-84.6	80.6	-	-	-	92.2	84.4-100	92.2	1	1	0			
			FL-1	PESSEV	32-32	3	41-43	21-22	15.4	12.3-11.8	16	73.1	53.3-83.4	68.4	84.8	74.1-84.6	80.3	-	-	-	87.1	77.7-100	83.7	0	3	0				
			FL-2	PESSEV	32-32	3	42-43	21-22	15.8	5.2-22.1	20	72.1	51.6-94.4	70.3	75.4	57.6-95.6	72.9	-	-	-	76.7	64.1-91.7	74.3	0	3	0				

3.3 Information on the occurrence or possible occurrence of the development of resistance (KCP 6.3)

3.3.1 Mode of action

GLOB2021dF is based on the two active substances: Prothioconazole and Boscalid.

Prothioconazole is a members of the DMI fungicides (FRAC group 3).

The mode of action of DMI fungicides is to inhibit the demethylation at the C14 position of the fungal sterol biosynthesis (DeMethylation Inhibition = DMI), being part of the SBI (Sterol Biosynthesis Inhibitor's).

Boscalid belongs to SDHI fungicides (FRAC group 7). All fungicides of this group inhibit complex II of the fungal mitochondrial respiration by binding and blocking SDH-mediated electron transfer from succinate to ubiquinone.

3.3.2 Resistance mechanism

Resistance to SBI fungicides has been well characterized during the last 20 years. Issues with SBI performance typically became obvious only after numerous years of intensive use with efficacy degrading step-wise. Following reduced selection pressure, a partial recovery in sensitivity is often observed. The primary mechanism of resistance is the accumulation of several independent mutations in the target site. Each individual mutation typically causes only a small reduction in sensitivity and it is not until multiple mutations accumulate in an isolate that a large enough reduction in sensitivity is observed to impact efficacy under field conditions. Resistance to DMIs or Amines is mostly characterized by a slow, step-wise erosion of efficacy over several years of intensive use rather than by a rapid loss of control. The resistance risk of DMI fungicides is still classified as “medium” (Frac Website). However, according to data from Monograph 1 and 2 of FRAC, Prothioconazole is more potent compared to other DMI fungicides, resulting in a smaller resistance factor.

Boscalid, which is the only member of the chemical subgroup of the pyridine-carboxamides, shows a medium to high risk of development of resistance, together with all other members of entire group of Succinate-dehydrogenase inhibitors (SDHI).

According to the FRAC Code List (2020) Resistance to SDHI fungicides is known for several fungal species in field populations and lab mutants. Target site mutations in *sdh* gene, e.g. H/Y (or H/L) at 257, 267, 272 or P225L, dependent on fungal species. Members of the SDHI group of fungicides require resistance management.

In the list of confirmed cases of plant pathogenic organisms resistant to disease control agents of May 2020 there's only one case of resistance to SDHI fungicides of any fungal pathogens of oilseed rape. This single case was observed in *Sclerotinia sclerotiorum*, this observation was made in 2014.

3.3.3 Evidence of resistance

As mentioned in the pathogen risk list of the FRAC which was released in September 2019, resistance has been observed in the following target species for GLOB2021dF:

Cereals

High risk:

-*Blumeria graminis* in wheat and barley

Medium risk:

Mycosphaerella graminicola (*Zymoseptoria tritici*) in wheat

Pyrenophora tritici-repentis in wheat

Pyrenophora teres in barley

Low risk:

Puccinia spp. in wheat and barley

Rhynchosporium secalis in barley

Fusarium spp. in various crops

Oilseed rape

Medium risk:

-*Alternaria brassicae*

-*Pyrenopeziza brassicae*

Low risk:

-*Leptosphaeria maculans*

-*Sclerotinia sclerotiorum*

According to the FRAC Pathogen risk list, all pathogens apart from those categorized in the “high risk” group pose a much lower risk, because resistance is not a major problem or has been slow to develop. Cases of specific isolates being classed as resistant may be known in some instances, but in commercial practice resistance has not created major disease problems.

Also according to FRAC, the application of fungicides with different modes of action in mixtures (both ready formulations and tank mixtures) and the alternation between non-cross-resistant fungicide classes are both suitable approaches to minimize the risk of resistance development alongside good agronomic practices.

Based on this information, it is considered that the risk of resistance development is medium for GLOB2021dF.

3.3.4 Cross resistance

DMI fungicides are cross-resistant to each other. There is no cross-resistance between the DMI's, Amines and Hydroxylanilides, while all 3 groups belong to the SBI fungicides.

The SDHI fungicides (benodanil, benzovindiflupyr, bixafen, boscalid, carboxin, fenfuram, fluindapyr, fluopyram, flutolanil, fluxapyroxad, furametpyr, inpyrfluxam, isofetamid, isoflucypram, isopyrazam, mepronil, oxycarboxin, penflufen, penthiopyrad, pydiflumetofen, sedaxane, thifluzamide) are in the same cross-resistance group. However, in FRAC group 7 fungicides, there seem to be differences in sensitivity between fungicides within the group after resistance has been detected in one particular fungicide. This therefore means that some FRAC group 7 fungicides may retain their efficacy even in case of resistance to another group 7 fungicide.

There is no known cross-resistance between the DMI's and SDHI.

3.3.5 Sensitivity data

No studies on baseline sensitivity data are available to the applicant.

Recent studies (Jørgensen et al., 2021 & 2022) investigated in large scale differences in azoles and SDHI's performances against *Mycosphaerella graminicola*/ *Zymoseptoria tritici* (SEPTTR) in 55 field trials were carried out during several seasons (2015–2018 only azoles and 2019- 2021 azoles and SDHI'S) across Europe covering a diversity of climatic zones and agricultural practices. The trials were carried out in Denmark, Scotland, England, Poland, France , Germany, Ireland, Belgium, Latvia and Hungary by local scientific organisations and following EPPO standards. Regarding azoles, prothioconazole (active substance contained in GLOB2021dF) was included in the analysis. The other a.s. of GLOB2021dF, boscalid was however not tested.

In the first study (2021) , the azoles Epoxiconazole = ECA, prothioconazole-desthio = PTH-D, Metconazole = MCA and tebuconazole= TCA were tested. In the second study (2022), the efficacy of only MFA and prothioconazole (PTH) were tested among azoles and the SDHIs fluxapyroxad (FXP), bixafen (BIX) and benzovindiflupyr (BVF) investigated as solo products. Azole/SDHI mixtures & QiI fenpicoxamid were as well tested in the following co-formulations: FXP+MFA, BVF+PTH, and BIX+FLP+PTH, the SDHIs BIX+FLP and the QiI fenpicoxamid (FPX) (Table 2).

The figures below shows EC50 values for the four azoles in the 2021 study and control levels for the azoles+SDHI's in the 2022 study, where significant differences across the different regions were observed.

Those data were also compared with the average yield responses. Despite variability in the performances and in the frequencies of single mutations observed across Europe, yield responses were always significant in both studies.

Jørgensen, 2021 study:

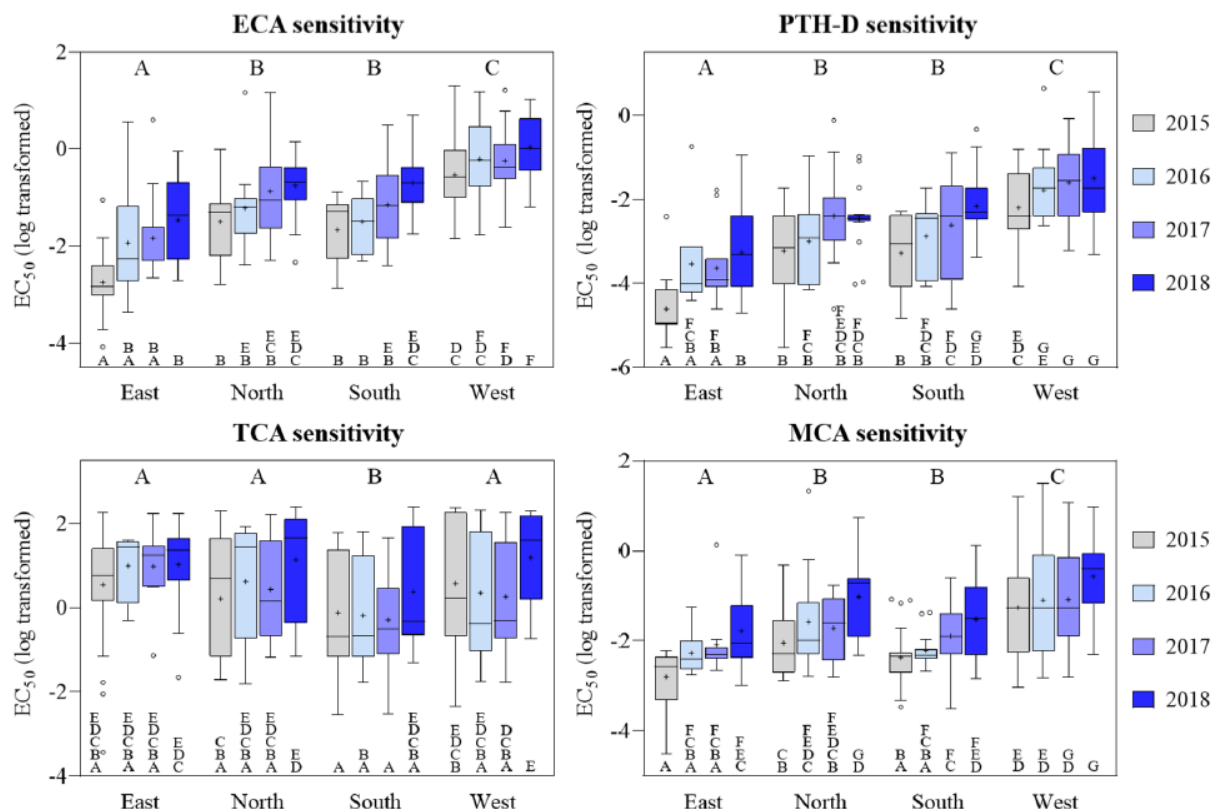


Figure 3.3-1: EC₅₀ values for the four azoles across Europe from 2015 to 2018. East: Poland, Latvia, Hungary. North: Denmark, Northern Germany. South: France, Belgium, Southern Germany. West: England, Scotland, Ireland. Different letters represent statistically significant differences between regions (above boxplots) and their interaction with years (below boxplots) ($P = 0.05$). Epoxiconazole = ECA, prothioconazole-deshtio = PTH-D, Metconazole = MCA and tebuconazole= TCA

Although a reduction in azole sensitivity has been observed in the European *Z. tritici* population, the azole fungicides still play a critical role in the control of Septoria across the continent and are able to positively affect yields. Nevertheless, modifiers are proposed and should be followed, one of which is the use as mixing partner or in alternation with SDHI fungicides as part of a broader anti-resistance strategy. On this regard, GLOB2021dF will turn an important tool for resistance management.

Jørgensen, 2022 study:

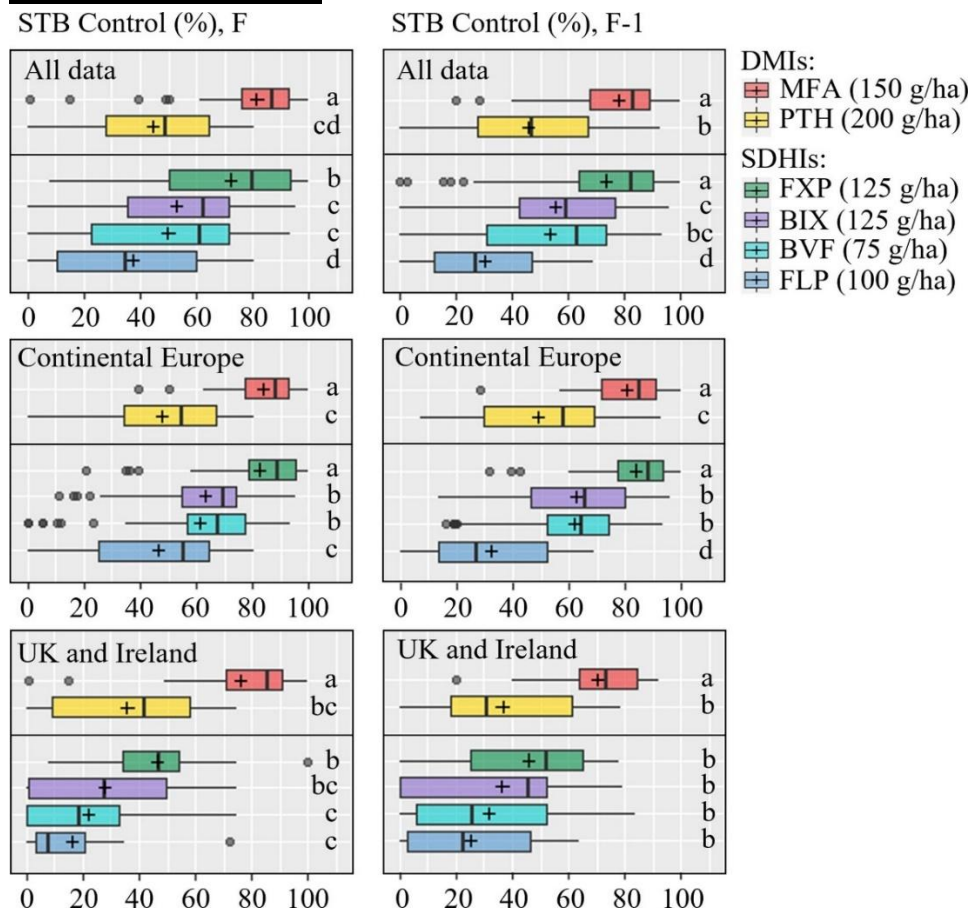


Figure 3.3-2: STB control (%) on flag leaves (left) and F-1 (right) were assessed at growth stage 65-85, 22-58 days after application in 18 trials on flag leaf and 19 on F-1 from 2019-2021. Trials from Continental Europe were carried out in Denmark, France, Germany, Poland and Belgium. Tested fungicides included mefentrifluconazole (MFA), prothioconazole (PTH), fluxapyroxad (FXP), bixafen (BIX), benzovindiflupyr (BVF), fluopyram (FLP). FLP was not included in 2021. The line inside the boxes indicates the median and '+' indicates the average.

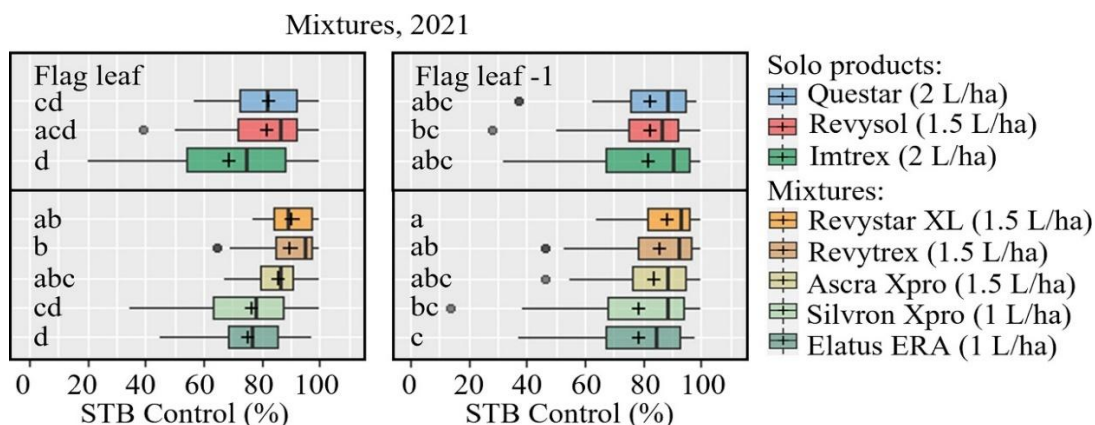


Figure 3.3-3: STB control (%) of mixtures on flag leaves (left) and F-1 leaves (right) were assessed at growth stage 65-83, 27-51 days after application in 9 trials in 2021. The trials were carried out in Denmark, the United Kingdom, Ireland, Belgium, France, Poland, and Germany. The tested fungicides included Questar (fenpicoxamid), Revysol (mefentrifluconazole), Imtrex (fluxapyroxad), Revystar and Revytrex (fluxapyroxad + mefentrifluconazole), Ascra Xpro (bixafen + fluopyram + prothioconazole), Silvtron Xpro (bixafen + fluopyram), Elatus ERA (benzovindiflupyr + prothioconazole).

CONCLUSION

Extensive testings in Europe confirm that shifting in fungicide efficacy against STB is challenged in some countries, while the efficacy is still good in other countries. The efficacy assessments based on field data, supported by in vitro testing, also clearly confirmed a significant shifting *Z. tritici*'s sensitivity from Eastern to Western Europe for all SDHIs tested. These changes were supported by differences in the composition of specific SDH-C mutations between local *Z. tritici* populations. A high degree of cross-resistance between the SDHIs tested was seen based on EC50 values; however, the values of FLP were slightly less correlated with those of the other actives. The sensitivity to PTH also showed an East-West gradient across Europe based both on EC50 values and CYP51 mutations.

Co-formulations based on azoles and SDHIs, and the new Qil fungicide FPX proved to be the most effective solutions for the control of STB. This benefit was clearest where the populations had shifted to lower sensitivity to both azoles and SDHIs.

Finally, shifts to lower efficacy does not imply widespread of resistance to an active substance throughout a region, as it is often connected to a misuse, it is commonly a localized phenomenon and generalizations should therefore be avoided.

The applicant is not aware of a recent extensive study on the sensitivity of other target pests in the concerned countries. Nevertheless, a strategy including azole/SDHI mixtures have been successfully used along the years to prolong the effectiveness of such products.

3.3.6 Use pattern

The use pattern is detailed in the GAP table.

3.3.7 Resistance risk assessment of unrestricted use pattern

As point mutations are responsible for the development of resistance, sensitivity to both active substances could decrease fast in the absence of resistance management.

According to FRAC, the application of fungicides with different modes of action in mixtures is a suitable approach to minimize the risk of resistance development alongside good agronomic practices. The strategy is particularly valuable for sustaining the effectiveness of site-specific fungicides by preventing upcome or further spread of pathogens with decreased sensitivity towards those fungicides with site-specific mode of action, if already present in farmers' field.

The combination of both active substances in GLOB2021dF will thus decrease the agronomic risk.

3.3.8 Acceptability of the resistance risk

In an unrestricted use pattern, the resistance risk for GLOB2021dF (Prothioconazole + Boscalid) is unacceptable. However, if the resistance management strategy is respected, resistance can be kept under control as seen in the yearly reports of the FRAC SBI and SDHI working groups.

3.3.9 Management strategy

Both SBI and SDHI FRAC Working Groups indicate recommendations that include

- Do not use repeated applications of SBIs or SDHIs alone on the same crop in one season
- For crop/pathogen situations requiring multiple spray applications, use mixtures or alternate (in block sprays or in sequence) with effective non-cross-resistant fungicides.
- To ensure good performance in situations of high disease pressure it is of importance to adhere to dosages and spray timings as recommended by manufacturers. Highly curative applications should be avoided. Application timing has to be appropriate to all mix partner's characteristics. Mixing with a non-cross resistant fungicide at effective dose rates may contribute to a higher level disease control.
- Complementary use of other fungicide classes with different modes of action should be maximised.
- Use as recommended on the label. Do not use reduced doses.
- Use other measures such as resistant varieties, good agronomic practice, plant hygiene.

Specific Recommendations for SDHIs on Cereals:

Apply SDHI fungicides always in mixtures.

The mixture partner should provide satisfactory disease control when used alone on the target disease and must have a different mode of action.

Apply a maximum of 2 SDHI fungicide containing sprays per cereal crop.

Apply the SDHI fungicide preventively or as early as possible in the disease cycle. Do not rely only on the curative potential of SDHI fungicides.

Strongly reduced rate programs including multiple applications must not be used. Refer to manufacturers' recommendations for rates.

The strategy of azole/SDHI mixtures have been successfully used along the years to prolong the effectiveness of such products. The combination of both active substances in GLOB2021dF are in line with recommendations of the Working Groups.

Therefore, the following general recommendations should be followed for GLOB2021dF:

- Avoid repetitive and sole use; mix or alternate with an appropriate partner fungicide;
- Limit number and timing of treatments;
- Avoid eradicant use;
- Maintain recommended dose rate;
- Integrate with non-chemical methods.
- Wherever feasible, several strategies should be used together.

3.3.10 Implementation of the management strategy

The guidelines for the proper use of GLOB2021dF will be added to the label (see 3.3.9-management strategy).

Conclusion to Information on possible occurrence of the development of resistance

The applicant addresses nearly all points of EPPO Standard PP 1/213 in the dRR status to evaluate the actual resistance risk of GLOB2021dF. The Resistance Risk Analysis provided by the applicant should be supplemented with information indicating that a significant loss of efficacy of DMI fungicides in controlling *Ramularia collo-cygni* has been observed in Germany, Austria, and the UK since 2015. Research has identified mutations in the *CYP51* gene, such as I381T, I384T, and S459C, which are associated with reduced susceptibility to DMI fungicides, including prothioconazole.

Based on the combination of two active substances with different modes of action, prothioconazole and boscalid, the overall resistance risk is considered acceptable, provided the product is used in accordance with the resistance management strategy and label recommendations.

~~The applicant addresses all points of EPPO Standard PP 1/213 in the dRR status to evaluate the actual resistance risk of GLOB2021dF. Based on the combination of two active substances with different modes of action, prothioconazole and boscalid, the overall resistance risk is considered acceptable if the product is used in accordance with the management strategy and label recommendations.~~

3.4 Adverse effects on treated crops (KCP 6.4)

Adverse effects on the treated crops were assessed in all efficacy trials. In total, 184 efficacy trials were submitted to demonstrate the safety of GLOB2021dF towards the target crops. These trials were carried out between 2021 and 2023 by GEP certified research institutions in Belgium, the Czech Republic, Denmark, Germany, the Netherlands, Sweden and the UK (belonging to the Maritime EPPO Zone), in Poland, Estonia, Latvia and Lithuania (belonging to the North-East EPPO Zone), in Croatia, Greece, Italy, Portugal and the coastal part of Slovenia (belonging to the Mediterranean EPPO Zone), as well as in Bulgaria, Croatia, Hungary and Romania (belonging to the South-East EPPO Zone).

Information on trial distribution, methodology and reference standards is presented in points 3.2.3.1 and 3.2.3.2 for oilseed rape and cereals respectively. Trial site information and application details are presented in Appendix 3 of the BAD for each EPPO zone.

3.4.1 Phytotoxicity to host crop (KCP 6.4.1)

Plant protection products containing boscalid or prothioconazole have been applied to a wide variety of crops in different countries for many years without any reports of damage symptoms to the crops. Consequently, reference is made to the efficacy trials (KCP 6.2). The phytotoxicity of GLOB2021dF was assessed in these trials according to EPPO PP 1/135 (4). This guideline states that for fungicides it is considered enough to demonstrate the crop safety at the N dose rate when no phytotoxicity is expected.

In all the efficacy trials, the test product GLOB2021dF was applied according to the GAP table at the maximum rates of 0.8L/ha (N) (or equivalent amount of the previous formulation GLOB2021aF for which a bridging section was presented above).

The following table aims to give an overview of submitted trials per crop and climatic zone, regardless of the diseases occurred.

CROP GROUP	CROP	Number of trials			
		Marit. zone	North-East zone	Medit. zone	South-East zone
Oilseed rape (2021-2022)	BRSNW	23	11	9	10
Cereals (2022-2023)	AVESA	1	7		
	HORVW	11	7	10	5
	HORVS	1	2		

	SECCW	4	3	1	
	TRZAW	23	16	9	11
	TRZDW			7	
	TRZSP	2			
	TTLWI	5	5	1	

No significant adverse effects were recorded at the proposed dose rates on any tested crop.

No specific crop safety extrapolation tables are proposed for the target crops of this submission, as referred to PP1/257(2) - Efficacy and crop safety extrapolations for minor uses. Nevertheless, a sound data set has been provided on major crops (major cereals and winter oilseed rape), with the product being tested under variable environmental and pest conditions and performing consistently, demonstrating no phytotoxicity. Therefore, extrapolation regarding crop safety is claimed to all crops requested on the table “All intended uses” in Part B - Section 0.

Maritime EPPO Zone:

Number of trials with...		Efficacy trials			
		Cereals (47 trials)		Oilseed rape (23 trials)	
		GLOB2021dF (0.8 L/ha)	Standard(s)*	GLOB2021dF (0.8 L/ha)	Standard(s)**
Maximum of phytotoxicity recorded during the trials	0% to 5%	47	47	23	23
	>5% to 10%	-	-	-	-
	>10% to 15%	-	-	-	-
	>15 %	-	-	-	-
Level of symptoms at the last assessments	0% to 5%	47	47	23	23
	>5% to 10%	-	-	-	-
	>10% to 15%	-	-	-	-
	>15 %	-	-	-	-

* standards were different formulations providing 195-200 g of prothioconazole/ha or bixafen + triazole mixtures. See point 3.2.3.2 for details on commercial names and composition.

** spring trials (17): Protendo 300 EC providing 180 g prothioconazole/ha; autumn trials (6): Difcor 250 EC/Score providing 62-125 g difenoconazole/ha

North-East EPPO Zone:

Number of trials with...		Efficacy trials			
		Cereals (40 trials)		Oilseed rape (11 trials)	
		GLOB2021dF (0.8 L/ha)	Standard(s)*	GLOB2021dF (0.8 L/ha)	Standard(s)**
Maximum of phytotoxicity recorded during the trials	0% to 5%	40	40	11	11
	>5% to 10%	-	-	-	-
	>10% to 15%	-	-	-	-
	>15 %	-	-	-	-
Level of symptoms at the last assessments	0% to 5%	40	40	11	11
	>5% to 10%	-	-	-	-
	>10% to 15%	-	-	-	-
	>15 %	-	-	-	-

* standards were different formulations providing 195-200 g of prothioconazole/ha or bixafen + triazole mixtures. See point 3.2.3.2 for details on commercial names and composition.

** spring trials (8): Protendo 300 EC providing 180 g prothioconazole/ha; autumn trials (3): Difcor 250 EC/Score providing 62-125 g difenoconazole/ha

Mediterranean EPPO Zone:

Number of trials with...		Efficacy trials			
		Cereals (28 trials)		Oilseed rape (9 trials)	
		GLOB2021dF (0.8 L/ha)	Standard(s)*	GLOB2021dF (0.8 L/ha)	Standard(s)**
Maximum of phytotoxicity recorded during the trials	0% to 5%	28	28	9	9
	>5% to 10%	-	-	-	-
	>10% to 15%	-	-	-	-
	>15 %	-	-	-	-
Level of symptoms at the last assessments	0% to 5%	28	28	9	9
	>5% to 10%	-	-	-	-
	>10% to 15%	-	-	-	-

* standards were different formulations providing 195-200 g of prothioconazole/ha or bixafen + triazole mixtures. See point 3.2.3.2 for details on commercial names and composition.

** spring trials (9): Protendo 300 EC providing 180 g prothioconazole/ha;

South-East EPPO Zone:

Number of trials with...		Efficacy trials			
		Cereals (16 trials)		Oilseed rape (10 trials)	
		GLOB2021dF (0.8 L/ha)	Standard(s)*	GLOB2021dF (0.8 L/ha)	Standard(s)**
Maximum of phytotoxicity recorded during the trials	0% to 5%	16	16	10	10
	>5% to 10%	-	-	-	-
	>10% to 15%	-	-	-	-
	>15 %	-	-	-	-
Level of symptoms at the last assessments	0% to 5%	16	16	10	10
	>5% to 10%	-	-	-	-
	>10% to 15%	-	-	-	-
	>15 %	-	-	-	-

* standards were different formulations providing 195-200 g of prothioconazole/ha or bixafen + triazole mixtures. See point 3.2.3.2 for details on commercial names and composition.

** Protendo 300 EC providing 180 g prothioconazole/ha;

Conclusion to Phytotoxicity to host crop

The presented data correspond with the requirements of the EPPO Standards PP 1/26 (Foliar and ear diseases on cereals) and PP 1/135 (Phytotoxicity assessment).

Assessments for phytotoxicity and other adverse effects were conducted on all 184 trials that generated efficacy data in support of the authorization for the use of GLOB2021dF against target fungal diseases on cereals in 2021 and 2023. The applicant submitted quality results on BRSNW (53), AVESA (8), HORVW (33), HORVS (3), SECCW (8), TRZAW (59), TRZDW (7), TRZSP (2), and TTLWI (11). No phytotoxicity was observed in any of the trials. Based on the evidence of crop safety demonstrated across trials conducted between 2021 and 2023, it is reasonable to conclude that up to two applications of GLOB2021dF at the maximum label rate of 0.8 L/ha do not cause significant phytotoxic damage or other adverse effects on the growth and development of cereals or winter oilseed rape.

3.4.2 Effect on the yield of treated plants or plant product (KCP 6.4.2)

The effect on yield and quality was determined in nearly all the efficacy trials discussed in section 3.2 in accordance with the EPPO standard PP 1/135 requirements. Plots were harvested individually to give results in kg per plot, and then converted to metric tons per ha which is shown in the below tables for the untreated check. The percentage relative to the control is shown for each treatment in the tables below.

In total, 52 trials evaluated the effects on the yield of oilseed rape (22 trials in the Maritime (only KCP 6.2-07 did not evaluate yield), 11 in the North-East, 10 in the South-East and 9 in the Mediterranean EPPO zones), while 131 trials evaluated the effects on the yield of cereals (47 trials in the Maritime, 40 in the North-East, 28 in the Mediterranean EPPO zones and 16 in the South-East EPPO zone). Trials on oilseed rape were carried out between 2021 and 2022. Those on cereals during 2022 and 2023. All trials were carried out by GEP certified research institutions.

In support of the North-East EPPO Zone, results were combined with those results from German and Czech trials since these are neighbouring countries and considered as valid to Poland, the only MS in the Central zone belonging to the North-East climatic zone.

In all the efficacy trials, the test product GLOB2021dF was applied according to the GAP table at the maximum rates of 0.8L/ha (N) (or equivalent amount of the previous formulation GLOB2021aF for which a bridging section was presented above).

On oilseed rape, as a general rule, GLOB2021dF was applied twice. Results from trials with one autumn and one spring application aimed at the control of LEPTMA are presented separately. Trials with spring applications are gathered. These can be either 2 applications around flowering but in some cases also one early spring application aimed at controlling LEPTMA and 2 applications around flowering targeting SCLESC and ALTEBA corresponding to a worst case situation.

In the following summary tables, the name Cantus is used in headers as a collective name for related products in a WG formulation containing boscalid which are registered in several countries on oilseed rape. Also results from other local reference products as e.g. Propulse and Caramba are reported in detailed tables in the BAD for information only, but not summarized in the dRR as present in a few trials and not representing the uniform reference.

On cereals it was applied either once or twice according to the GAP and results are analysed separately.

A wide range of commercially grown varieties were tested and are listed in trial methodology tables in point 3.2.3.1 and 3.2.3.2 above, split by EPPO zone.

Oilseed rape

Maritime EPPO Zone:

Table 3.4-1 Effect on yield of GLOB2021dF on oilseed rape – autumn application – Maritime EPPO zone

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at appl.	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)								
								GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Difcor 250 EC/Score at 0.25-0.5 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	6	All	Yield (t/ha)	15-18	3.8	2.9-5	3.8	108.1	105-115.3	106.4	111.2	104.2-118.1	110.6	107.6	98-116.4	108.0

Table 3.4-2 Effect on yield of GLOB2021dF on oilseed rape – spring application – Maritime EPPO zone

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at 1st appl.	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)														
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	16	All	Yield (t/ha)	32-65	4.0	2.5-6.1	4.2	109.3	98.3-122	110.4	113.7	96.3-144.3	110.9	108.9	92.9-134.8	107.0	-	-	-	-	-	-

North-East EPPO Zone:

Table 3.4-3 Effect on yield of GLOB2021dF on oilseed rape – autumn application – North-East EPPO zone

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at appl.	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Difcor 250 EC/Score at 0.25-0.5 L/ha			Tilmor/Folicur Expert at 0.8-1 L/ha		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ,DE)	8	All	Yield (t/ha)	14-18	3.3	2.2-4.4	3.3	108.8	100.2-119.1	107.5	111.7	97-121.2	113.9	109.4	99.1-119.3	109.0	-	-	-

Means valid for Northern zone (CZ and DE trials not included in mean calculation)

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at appl.	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Difcor 250 EC/Score at 0.25-0.5 L/ha			Tilmor/Folicur Expert at 0.8-1 L/ha		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	3	All	Yield (t/ha)	14-16	2.8	2.2-3.8	2.4	109.3	100.2-119.1	108.5	110.8	97-121.2	114.2	109.3	99.1-119.3	109.5	110.9	100.1-125.5	107.1

Table 3.4-4 Effect on yield of GLOB2021dF on oilseed rape – spring application – North-East EPPO zone

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at 1st appl.	Assessed value in the untreated control (=100%)		% yield increase (UTC=100%)															
							GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products			
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	15	All	Yield (t/ha)	30-65	3.0	2-4.6	3.0	112.7	102.5-127.7	111.3	119.2	109.9-135	119.0	115.5	101.4-134.8	114.2	-	-	-	-	-	-

Means valid for Northern zone (CZ and DE trials not included in mean calculation)

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at 1st appl.	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Local ref products		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	8	All	Yield (t/ha)	30-65	2.7	2-3.4	2.6	113.1	103-127.7	112.9	119.4	109.9-135	119.4	118.1	103.7-134.8	117.7	-	-	-

Mediterranean EPPO Zone:

Table 3.4-5 Effect on yield of GLOB2021dF on oilseed rape – spring application – Mediterranean EPPO zone

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at 1st appl.	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	9	All	Yield (t/ha)	32-65	2.4	1.8-3.1	2.4	117.2	106.5-141.4	112.1	113.5	101.7-130.9	109.7	113.5	106.2-129.6	110.8

South-East EPPO Zone:

Table 3.4-6 Effect on yield of GLOB2021dF on oilseed rape – autumn application – South -East EPPO zone

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at appl.	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Protendo 300 EC at 0.6 (0.5 in RO) L/ha			Cantus at 0.5 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	2	All	Yield (t/ha)	14-17	2.0	1.3-2.7	2.0	116.3	105.6-126.9	116.3	125.0	124-126	125.0	119.1	111.7-126.5	119.1	126.8	126-127.5	126.8

Table 3.4-7 Effect on yield of GLOB2021dF on oilseed rape – spring application – South -East EPPO zone

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at 1st appl.	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	8	All	Yield (t/ha)	50-64	2.5	1.9-3.9	2.3	118.0	108.4-136.3	115.3	117.8	104.5-134.8	114.1	118.1	104.9-125.1	119.9

Cereals

Maritime EPPO Zone:

Winter wheat – 1 application

Table 3.4-8 Effect on yield of GLOB2021dF on winter wheat - 1 application – Maritime EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	TRZAW	All	4	Yield (t/ha)	8.6	5.4-12.1	8.5	109.8	98.1-125.5	107.7	109.8	98.1-124.7	108.3	113.7	98-133.2	111.8

Table 3.4-9 Effect on yield of GLOB2021dF on winter wheat - 1 application – Maritime EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	TRZAW	All	7	Yield (t/ha)	7.4	4.9-9.2	7.4	-	-	-	125.8	103.3-171.4	106.9	143.6 (n=1)	-	-	127.9 (n=6)	103.3-173.7	108.6

Winter wheat – 2 applications

Table 3.4-10 Effect on yield of GLOB2021dF on winter wheat - 2 applications – Maritime EPPO zone– 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	TRZAW	All	5	Yield (t/ha)	7.5	3.3-10.1	7.2	112.5	105.7-121.1	110.9	113.4	107.3-120.3	111.6	113.2	103.3-123.1	109.7

Table 3.4-11 Effect on yield of GLOB2021dF on winter wheat - 2 applications – Maritime EPPO zone– 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	TRZAW	All	7	Yield (t/ha)	8.2	4.7-10.4	9.2	118.7	101.3-142.7	112.2	118.6	101.8-159.9	108.4	114.3 (n=4)	99.9-143.2	107.0	116.4 (n=5)	101.5-145	109.9

Winter barley– 1 application

Table 3.4-12 Effect on yield of GLOB2021dF on winter barley - 1 application – Maritime EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	HORVW	All	1	Yield (t/ha)	6.9	-	-	-	-	-	105.5	-	-	-	-	-	103.3	-	-

Winter barley– 2 applications

Table 3.4-13 Effect on yield of GLOB2021dF on winter barley - 2 applications – Maritime EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	HORVW	All	2	Yield (t/ha)	8.6	7.4-9.7	8.6	-	-	-	107.2	101.7-112.6	107.2	104.9	101.6-108.1	104.9

Table 3.4-14 Effect on yield of GLOB2021dF on winter barley - 2 applications – Maritime EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	HORVW	All	8	Yield (t/ha)	8.0	5.4-10	8.7	110.7	98.5-121.5	111.5	111.4	102-122.2	108.4	107.0 (n=2)	103.8-110.1	107.0	113.4 (n=6)	106.6-122.8	111.4

Spring barley– 2 applications

Table 3.4-15 Effect on yield of GLOB2021dF on spring barley - 2 applications – Maritime EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	HORVS	All	1	Yield (t/ha)	6.5	-	-	-	-	-	99.6	-	-	108.2	-	-	-	-	-

Spelt – 2 applications

Table 3.4-16 Effect on yield of GLOB2021dF on spelt - 2 applications – Maritime EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	TRZSP	All	2	Yield (t/ha)	5.5	4.5-6.5	5.5	112.1	112.1-112.1	112.1	118.8	112.7-124.9	118.8	-	-	-	127.2	124.1-130.2	127.2

Rye – 2 applications

Table 3.4-17 Effect on yield of GLOB2021dF on rye - 2 applications – Maritime EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	SECCW	All	4	Yield (t/ha)	6.5	4.6-8.4	6.5	113.9	105.6-122.1	113.9	116.2	100-130.6	117.0	-	-	-	119.6	100.5-138.1	120.0

Winter triticales

Table 3.4-18 Effect on yield of GLOB2021dF on winter triticales - 2 applications – Maritime EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	TTLWI	All	1	Yield (t/ha)	7.2	-	-	109.7	-	-	108.4	-	-	109.3	-	-

Table 3.4-19 Effect on yield of GLOB2021dF on winter triticales - 2 applications – Maritime EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	TTLWI	All	4	Yield (t/ha)	6.5	5-7.9	6.5	123.0	120.8-125.2	123.0	117.1	109.1-125.2	117.0	-	-	-	121.9	118.7-125.3	121.8

North-East EPPO Zone:

Winter wheat – 1 application

Table 3.4-20 Effect on yield of GLOB2021dF on winter wheat - 1 application – North-East EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	TRZAW	All	8	Yield (t/ha)	6.0	4.5-7.9	5.6	119.2 (n=2)	112.9-125.5	119.2	112.2	97.7-125.4	111.3	114.1	95.9-133.2	113.3

Table 3.4-21 Effect on yield of GLOB2021dF on winter wheat - 1 application – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	TRZAW	All	12	Yield (t/ha)	7.9	4.9-10.5	8.3	-	-	-	118.1	100.8-171.4	108.9	126.1 (n=2)	108.5-143.6	126.1	117.6 (n=10)	100.9-173.7	105.1

Winter wheat – 2 applications

Table 3.4-22 Effect on yield of GLOB2021dF on winter wheat - 2 applications – North-East EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	TRZAW	All	5	Yield (t/ha)	7.3	3.3-10.1	7.2	110.1	105.7-118.5	109.1	111.9	107.3-119.5	111.6	111.3	103.3-121.4	109.7

Table 3.4-23 Effect on yield of GLOB2021dF on winter wheat - 2 applications – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	TRZAW	All	6	Yield (t/ha)	7.9	4.7-10.4	8.9	-	-	-	120.7	101.8-159.9	108.1	123.3 (n=2)	103.4-143.2	123.3	113.9	101-145	107.3

Winter barley – 1 application

Table 3.4-24 Effect on yield of GLOB2021dF on winter barley - 1 application – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	-	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	HORVW	All	1	Yield (t/ha)	7.5	-	-	-	-	-	113.6	-	-	-	-	-	117.0	-	-

Winter barley – 2 applications

Table 3.4-25 Effect on yield of GLOB2021dF on winter barley - 2 applications – North-East EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	HORVW	All	5	Yield (t/ha)	7.2	5-9.5	7.4	110.3 (n=4)	105.3-121	107.4	112.0	105-124.4	112.6	112.3	107.2-125.1	109.6

Table 3.4-26 Effect on yield of GLOB2021dF on winter barley - 2 applications – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	HORVW	All	8	Yield (t/ha)	7.1	4.6-10	6.5	-	-	-	111.2	101.8-122.2	108.4	-	-	-	110.0	99.3-122.8	108.0

Spring barley – 1 application

Table 3.4-27 Effect on yield of GLOB2021dF on spring barley - 1 application – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	HORVS	All	2	Yield (t/ha)	5.1	4.8-5.3	5.1	-	-	-	111.1	109.6-112.5	111.1	-	-	-	115.7	114.1-117.3	115.7

Spelt – 2 applications

Table 3.4-28 Effect on yield of GLOB2021dF on spelt - 2 applications – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	TRZSP	All	2	Yield (t/ha)	5.5	4.5-6.5	5.5	-	-	-	118.8	112.7-124.9	118.8	-	-	-	127.2	124.1-130.2	127.2

Rye – 2 applications

Table 3.4-29 Effect on yield of GLOB2021dF on rye - 2 applications – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	SECCW	All	7	Yield (t/ha)	6.0	4.3-8.4	5.3	-	-	-	113.6	100-130.6	112.4	-	-	-	118.2	100.5-138.1	115.9

Triticale – 1 application

Table 3.4-30 Effect on yield of GLOB2021dF on triticale - 1 application – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	TTLWI	All	1	Yield (t/ha)	7.7	-	-	-	-	-	104.8	-	-	-	-	-	107.9	-	-

Triticale – 2 applications

Table 3.4-31 Effect on yield of GLOB2021dF on triticale - 2 applications – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	TTLWI	All	8	Yield (t/ha)	6.5	3.4-8.7	6.5	-	-	-	111.1	95.4-125.2	111.0	-	-	-	113.2	95.9-125.3	119.4

Winter oat

Table 3.4-32 Effect on yield of GLOB2021dF on winter oat - 2 applications – North-East EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			bixafen+triazole mixtures at 1.2 L/ha		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	AVESA	All	4	Yield (t/ha)	4.6	2.1-6.2	5.1	-	-	-	109.2	101-119.4	108.3	112.7	103.6-125.4	110.8

Table 3.4-33 Effect on yield of GLOB2021dF on winter oat - 2 applications – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	AVESA	All	3	Yield (t/ha)	4.7	3.9-6.3	4.0	115.5	100.3-123.6	122.6	114.0	100.1-122.8	119.1	-	-	-	115.2	98.9-124.2	122.6

Mediterranean EPPO Zone:

Winter soft and durum wheat – 1 application

Table 3.4-34 Effect on yield of GLOB2021dF on winter soft and durum wheat - 1 application – Mediterranean EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	TRZAW	All	4	Yield (t/ha)	5.7	4.4-7.3	5.5	-	-	-	113.6	110.6-118.6	112.6	114.2	113.2-116	113.9
MED	TRZDW	All	1	Yield (t/ha)	4	-	-	-	-	-	115	-	-	111	-	-

Table 3.4-35 Effect on yield of GLOB2021dF on winter soft wheat - 1 application – Mediterranean EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)												
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures			
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	
MED	TRZAW	All	1	Yield (t/ha)	3.8	-	-	-	-	-	117.6	-	-	119.5	-	-	-	-	-	-

Table 3.4-36 Effect on yield of GLOB2021dF on winter durum wheat - 1 application – Mediterranean EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	TRZDW	All	3	Yield (t/ha)	4.5	2.1-6.5	3.5	-	-	-	121.4	111.1-139.1	112.6	127.6	110.3-144.9	127.6	110.3	-	-

Winter soft and durum wheat – 2 applications

Table 3.4-37 Effect on yield of GLOB2021dF on soft winter wheat - 2 applications – Mediterranean EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	TRZAW	All	5	Yield (t/ha)	4.5	3.7-5.1	4.6	107.0	94-121.3	105.4	110.3	99.1-118.9	116.2	108.0	99-122	103.7

Table 3.4-38 Effect on yield of GLOB2021dF on durum winter wheat - 2 applications – Mediterranean EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	TRZDW	All	2	Yield (t/ha)	4.1	3.7-4.5	4.1	107.1	107.1-107.1	107.1	116.9	115.3-118.4	116.9	-	-	-	109.6	106.9-112.3	109.6

Winter barley – 2 applications

Table 3.4-39 Effect on yield of GLOB2021dF on winter barley - 2 applications – Mediterranean EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	HORVW	All	5	Yield (t/ha)	4.7	4.2-6.1	4.4	115.1	96.4-124.8	119.0	120.8	106.9-135.7	121.4	120.3	112.2-128.5	121.8

Table 3.4-40 Effect on yield of GLOB2021dF on winter barley - 2 applications – Mediterranean EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	HORVW	All	5	Yield (t/ha)	4.3	3.2-5.3	4.3	112.1	103.6-120.6	112.1	117.9	104-131.5	114.2	-	-	-	119.2	106-131.5	116.2

Rye – 2 applications

Table 3.4-41 Effect on yield of GLOB2021dF on rye - 2 applications – Mediterranean EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	SECCW	All	1	Yield (t/ha)	4.1	-	-	-	-	-	117.7	-	-	-	-	-	118.1	-	-

Triticale – 2 applications

Table 3.4-42 Effect on yield of GLOB2021dF on triticale - 2 applications – Mediterranean EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	TTLWI	All	1	Yield (t/ha)	3.2	-	-	115.7	-	-	124.1	-	-	-	-	-	122.7	-	-

South-East EPPO Zone:

Winter soft wheat – 1 application

Table 3.4-43 Effect on yield of GLOB2021dF on winter soft wheat - 1 application – South-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	TRZAW	All	5	Yield (t/ha)	4.9	4.2-7.3	4.4	-	-	-	120.3	106.1-162.2	109.8	98.2 (n=2)	85.7-110.7	98.2	131.3 (n=3)	115.1-156.9	122.0

Winter soft wheat – 2 applications

Table 3.4-44 Effect on yield of GLOB2021dF on winter soft wheat - 2 applications – South-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	TRZAW	All	4	Yield (t/ha)	5.7	4.1-7.9	5.5	110.7	98.1-121.2	111.8	109.5	105.8-114.3	108.9	-	-	-	115.5	108.3-127.8	113.0

Barley – 2 applications

Table 3.4-45 Effect on yield of GLOB2021dF on barley - 2 applications – South-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% yield increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	HORVW	All	5	Yield (t/ha)	4.6	4.2-5.6	4.4	110.4	102.7-118.6	107.4	114.5	103.6-127.7	115.4	-	-	-	114.7	99.3-124.4	115.5

Conclusion

From the results above, it can be concluded that GLOB2021dF has a positive effect on oilseed rape (10 to 25 % of mean yield increase) and cereals (5 to 24% of mean yield increase), compared to the untreated control. Furthermore, at the maximum dose rates of 0.8 L/ha, the results are comparable to the reference products. Overall these results fully support the authorization of GLOB2021dF at the requested dose rates.

Conclusion to yield from efficacy trials (in the presence of the specific diseases)

No specific disease-free trials have been conducted with GLOB2021dF. This section presents the effect of the fungicide on the yield of treated plants based on efficacy trials. While the amount of data from the three zones is considered limited, sufficient evidence was observed across all zones. A mean grain yield increase of 10 to 25% in oilseed rape and 5 to 24% in cereals was recorded compared to the untreated control. Additionally, no negative impact on the mean thousand kernel weight (TKW), hectolitre weight of harvested grain in cereals, or oil content in oilseed rape was observed following the application of the fungicide.

3.4.3 Effects on the quality of plants or plant products (KCP 6.4.3)

The effect on qualitative yield was also determined in nearly all the efficacy trials discussed in section 3.2 in accordance with the EPPO standard PP 1/135 requirements.

The assessments presented for oilseed rape are (note, not all trials assessed all parameters):

- Thousand kernel weight: TKW (g) measured at harvest, calculated in % compared to the untreated
- Hectolitre weight: HLW (kg) measured at harvest, calculated in % compared to the untreated
- Oil content (%): measured at harvest, calculated in % compared to the untreated

The assessments presented for cereals are:

- Hectolitre weight: HLW (kg) measured at harvest, calculated in % compared to the untreated
- Thousand kernel weight: TKW (g) measured at harvest, calculated in % compared to the untreated

The absolute assessed values are shown for the untreated check, while the percentage relative to the control is shown for each treatment in the tables below.

In total, 52 trials evaluated the effects on the yield of oilseed rape (22 trials in the Maritime (only KCP 6.2-07 did not evaluate yield), 11 in the North-East, 10 in the South-East and 9 in the Mediterranean EPPO zones), while 131 trials evaluated the effects on the yield of cereals (47 trials in the Maritime, 40 in the North-East, 28 in the Mediterranean EPPO zones and 16 in the South-East EPPO zone). Trials on oilseed rape were carried out between 2021 and 2022. Those on cereals during 2022 and 2023. All trials were carried out by GEP certified research institutions.

In support of the North-East EPPO Zone, results were combined with those results from German and Czech trials since these are neighbouring countries and considered as valid to Poland, the only MS in the Central zone belonging to the North-East climatic zone.

In all the efficacy trials, the test product GLOB2021dF was applied according to the GAP table at the maximum rates of 0.8L/ha (N) (or equivalent amount of the previous formulation GLOB2021aF for which a bridging section was presented above).

On oilseed rape, as a general rule, GLOB2021dF was applied twice. Results from trials with one autumn and one spring application aimed at the control of LEPTMA are presented separately. Trials with spring applications are gathered. These can be either 2 applications around flowering but in some cases also one early spring application aimed at controlling LEPTMA and 2 applications around flowering targeting SCLESC and ALTEBA corresponding to a worst case situation. On cereals it was applied either once or twice according to the GAP and results are analysed separately.

In the following summary tables, the name Cantus is used in headers as a collective name for related products in a WG formulation containing boscalid which are registered in several countries. Also results from other local reference products as e.g. Propulse and Caramba are reported in detailed tables in the BAD for information only, but not summarized in the dRR as present in a few trials and not representing the uniform reference.

On cereals it was applied either once or twice according to the GAP and results are analysed separately.

A wide range of commercially grown varieties were tested and are listed in trial methodology tables in point 3.2.3.1 and 3.2.3.2 above, split by EPPO zone.

Oilseed rape

Maritime EPPO Zone:

Table 3.4-46 Effect on quality of GLOB2021dF on oilseed rape – autumn application – Maritime EPPO zone

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at appl.	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)								
								GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Difcor 250 EC/Score at 0.25-0.5 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	5	All	TKW (g)	15-18	13.4	3.7-48.2	5.1	102.8	100.3-105	103.6	103.3	100.4-107	104.0	101.3	99.7-102.8	101.7
MAR	6	All	Oil cont. (%)	15-18	45.3	40.6-51.2	45.2	99.9	98-101.7	99.5	99.9	98.8-102.8	99.1	100.6	98.8-102.6	100.6

Table 3.4-47 Effect on quality of GLOB2021dF on oilseed rape – spring application – Maritime EPPO zone

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at 1st appl.	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)														
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	16	All	TKW (g)	32-65	4.6	2.1-7.7	4.4	108.4	95.4-155.2	105.7	107.0	97.8-153.2	103.7	107.0	91.3-160.8	104.6	-	-	-	-	-	-
MAR	2	All	HLW (kg/100L)	33-65	63.0	61.8-64.1	63.0	103.3	101.2-105.4	103.3	104.9	103.8-106	104.9	103.2	100.3-106	103.2	-	-	-	-	-	-

North-East EPPO Zone:

Table 3.4-48 Effect on quality of GLOB2021dF on oilseed rape – autumn application – North-East EPPO zone

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at appl.	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Difcor 250 EC/Score at 0.25-0.5 L/ha			Tilmor/Folicur Expert at 0.8-1 L/ha		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ,DE)	6	All	TKW (g)	14-18	11.9	3.7-48.2	4.8	101.6	99.8-103.8	101.2	103.0	99.9-108.8	102.4	101.0	99.7-102.8	100.8	-	-	-
NE (+CZ,DE)	8	All	Oil cont. (%)	14-18	45.2	40.6-48.8	45.2	100.1	98-101.7	100.0	99.8	98.5-102.8	99.3	100.4	99.1-102.6	99.9	-	-	-

Means valid for Northern zone (CZ and DE trials not included in mean calculation)

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at appl.	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Difcor 250 EC/Score at 0.25-0.5 L/ha			Tilmor/Folicur Expert at 0.8-1 L/ha		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	2	All	TKW (g)	14-16	4.1	3.7-4.5	4.1	100.5	99.8-101.1	100.5	104.4	99.9-108.8	104.4	100.8	100.3-101.2	100.8	100.5	98.6-102.3	100.5
NE	3	All	Oil cont. (%)	14-16	47.0	44.3-48.8	48.0	100.1	99.8-100.3	100.1	99.4	98.5-100.2	99.4	99.5	99.1-99.9	99.4	100.0	99.6-100.8	99.7

Table 3.4-49 Effect on quality of GLOB2021dF on oilseed rape – spring application – North-East EPPO zone

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at 1st appl.	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)														
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Cantus/boscalid ref at 0.5 L/ha			Local ref products		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	15	All	TKW (g)	30-65	4.3	3.6-5.7	4.1	105.9	101.3-111.7	105.7	106.2	101-111.7	105.7	104.3	95.9-110.8	104.8	-	-	-	-	-	-
NE (+CZ)	4	All	HLW (kg/100L)	33-65	60.9	57.2-64.1	61.2	103.3	100.2-106.2	103.3	102.7	97.6-106	103.7	101.0	98.1-106	100.0	-	-	-	-	-	-

Means valid for Northern zone (CZ and DE trials not included in mean calculation)

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at 1st appl.	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha			Local ref products		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	8	All	TKW (g)	30-65	4.2	3.6-4.7	4.2	104.6	101.3-110	104.4	105.5	101-111.3	105.2	103.0	95.9-105.8	103.5	-	-	-
NE	2	All	HLW (kg/100L)	51-65	58.9	57.2-60.5	58.9	103.2	100.2-106.2	103.2	100.6	97.6-103.5	100.6	98.9	98.1-99.6	98.9	-	-	-

Mediterranean EPPO Zone:

Table 3.4-50 Effect on quality of GLOB2021dF on oilseed rape – spring application – Mediterranean EPPO zone

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at 1st appl.	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	9	All	TKW (g)	32-65	4.3	3.3-5.1	4.1	103.5	93.3-109.5	105.0	104.2	95.7-110.3	105.3	102.8	95.3-109.5	102.5

South-East EPPO Zone:

Table 3.4-51 Effect on quality of GLOB2021dF on oilseed rape – autumn application – South -East EPPO zone

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at appl.	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021aF at 0.6 L/ha			GLOB2021aF at 1 L/ha			Protendo 300 EC at 0.6 (0.5 in RO) L/ha			Cantus at 0.5 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	2	All	TKW (g)	14-17	4.1	4-4.2	4.1	106.7	100.7-112.7	106.7	107.5	102.8-112.2	107.5	107.9	102-113.7	107.9	108.6	101.7-115.4	108.6
SE	2	All	Oil cont. (%)	14-17	43.8	42.8-44.8	43.8	101.9	101.3-102.5	101.9	100.5	99.2-101.7	100.5	100.7	98.4-102.9	100.7	100.2	100-100.4	100.2

Table 3.4-52 Effect on quality of GLOB2021dF on oilseed rape – spring application – South -East EPPO zone

EPPO zone	Nb. trials	Grouping	Type	Crop BBCH at 1st appl.	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.6 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	8	All	TKW (g)	50-64	4.6	3.6-5.9	4.4	105.6	101.7-110.2	106.3	106.5	100-115.9	106.0	106.5	100.2-114.1	107.1

Cereals

Maritime EPPO Zone:

Winter wheat – 1 application

Table 3.4-53 Effect on quality of GLOB2021dF on winter wheat - 1 application – Maritime EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	TRZAW	All	4	TKW (g)	39.0	37.6-40.4	39.1	103.8	100.7-109.7	102.4	104.1	98.8-110	103.8	105.5	102.7-111	104.1

Table 3.4-54 Effect on quality of GLOB2021dF on winter wheat - 1 application – Maritime EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	TRZAW	All	7	TKW (g)	39.9	28.2-46.3	40.5	-	-	-	105.2	100-111.5	104.5	105.1 (n=1)	-	-
MAR	TRZAW	All	1	HLW	74.2	-	-	-	-	-	100.2	-	-	-	-	-

Winter wheat – 2 applications

Table 3.4-55 Effect on quality of GLOB2021dF on winter wheat - 2 applications – Maritime EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	TRZAW	All	5	TKW (g)	47.6	38.6-52	49.6	102.9	97.4-110.8	101.1	103.2	97-112	101.6	102.9	99.5-111.9	100.8

Table 3.4-56 Effect on quality of GLOB2021dF on winter wheat - 2 applications – Maritime EPPO zone– 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	TRZAW	All	7	TKW (g)	47.3	40.6-59.6	46.7	103.2	100.3-105.2	103.3	102.0	98.6-104.8	102.7	103.4 (n=4)	101.5-105.2	103.4
MAR	TRZAW	All	1	HLW	68.2	-	-	101.4	-	-	96.2	-	-	-	-	-

Winter barley– 1 application

Table 3.4-57 Effect on quality of GLOB2021dF on winter barley - 1 application – Maritime EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	HORVV	All	1	TKW (g)	59.1	-	-	-	-	-	101.0	-	-	-	-	-	99.8	-	-

Winter barley– 2 applications

Table 3.4-58 Effect on quality of GLOB2021dF on winter barley - 2 applications – Maritime EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	HORVV	All	2	TKW (g)	51.8	46.6-56.9	51.8	-	-	-	100.5	100-100.9	100.5	100.4	100.2-100.5	100.4

Table 3.4-59 Effect on quality of GLOB2021dF on winter barley - 2 applications – Maritime EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	HORVV	All	8	TKW (g)	44.6	39.6-51.7	44.3	102.9	100.1-105.4	103.0	105.6	102.7-112.3	105.1	104.5 (n=2)	103.2-105.8	104.5	106.9 (n=6)	102.6-116.4	105.0

Spring barley– 2 applications

Table 3.4-60 Effect on quality of GLOB2021dF on spring barley - 2 applications – Maritime EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	HORVS	All	1	TKW (g)	52.3	-	-	-	-	-	99.0	-	-	107.1	-	-	-	-	-

Spelt – 2 applications

Table 3.4-61 Effect on quality of GLOB2021dF on spelt - 2 applications – Maritime EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	TRZSP	All	2	TKW (g)	38.3	36.8-39.7	38.3	103.3	103.3-103.3	103.3	104.0	102.4-105.6	104.0	-	-	-	106.7	101.8-111.5	106.7
MAR	TRZSP	All	1	HLW	38.4	-	-	99.5	-	-	103.2	-	-	-	-	-	100.6	-	-

Rye – 2 applications

Table 3.4-62 Effect on quality of GLOB2021dF on rye - 2 applications – Maritime EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	SECCW	All	4	TKW (g)	33.1	20-38.2	37.0	103.0	102.5-103.4	103.0	104.5	101-106.5	105.2	-	-	-	103.8	101-106.7	103.7
MAR	SECCW	All	1	HLW	70.3	-	-	99.7	-	-	99.3	-	-	-	-	-	100.4	-	-

Winter triticale

Table 3.4-63 Effect on quality of GLOB2021dF on winter triticale - 2 applications – Maritime EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)									
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha			
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mdn
MAR	TTLWI	All	1	TKW (g)	34.3	34.3-34.3	34.3	104.5	104.5-104.5	104.5	108.5	108.5-108.5	108.5	108.6	108.6-108.6	108.6	108.6

Table 3.4-64 Effect on quality of GLOB2021dF on winter triticale - 2 applications – Maritime EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MAR	TTLWI	All	4	TKW (g)	42.7	37.5-45.8	43.8	107.5	106.8-108.1	107.5	105.5	100.2-108.3	106.8	-	-	-	106.5	100.9-108.4	108.3
MAR	TTLWI	All	1	HLW	69.4	69.4-69.4	69.4	-	-	-	96.9	-	-	-	-	-	96.4	-	-

North-East EPPO Zone:

Winter wheat – 1 application

Table 3.4-65 Effect on quality of GLOB2021dF on winter wheat - 1 application – North-East EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	TRZAW	All	8	TKW (g)	40.8	31.7-49.8	39.0	106.2 (n=2)	102.7-109.7	106.2	103.5	100.4-110	102.6	102.9	98-111	102.8
NE	TRZAW	All	1	HLW	73.0	-	-	-	-	-	105.6	-	-	104.9	-	-

Table 3.4-66 Effect on quality of GLOB2021dF on winter wheat - 1 application – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	TRZAW	All	12	TKW (g)	41.8	28.2-51.4	41.8	-	-	-	104.1	100.9-111.5	103.2	103.5 (n=2)	101.8-105.1	103.5	104.3 (n=10)	98.8-111.9	102.7
NE (+CZ)	TRZAW	All	3	HLW	73.0	69.9-76.1	73.0	-	-	-	103.3	101.4-104.3	104.2	102.2 (n=2)	101.4-102.9	102.2	103.8 (n=2)	103.5-104	103.8

Winter wheat – 2 applications

Table 3.4-67 Effect on quality of GLOB2021dF on winter wheat - 2 applications – North-East EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	TRZAW	All	5	TKW (g)	46.4	38.6-52	47.7	104.3	100.4-110.8	104.4	104.2	100.5-112	102.0	104.6	100.2-111.9	102.2
NE (+CZ)	TRZAW	All	1	HLW	71.9	-	-	100.9	-	-	102.2	-	-	102.1	-	-

Table 3.4-68 Effect on quality of GLOB2021dF on winter wheat - 2 applications – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	TRZAW	All	6	TKW (g)	46.2	40.6-53.2	46.1	-	-	-	102.7	99.3-104.8	103.0	103.6 (n=2)	101.9-105.2	103.6	101.4	96.8-105.4	101.1
NE (+CZ)	TRZAW	All	1	HLW	68.2	68.2-68.2	68.2	-	-	-	96.2	96.2-96.2	96.2	-	-	-	96.2	96.2-96.2	96.2

Winter barley – 1 application

Table 3.4-69 Effect on quality of GLOB2021dF on winter barley - 1 application – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	-	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	HORVW	All	1	TKW (g)	44.1	-	-	-	-	-	105.5	-	-	-	-	-	108.0	-	-
NF	HORVW	All	1	HLW	62.6	-	-	-	-	-	103.7	-	-	-	-	-	104.1	-	-

Winter barley – 2 applications

Table 3.4-70 Effect on quality of GLOB2021dF on winter barley - 2 applications – North-East EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha		
								Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	HORVW	All	5	TKW (g)	49.4	35-57.9	48.6	102 (n=4)	98.7-108.4	100.5	102.8	100.2-110.1	101.2	102	95.8-109.7	101.2
NE (+CZ)	HORVW	All	1	HLW	62.1	-	-	100.4	-	-	108.1	-	-	101.3	-	-

Table 3.4-71 Effect on quality of GLOB2021dF on winter barley - 2 applications – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+C7)	HORVW	All	8	TKW (g)	44.9	39.6-51.7	44.3	-	-	-	104.9	99.4-112.3	104.7	-	-	-	105.8	101.4-116.4	103.7

Spring barley – 1 application

Table 3.4-72 Effect on quality of GLOB2021dF on spring barley - 1 application – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NF	HORVS	All	2	TKW (g)	32.4	24.1-40.7	32.4	-	-	-	106.3	101.8-110.7	106.3	-	-	-	110.6	106.3-114.8	110.6

Spelt – 2 applications

Table 3.4-73 Effect on quality of GLOB2021dF on spelt - 2 applications – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	TRZSP	All	2	TKW (g)	38.3	36.8-39.7	38.3	-	-	-	104.0	102.4-105.6	104.0	-	-	-	106.7	101.8-111.5	106.7
NE (+CZ)	TRZSP	All	1	HLW	38.4	38.4-38.4	38.4	-	-	-	103.2	103.2-103.2	103.2	-	-	-	100.6	100.6-100.6	100.6

Rye – 2 applications

Table 3.4-74 Effect on quality of GLOB2021dF on rye - 2 applications – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	SECCW	All	7	TKW (g)	33.3	20-38.2	36.9	-	-	-	103.4	101-106.5	102.5	-	-	-	103.2	101-106.7	103.4
NE (+CZ)	SECCW	All	2	HLW	68.7	67.1-70.3	68.7	-	-	-	100.5	99.3-101.6	100.5	-	-	-	101.1	100.4-101.8	101.1

Triticale – 1 application

Table 3.4-75 Effect on quality of GLOB2021dF on triticale - 1 application – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE	TTLWI	All	1	TKW (g)	44.8	-	-	-	-	-	101.6	-	-	-	-	-	102.0	-	-

Triticale – 2 applications

Table 3.4-76 Effect on quality of GLOB2021dF on triticale - 2 applications – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	TTLWI	All	8	TKW (g)	43.2	37.5-49.8	43.8	-	-	-	103.9	100.2-108.3	103.2	-	-	-	103.9	96.5-108.4	104.2
NE (+CZ)	TTLWI	All	1	HLW	69.4	69.4-69.4	69.4	-	-	-	96.9	96.9-96.9	96.9	-	-	-	96.4	96.4-96.4	96.4

Winter oat

Table 3.4-77 Effect on quality of GLOB2021dF on winter oat - 2 applications – North-East EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)									
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			bixafen+triazole mixtures at 1.2 L/ha			
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	
NE	AVESA	All	4	TKW (g)	36.5	30.7-45.4	35.0	-	-	-	102.9	98.9-107.5	102.6	102.8	100.8-105.1	102.7	
NE	AVESA	All	1	HLW	36.6	36.6-36.6	36.6	-	-	-	101.5	101.5-101.5	101.5	100.4	100.4-100.4	100.4	

Table 3.4-78 Effect on quality of GLOB2021dF on winter oat - 2 applications – North-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
NE (+CZ)	AVESA	All	3	TKW (g)	40.3	34.2-51.4	35.3	102.9	99.3-106.2	103.2	104.7	102.5-107.4	104.1	-	-	-	102.4	99.2-104.3	103.6

Mediterranean EPPO Zone:

Winter soft and durum wheat – 1 application

Table 3.4-79 Effect on quality of GLOB2021dF on winter soft and durum wheat - 1 application – Mediterranean EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Prothioconazole ref. at 195-200 g a.s./ha		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	TRZAW	All	4	TKW (g)	42.7	39.4-47	42.2	-	-	-	103.2	100.7-106.1	103.0	102.4	100.1-105.9	101.7
MED	TRZDW	All	1	TKW (g)	33.2	-	-	-	-	-	101.0	-	-	100.8	-	-

Table 3.4-80 Effect on quality of GLOB2021dF on winter soft wheat - 1 application – Mediterranean EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)												
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures			
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	
MED	TRZAW	All	1	TKW (g)	38.7	-	-	-	-	-	104.1	-	-	102.6	-	-	-	-	-	-

Table 3.4-81 Effect on quality of GLOB2021dF on winter durum wheat - 1 application – Mediterranean EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	TRZDW	All	3	TKW (g)	37.5	32-44	36.5	-	-	-	110.4	100.8-118.7	111.7	115.5	102-129	115.5	112.7	-	-

Winter soft and durum wheat – 2 applications

Table 3.4-82 Effect on quality of GLOB2021dF on winter wheat - 2 applications – Mediterranean EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	TRZAW	All	5	TKW (g)	36.0	31.4-41.7	34.5	101.8	99.3-105.1	101.1	101.0	98.4-103.8	101.3	101.5	99.5-105	101.1

Table 3.4-83 Effect on quality of GLOB2021dF on durum winter wheat - 2 applications – Mediterranean EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	TRZDW	All	2	TKW (g)	40.7	38.2-43.2	40.7	101.2	101.2-101.2	101.2	102.3	99.3-105.2	102.3	-	-	-	100.7	100.4-101	100.7

Winter barley – 2 applications

Table 3.4-84 Effect on quality of GLOB2021dF on winter barley - 2 applications – Mediterranean EPPO zone – 2022 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)								
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			PROTENDO 300 EC at 0.65 L/ha		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	HORVW	All	5	TKW (g)	45.1	40.8-50.1	44.7	103.8	96.2-108.2	106.1	102.5	88.9-110.3	105.2	104.7	98.1-108.7	108.0

Table 3.4-85 Effect on quality of GLOB2021dF on winter barley - 2 applications – Mediterranean EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	HORVW	All	5	TKW (g)	45.3	37.6-54.7	46.5	107.6	100.4-114.8	107.6	106.0	100.7-116.7	104.3	-	-	-	105.8	100.9-115.5	101.7

Rye – 2 applications

Table 3.4-86 Effect on quality of GLOB2021dF on rye - 2 applications – Mediterranean EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	SECCW	All	1	TKW (g)	26.1	-	-	-	-	-	105.5	-	-	-	-	-	105.9	-	-

Triticale – 2 applications

Table 3.4-87 Effect on quality of GLOB2021dF on triticale - 2 applications – Mediterranean EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
MED	TTLWI	All	1	TKW (g)	38.6	-	-	108.0	-	-	109.2	-	-	-	-	-	111.7	-	-

South-East EPPO Zone:

Winter soft wheat – 1 application

Table 3.4-88 Effect on quality of GLOB2021dF on winter soft wheat - 1 application – South-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	TRZAW	All	5	TKW (g)	43.3	32.8-50.3	45.1	-	-	-	103.6	99.1-114.5	102.1	99.8 (n=2)	98.7-100.9	99.8	108.6 (n=3)	103.5-114.4	108.0

Winter soft wheat – 2 applications

Table 3.4-89 Effect on quality of GLOB2021dF on winter soft wheat - 2 applications – South-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	TRZAW	All	4	TKW (g)	47.5	37.7-59.1	46.5	102.5	100-106.9	101.5	102.7	99.3-105.6	103.0	-	-	-	102.8	99.2-106.4	102.8

Barley – 2 applications

Table 3.4-90 Effect on quality of GLOB2021dF on barley - 2 applications – South-East EPPO zone – 2023 data

EPPO zone	Crop Code	Grouping	Nb. trials	Assessment type (unit)	Assessed value in the untreated control (=100%)			% quality increase (UTC=100%)											
								GLOB2021dF at 0.48 L/ha			GLOB2021dF at 0.8 L/ha			Protendo 300 EC at 0.65 L/ha			bixafen+triazole mixtures		
					Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn	Mean	Min & Max	Mdn
SE	HORVV	All	5	TKW (g)	44.8	41.6-47.4	45.8	102.4	99-105.8	101.9	104.5	98.9-114	101.5	-	-	-	104.2	99.6-113.3	102.5

Conclusion

No biologically significant differences were observed in HLW, TKW or oil contents between the untreated and any of the treatments. Furthermore, at the maximum dose rates of 0.8 L/ha the results are comparable to the reference products. From the results above, it can be concluded that GLOB2021dF has no negative effect on the quality of cereals and oilseed rape and the presented results fully support the authorization at the requested dose rates.

Conclusion to quality parameters from efficacy trials (in the presence of the specific diseases)

No specific disease-free trials have been conducted with GLOB2021dF. This section presents the effects on the quality of cereals and oilseed rape from treated plants in efficacy trials. The impact of GLOB2021dF on cereal quality was assessed by measuring thousand kernel weight (TKW) and hectolitre weight of harvested grain, as well as oil content in oilseed rape. Overall, the application of GLOB2021dF had a positive effect on the tested quality parameters.

Therefore, it is reasonable to conclude that when applied according to label recommendations, two foliar applications of GLOB2021dF at the maximum label rate of 0.8 L/ha have no adverse impact on the quality of cereals or oilseed rape.

3.4.4 Effects on transformation processes (KCP 6.4.4)

According to EPPO PP1/243 “*Effects of plant protection products on transformation processes*”, wheat and barley are crops used for industrial processes (such as bread making or brewing) which include transformation (dependent on biological activity). On the other hand, oilseed rape usually do not follow transformation processes depending on biological activity but may follow physical processes.

Also, according to PP1/242(2) - Taint tests, there are no simple rules or cut-off criteria, to decide whether or not taint tests should be conducted, but based on information on the historical occurrence of taint, the risk can be classified as Low (with a taint test not usually required) for *a product used on fresh produce only, and/or an active substance not associated with taint problems or relatively similar in structure to active substances not associated with taint problems, and/or a product leaving no residues at harvest and/or a non-systemic compound not applied to harvestable plant parts*.

Specifically for the crops in this submission, cereals and oilseed rape, the product GLOB2021dF is not to be applied close to harvest (latest application possible at BBCH 69, about 2 months ahead of harvest).

Changed quality parameters might also be an indication for changes in the transformation processes. As shown under 3.4.3 this is not the case for GLOB2021dF, where oil content, thousand kernel weight and hectolitre weight were not negatively affected. Therefore, it can be concluded that GLOB2021dF is also safe when applied as recommended to target crops.

Additionally, no significant residues of any of the active ingredients are found on harvested parts (for details please refer to Part B7 of the Registration Report). Therefore, according to EPPO guideline PP 1/243, no further data is deemed to be necessary.

It is therefore not expected that GLOB2021dF, providing 125 g of Prothioconazole + 125 g Boscalid/ha would have any detrimental effect on transformation processes. Thus, no further data is deemed to be necessary. A safe use of GLOB2011I can be considered for all crops.

Conclusion to Effects on transformation processes

No results from specific studies were submitted for this annex point, as the applicant did not consider it necessary. The case presented by the applicant is acceptable, and no further data are required.

3.4.5 Impact on treated plants or plant products to be used for propagation (KCP 6.4.5)

Prothioconazole and Boscalid are well-known active substances, used for many years in cereals and oilseed rape, including cereals grown for seed. Moreover, prothioconazole may even be used as seed treatment itself and as so no impact on germination is expected.

GLOB2021dF is not to be applied close to harvest (latest application timing BBCH 69) nor any phytotoxic effect was observed in any of the submitted trials. Under these circumstances, data on plant parts for propagation are not required according to EPPO Guideline PP 135(4).

Thus, no negative effect is to be expected even in plant parts used for propagation (i.e. seeds) with no additional data.

Conclusion to Impact on treated plants to be used for propagation

Based on EPPO standards PP 1/135(4) 'Phytotoxicity Assessment' and PP 1/226(3) 'Number of Efficacy Trials' for fungicides, data on plant parts intended for propagation are required only if phytotoxic effects are observed on certain crops. As previously stated, no phytotoxic symptoms were observed in any of the 184 trials conducted on cereals or oilseed rape. Therefore, the case presented by the applicant is acceptable, and no further data are required.

3.5 Observations on other undesirable or unintended side-effects (KCP 6.5)

3.5.1 Impact on succeeding crops (KCP 6.5.1)

GLOB2021dF contains 2 fungicidal active substances (prothioconazole and boscalid) known to have no significant effects on plant growth and development. Their activity and selectivity is widely known and it is thus unlikely that the product will cause damage to any succeeding crop. Moreover, GLOB2021dF applies a reduced amount of each active substance when compared to rates of the straight products applied alone.

Still, reference can be made to the seedling emergence study provided for the off-field exposure in Part B9 of the Registration Report (KCP 10.6.2). The seedling emergence study was performed with GLOB2021dF deposited on the soil surface after sowing, according to the OECD Guideline No. 208.

Six different crops were tested (3 monocots: oat, onion, maize, and 3 dicots: carrot, cabbage and pea). Based on the results of the preliminary range finding test, a limit test was performed at only one test dose level with test plant species at 4 mL/L spray concentration (corresponding 0.8 L in 200 L/ha spraying application). The test item had no effect on the emergence, survival, plant height, seedling fresh weight or seedling dry weight parameters, in any species tested in the limit test and it can be concluded that the NOEC and LOEC is above the maximum recommended application rate for GLOB2021dF (0.8 L/ha).

Summary and conclusion on the Impact on succeeding crops

Components of GLOB2021dF are known active ingredients already authorised for cereals and oilseed rape production with no restrictions on rotational crops. Based on the experience with the active substances and given the fact that GLOB2021dF applies a reduced amount of each active substance when compared to rates of the straight products applied alone, it is unlikely that the product will cause any damage to succeeding crops. These outcomes are confirmed by the seedling emergence study where GLOB2021dF had no effect on the emergence, survival, plant height, seedling fresh weight or seedling dry weight parameters, in any species tested.

Conclusion to "Impact on succeeding crops"

The LOEC and NOEC in the ~~vegetative vigour test~~ seedling emergence for oat, pea, carrot, maize, cabbage and onion species was determined to be above the maximum recommended application rate for GLOB2021dF (0.8 L/ha in 200 L spraying solution) for survival, plant height, seedling fresh weight and seedling dry weight endpoints.

It is therefore reasonable to conclude that a two application of GLOB2021dF at the maximum proposed label rate of 0.8 L/ha and applied according to label recommendations has no impact on succeeding crops.

Applicant comment: in the commenting grey box above there might be a typo. The applicant refers to the LOEC and NOEC in the seedling emergence study, not the vegetative vigour test.

3.5.2 Impact on other plants including adjacent crops (KCP 6.5.2)

Products containing the active substances prothioconazole and boscalid have been approved and widely used in EU countries and worldwide for the control of fungal pathogens on a range of different crop types on which they are crop safe. These products have been approved and extensively applied in many crops using a wide variety of application methods and equipment and are therefore widely proven in commercial practice to have no adverse effects on other plants, including adjacent crops, resulting from spray drift away from the area of application. Moreover, GLOB2021dF applies a reduced amount of each active substance when compared to rates of the straight products applied alone.

Conclusion

Overall, the risk to non-target terrestrial plants is considered acceptable.

Tank cleaning

Effectiveness of cleaning procedures was investigated in a dedicated study (KCP 4.2).

The effectiveness of cleaning procedures was assessed in the EFFECTIVENESS OF CLEANING TEST OF GLOB2021dF (Amaljoy, A., 2023). After three tank washes with 10 mL water, 99.998 ± 0.000 of boscalid and 99.998 ± 0.000 of prothioconazole was removed from the bottles. This demonstrates that only a very limited amount of residue remains in the spray tank after cleaning.

Please refer to Part B Section 1, 2 and 4 for further details.

Conclusion to Impact on adjacent crops

The selectivity data for GLOB2021dF showed no phytotoxicity when applied directly to cereals or winter oilseed rape, and the results of vegetative vigour tests, discussed in the annex under "Impact on succeeding crops," further support this. Therefore, it is reasonable to conclude that the risk of adverse effects on other plants, including adjacent crops, is very low and acceptable when GLOB2021dF is applied at the maximum label rate of 0.8 L/ha.

3.5.3 Effects on beneficial and other non-target organisms (KCP 6.5.3)

There were no adverse effects on beneficial and other non-target organisms observed in any of the efficacy trials submitted in this dossier.

Detailed studies on the possible adverse effects to beneficial organisms are submitted and summarised in Part B, Section 9 (Ecotoxicology).

Compatibility with current management practices including IPM

No trials were carried out.

Conclusion to Effects on beneficial and other non-target organisms

No adverse effects were noted during visual observations at these field trial sites. Risk assessments for GLOB2021dF, based on the proposed use pattern, are provided in Part B, Section 9 (Ecotoxicology) of the draft registration report and are considered adequate.

3.6 Other/special studies

No other/special studies were performed.

3.7 List of test facilities including the corresponding certificates

Table 3.7-1: List of test facilities

Test facility	Address	Certificate (Yes or No)
University of Aarhus, Department of Agroecology	Blichers Allé 20, 8830 Tjele (DK)	Yes
Agrolab A/S	Røjleskovvej 18, 5500 Middelfart (DK)	Yes
Agri 2000 France SARL	22 Che de L'artisanat 26540 Mours-Saint-Eusebe, France	Yes
Agri 2000 Net S.r.l.	Via Marabini, 14/A Castel Maggiore (BO), Italy	Yes
Agri 2000 Hellas Ltd.	Evagelistrias 20,, Kyparissia P.C. 24500,, Messinia. Greece.	Yes
Estonian Crop Research Institute	J. Aamisepa 1, Jõgeva 48309 Jõgeva maakond (EE)	Yes
Institute of Plant Protection - National Research Institute IOR Sosnicowice	ul. Gliwicka 29, 44-153 Sosnicowice, Poland	Yes
NIBIO Norwegian Institute of Bioeconomy Research	Postboks 115 NO-1431 Ås, Norway	Yes
Pest Pro d.o.o.	Stjepana Gradica 5, Zagreb – 10010, Croatia	Yes
Qualiphyt	80 Chemin de Riboulin, 26270 Loriol Sur Drome, France	Yes
SAGEA Centro di Saggio s.r.l.	Via San Sudario, 15 12050 Castagnito d'Alba (CN), Italy	Yes
Staphyt Belgium	Rue Laid Burnait, 1348 Loivain-La-Neuve, Belgium	Yes
Staphyt Poland	Ziębicka 2, Poznań-60-164	Yes
VKST field trials	Fulbyvej 15 DK-4180 Sorø, Denmark	Yes
Agricultural Research Institute Kromeriz (Zemelský výzkumný ústav Kromeriz, s. r. o.)	Havlíčková 2787/121 Kroměříž-767 01, Czech Republic	Yes
Zkusební stanice Kluky	Boys 201 Boys at Písek-398 19, Czech Republic	Yes
ZKUSEBNÍ STANICE TRUTNOV s.r.o.	Volanovská 409, Trutnov-541 01, Czech Republic	Yes
Syntech Research Portugal	Rua António Oliveira, 21 Lote 16B – Armazém L Zona Industrial das Caldas da Rainha 2500-916 Caldas da Rainha Leiria - Portugal	Yes
UP Poznań - Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department	Wojska Polskiego 28, 60-637 Poznań, Poland	Yes
Agritec výzkum slechtění a služby s.r.o. (AGRITEC Research, Breeding and Services, Ltd.)	Zemelská 2520/16 Sumperk-787 01, Czech Republic	Yes
Agro Research Consulting	ul. Nadburzańská 32 99-400 Łowicz, Poland	Yes
Biochem agrar	Kupferstraße 6, 04827 Machern OT Gerichshain, Germany	Yes
CPRP	Török Ignác u. 30, Szombathely, Hungary	Yes
Estonian Crop Research Institute	J. Aamisepa 1, Jõgeva 48309 Jõgeva maakond (EE)	Yes

Test facility	Address	Certificate (Yes or No)
Field Research Support (PL)	Ul Dworcowa 2, Kościan-64-000, Poland	Yes
Latvian Plant Protection Research Centre (LAAPC)	Struktoru 14a, Rīga, LV 1039, Latvia	Yes
Plant-Art Research Kft.	Ébner György köz 4, 2040 Budaörs, Hungary	Yes
Vertify / Proeftuin Zwaagdijk	1681 ND Zwaagdijk-Oost, the Netherlands	Yes
Staphyt Poland	Ziębicka 2, Poznań-60-164	Yes
SynTech Research Poland Sp. z o.o.	ul. Jagiellonska 69/1, 85-027 Bydgoszcz, Poland	Yes
FieldArm Limited	Willowfields, The Street, Ramsey, Essex, CO12 5HL, UK	Yes
Institute of Agriculture, LAMMC	Lithuania Instituto al. 1, Akademija LT 58344 Kėdainiai distr., Lithuania	Yes
Oxford Agricultural Trials Ltd.	West Farm Barn, Launton Rd, Stratton Audley, Bicester OX27 9AS, UK	Yes
Qualiphyt	80 Chemin de Riboulin, 26270 Lorient Sur Drome, France	Yes
Sagea OOD	Ul. Kasta 22, S. Stargel, 2135 - Bulgaria	Yes
Staphyt Germany	Langenburger Str. 35 74572 Blaufen, Germany	Yes
HS Skåne HUSEC	Borgeby Slottsväg 11 SE-237 91 Bjärred, Sweden	Yes
BIOTEK Francor Agriculture S.R.L.	Str Oituz 28/B, 310038 Arad, Romania	Yes
OSEVA PRO Zubří	Hamerská 698 756 54 Zubří, Czech Republic	Yes
Green & Property	ul. Na Stoku, nr 6/6, 26-600 Radom, Poland	Yes
AGROLIS CONSULTING	Rua Ana De Macedo – Lote BS1 – Loja D – 2000-019 Santarem - Portugal	Yes
Syntech Research Agrico SRL	Str. Marcus Aurelius Nr. 6. Arad, Jud. ARAD, Romania, 310209	Yes
Staphyt Greece	Industrial Area of Thermi, Thessalonikis - Polygrou Road, Triadi 570 01, Greece	Yes
Staphyt Bulgaria	Stopanski dvor, 9307 Dobrich, Bulgaria	Yes

Appendix 1 Lists of data considered in support of the evaluation

List of data submitted by the applicant and relied on

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
Oilseed rape					
KCP 6.2	Roberta Kolberg	2023	Biological Assessment Dossier: GLOB2021dF Globachem NV	N	Globachem NV

List of data submitted or referred to by the applicant and relied on, but already evaluated at EU peer review

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP XX	Author	YYYY	Title Company Report N Source GLP/non GLP/GEP/non GEP Published/Unpublished	Y/N	Owner

The following tables are to be completed by MS

List of data submitted by the applicant and not relied on

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP XX	Author	YYYY	Title Company Report N Source GLP/non GLP/GEP/non GEP Published/Unpublished	Y/N	Owner

List of data relied on not submitted by the applicant but necessary for evaluation

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP XX	Author	YYYY	Title Company Report N Source GLP/non GLP/GEP/non GEP Published/Unpublished	Y/N	Owner