

REGISTRATION REPORT

Part B

Section 3

Efficacy Data and Information

Concise summary

Product code: A23282A

Product name: **KAYAK ERA**

Chemical active substances:

Cyprodinil, 225 g/L

Prothioconazole, 75 g/L

NATIONAL ADDENDUM – Poland

(To support a lower dose rate and claims against some target diseases in cereals according to the national Polish data requirements)

Applicant: XXXX

Submission date: July 2022

Evaluation date: March 2023

MS Finalisation date: July 2024

Version history

When	What
July 2022	dRR submitted by applicant
March 2023	National reviewer evaluation
July 2024	Corrected version

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- Following expiry of any period of exclusive use, by offering, in certain jurisdictions, mandatory compensation,

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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 (cMS version)

This is the version of National Addendum from July 2022, submitted by applicant in the framework of Article 33 of Regulation (EC) 1107/2009. The applicant's text is commented by National reviewer and the comments and conclusions are placed in commenting boxes shaded in grey at the end of each chapter. Amendments in the text are highlighted in yellow.

3.1 Summary and conclusions of applicant on Section 3: Efficacy (KCP 6)

Abstract

The National reviewer considers that data submitted for A23282A (Kayak Era) meets the registration requirement and the evaluation resulted in the decision to grant the authorization of this product in wheat, barley, triticale, and rye, for disease control at the rate of 1.5-2.0 L/ha, at the growth stages between BBCH 30-69 in wheat, rye and triticale or 30-59 in barley, and spray volume of 100-400 L/ha. A23282A can be recommended for the control of *Zymoseptoria tritici*, *Puccinia recondita*, *Puccinia striiformis*, *Blumeria graminis* and Eyespot on winter wheat; *Zymoseptoria tritici* and *Blumeria graminis* on spring wheat, *Pyrenophora teres*, *Rhynchosporium secalis*, *Ramularia collo-cygni*, *Puccinia hordei*, *Blumeria graminis* and Eyespot on winter barley; *Pyrenophora teres*, *Ramularia collo-cygni*, *Puccinia hordei* and *Blumeria graminis* on spring barley *Rhynchosporium secalis* on rye; *Zymoseptoria tritici* on triticale.

Data presented in this report demonstrate that A23282A has a high efficacy against diseases observed under experiments, is not phytotoxic to cereal crops and has no negative influence on yield, grain quality, propagation, succeeding crops and adjacent crops.

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

1	2	3	4	5	6	7	8	9	10	11a	11b	12	13	14	15
Use- No. ^(e)	Member state(s)	Crop and/ or situation (crop destination / purpose of crop)	F, Fn, Fp n G, Gn , Gp n 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 safener/synergi st per ha ^(f)	cMS Conclusion (efficacy)
					Metho d / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applicatio ns (days)	L product / ha a) max. rate per appl. b) max. total rate per crop/season	g cyprodinil/h a a) max. rate per appl. b) max. total rate per crop/season	g prothioconaz ole/ha a) max. rate per appl. b) max. total rate per crop/season	Wate r L/ha min / max			
Zonal uses (field or outdoor uses, certain types of protected crops)															
PL1	Poland	spring wheat; TRZAS	F	Zymoseptoria tritici; SEPTTR	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL2	Poland	spring wheat; TRZAS	F	Puccinia striiformis; PUCCST	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		
PL3	Poland	spring wheat; TRZAS	F	Blumeria graminis; ERYSGR	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*	Supported additionally in this National Addendum.	Acceptable
PL4	Poland	spring wheat; TRZAS	F	Oculimacula yallundae; PSDCHE	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		
PL5	Poland	winter wheat; TRZAW	F	Zymoseptoria tritici; SEPTTR	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL6	Poland	winter wheat; TRZAW	F	Puccinia striiformis; PUCCST	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*	Supported additionally in this National Addendum.	Acceptable

1	2	3	4	5	6	7	8	9	10	11a	11b	12	13	14	15
Use- No. ^(e)	Member state(s)	Crop and/ or situation (crop destination / purpose of crop)	F, Fn, Fp n G, Gn , Gp n 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 safener/synergi st per ha ^(f)	cMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applicatio ns (days)	L product / ha a) max. rate per appl. b) max. total rate per crop/season	g cyprodinil/h a a) max. rate per appl. b) max. total rate per crop/season	g prothioconaz ole/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
PL7	Poland	winter wheat; TRZAW	F	Blumeria graminis; ERYSGR	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*	Supported additionally in this National Addendum.	Acceptable
PL8	Poland	winter wheat; TRZAW	F	Oculimacula yallundae; PSDCHE	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL13	Poland	spring barley; HORVS	F	Pyrenophora teres; PYRNTE	foliar spray	BBCH30-59	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL14	Poland	spring barley; HORVS	F	Rhynchosporium secalis; RHYNSE	foliar spray	BBCH30-59	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		
PL15	Poland	spring barley; HORVS	F	Blumeria graminis; ERYSGR	foliar spray	BBCH30-59	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*	Supported additionally in this National Addendum.	Acceptable
PL16	Poland	spring barley; HORVS	F	Puccinia hordei; PUCCHD	foliar spray	BBCH30-59	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*	Supported additionally in this National Addendum.	Acceptable
PL17	Poland	spring barley;	F	Ramularia collo- cygni; RAMUCC	foliar spray	BBCH30-59	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*	Supported additionally in	Acceptable

1	2	3	4	5	6	7	8	9	10	11a	11b	12	13	14	15
Use- No. ^(e)	Member state(s)	Crop and/ or situation (crop destination / purpose of crop)	F, Fn, Fp n G, Gn , Gp n 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 safener/synergi st per ha ^(f)	cMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applicatio ns (days)	L product / ha a) max. rate per appl. b) max. total rate per crop/season	g cyprodinil/h a a) max. rate per appl. b) max. total rate per crop/season	g prothioconaz ole/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
		HORVS												this National Addendum.	
PL18	Poland	spring barley; HORVS	F	Oculimacula yallundae; PSDCHE	foliar spray	BBCH30-59	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		
PL19	Poland	winter barley; HORVW	F	Pyrenophora teres; PYRNTE	foliar spray	BBCH30-59	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL20	Poland	winter barley; HORVW	F	Rhynchosporium secalis; RHYNSE	foliar spray	BBCH30-59	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*	Supported additionally in this National Addendum.	Acceptable
PL21	Poland	winter barley; HORVW	F	Blumeria graminis; ERYSGR	foliar spray	BBCH30-59	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*	Supported additionally in this National Addendum.	Acceptable
PL22	Poland	winter barley; HORVW	F	Puccinia hordei; PUCCHD	foliar spray	BBCH30-59	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*	Supported additionally in this National Addendum.	Acceptable
PL23	Poland	winter barley; HORVW	F	Ramularia collo- cygni; RAMUCC	foliar spray	BBCH30-59	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*	Supported additionally in this National	Acceptable

1	2	3	4	5	6	7	8	9	10	11a	11b	12	13	14	15
Use- No. ^(e)	Member state(s)	Crop and/ or situation (crop destination / purpose of crop)	F, Fn, Fp n G, Gn , Gp n 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 safener/synergi st per ha ^(f)	cMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applicatio ns (days)	L product / ha a) max. rate per appl. b) max. total rate per crop/season	g cyprodinil/h a a) max. rate per appl. b) max. total rate per crop/season	g prothioconaz ole/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
														Addendum.	
PL24	Poland	winter barley; HORVW	F	Oculimacula yallundae; PSDCHE	foliar spray	BBCH30-59	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL25	Poland	spring rye; SECCS	F	Rhynchosporium secalis; RHYNSE	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*	Minor use	Acceptable
PL26	Poland	winter rye; SECCW	F	Rhynchosporium secalis; RHYNSE	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL27	Poland	Oat, spring; AVESP	F	Blumeria graminis; ERYSGR	foliar spray	BBCH30-59	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		
PL28	Poland	Oat, winter; AVESW	F	Blumeria graminis; ERYSGR	foliar spray	BBCH30-59	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		
PL29	Poland	spring triticale; TTLSO	F	Zymoseptoria tritici; SEPTTR	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL30	Poland	winter triticale; TTLWI	F	Zymoseptoria tritici; SEPTTR	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*	Supported additionally in this National Addendum.	Acceptable
Minor uses according to Article 51 (zonal uses)															
PL9	Poland	durum	F	Zymoseptoria	foliar	BBCH30-69	a) 1	NA	a) 1.5-2	a) 338-450	a) 113-150	100-	N/A*		Acceptable

1	2	3	4	5	6	7	8	9	10	11a	11b	12	13	14	15
Use- No. ^(e)	Member state(s)	Crop and/ or situation (crop destination / purpose of crop)	F, Fn, Fp n G, Gn , Gp n 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 safener/synergi st per ha ^(f)	cMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applicatio ns (days)	L product / ha a) max. rate per appl. b) max. total rate per crop/season	g cyprodinil/h a a) max. rate per appl. b) max. total rate per crop/season	g prothioconaz ole/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
		wheat; TRZDU		tritici; SEPTTR	spray		b) 1		b) 1.5-2	b) 338-450	b) 113-150	400			
PL10	Poland	durum wheat; TRZDU	F	Puccinia striiformis; PUCCST	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL11	Poland	durum wheat; TRZDU	F	Blumeria graminis; ERYSGR	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL12	Poland	durum wheat; TRZDU	F	Oculimacula yallundae; PSDCHE	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL31	Poland	spring rye; SECCS	F	Blumeria graminis; ERYSGR	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL32	Poland	spring rye; SECCS	F	Puccinia recondita; PUCCRE	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL33	Poland	spring rye; SECCS	F	Fusarium culmorum; FUSACU	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL34	Poland	durum wheat; TRZDU	F	Puccinia recondita; PUCCRE	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL35	Poland	durum	F	Fusarium sp.;	foliar	BBCH30-69	a) 1	NA	a) 1.5-2	a) 338-450	a) 113-150	100-	N/A*		Acceptable

1	2	3	4	5	6	7	8	9	10	11a	11b	12	13	14	15
Use- No. ^(e)	Member state(s)	Crop and/ or situation (crop destination / purpose of crop)	F, Fn, Fp n G, Gn , Gp n 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 safener/synergi st per ha ^(f)	cMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applicatio ns (days)	L product / ha a) max. rate per appl. b) max. total rate per crop/season	g cyprodinil/h a a) max. rate per appl. b) max. total rate per crop/season	g prothioconaz ole/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
		wheat; TRZDU		FUSASP	spray		b) 1		b) 1.5-2	b) 338-450	b) 113-150	400			
PL36	Poland	spring triticale; TTL SO	F	Puccinia striiformis; PUCCST	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL37	Poland	spring rye; SECCS	F	Puccinia striiformis; PUCCST	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL38	Poland	spelt; TRZSP	F	Zymoseptoria tritici; SEPTTR	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL39	Poland	spelt; TRZSP	F	Puccinia striiformis; PUCCST	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL40	Poland	spelt; TRZSP	F	Blumeria graminis; ERYSGR	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL41	Poland	spelt; TRZSP	F	Oculimacula yallundae; PSDCHE	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL42	Poland	spelt; TRZSP	F	Puccinia recondita; PUCCRE	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable
PL43	Poland	spelt; TRZSP	F	Fusarium sp.; FUSASP	foliar spray	BBCH30-69	a) 1 b) 1	NA	a) 1.5-2 b) 1.5-2	a) 338-450 b) 338-450	a) 113-150 b) 113-150	100- 400	N/A*		Acceptable

3.2 Efficacy data (KCP 6)

Introduction

A23282A is an emulsifiable concentrate (EC) formulation containing 225 g/L cyprodinil and 75 g/L prothioconazole. It is a foliar fungicide treatment proposed for disease control in winter and spring wheat, winter and spring barley, winter and spring rye, winter and spring triticale and winter and spring oats. The proposed maximum label rate for use on all crops is 2.0 L product/hectare, with a maximum of one application per season, which will deliver 450 g cyprodinil + 150 g prothioconazole per hectare. A23282A provides broad spectrum control against target fungal pathogens with good crop safety.

The product is recommended one time at 1.5 - 2.0 L/ha at BBCH 30-69 (BBCH 30-59 in barley).

This National Addendum document was prepared according to the national Polish data requirements in order to additionally support the following claims on the Polish label:

- *Puccinia striiformis* 'Full control' at 1.5 L/ha and 2.0 L/ha on winter wheat,
- *Blumeria graminis* 'Full control' at 1.5 L/ha and 2.0 L/ha on winter and spring wheat,
- *Rhynchosporium secalis* 'Full control' at 1.5 L/ha and 2.0 L/ha on winter barley,
- *Ramularia collo-cygni* 'Moderate control' at 1.5 L/ha and 'Full control' 2.0 L/ha on winter and spring barley,
- *Puccinia hordei* 'Full control' at 1.5 L/ha and 2.0 L/ha on winter and spring barley,
- *Blumeria graminis* 'Full control' at 1.5 L/ha and 2.0 L/ha on winter and spring barley,
- *Zymoseptoria tritici* 'Full control' at 1.5 L/ha and 2.0 L/ha on winter triticale.

In order to support the proposed uses data are presented from 54 trials conducted over two seasons in 2020 and 2021 in Poland, in EPPO North-East zone countries Latvia and Lithuania and in neighbouring EPPO Maritime zone country Germany. All are considered as acceptable for efficacy justification of the plant protection products in Poland.

This document complements and should be read in conjunction with Section 3: Efficacy Data and Information (BAD), Core assessment (XXXX File No. VV-894835) and summarises the information related to the efficacy in winter and spring wheat, winter and spring barley and winter triticale.

No new trials (except 2) are presented in this National Addendum compared to the core BAD, however in this document trial results from all acceptable countries were grouped together to demonstrate the average and the range of the control levels that are achieved with A23282A in various and representative agro-climatic conditions that cover all Poland.

All the data presented in this document fully support the proposed registration of A23282A for the claims mentioned above.

Regarding details on the active substances, description of the plant protection product, importance of cereals and description of the target diseases please refer to the Biological Assessment Dossier, Core Assessment (VV-894835).

Table 3.2-1: Simplified table of requested uses (in addition to the uses supported in the core assessment) for A23282A

Crop	Target (s)	Max. number of applications	Requested dose rates
Winter wheat	<i>Blumeria graminis</i> <i>Puccinia striiformis</i>	1	1.5 – 2.0 L/ha
Winter barley	<i>Blumeria graminis</i> <i>Puccinia hordei</i> <i>Ramularia collo-cygni</i> <i>Rhynchosporium secalis</i>	1	1.5 – 2.0 L/ha
Winter triticale	<i>Zymoseptoria tritici</i>	1	1.5 – 2.0 L/ha
Spring wheat	<i>Blumeria graminis</i>	1	1.5 – 2.0 L/ha
Spring barley	<i>Blumeria graminis</i> <i>Puccinia hordei</i> <i>Ramularia collo-cygni</i>	1	1.5 – 2.0 L/ha

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

Table 3.2-2: Glossary of pests and crops mentioned in this National Addendum

EPPO code	Scientific name	Common name
PUCCST	<i>Puccinia striiformis</i>	Yellow (stripe) rust
SEPTTR	<i>Zymoseptoria tritici</i> (= <i>Septoria tritici</i>)	Septoria leaf blotch
RAMUCC	<i>Ramularia collo-cygni</i>	Ramularia leaf spot
RHYNSE	<i>Rhynchosporium secalis</i>	Leaf scald of cereals
ERYSGR	<i>Blumeria graminis</i>	Powdery mildew of cereals
PUCCHD	<i>Puccinia hordei</i>	Brown rust of barley

For a list of scientific and common names, please refer to <http://eppt.eppo.org>

Table 3.2-3: Major / minor status of intended uses (for Poland)

Crop and/or situation	Crop status		Pests or group of pests controlled	Pest status	
	Major	Minor		Major	Minor
Wheat (TRZSS)	PL	-	<i>Puccinia striiformis</i> (PUCCST) <i>Blumeria graminis</i> (ERYSGR)	PL	-
Barley (HORVX)	PL	-	<i>Blumeria graminis</i> (ERYSGR) <i>Rhynchosporium secalis</i> (RHYNSE)	PL	-

Crop and/or situation	Crop status		Pests or group of pests controlled	Pest status	
	Major	Minor		Major	Minor
			<i>Ramularia collo-cygni</i> (RAMUCC) <i>Puccinia hordei</i> (PUCCHD)		
Triticale (TTLRI)	PL	-	<i>Zymoseptoria tritici</i> (SEPTTR)	PL	-

Minor uses in Poland are defined in the order of minister of Agriculture and Rural Development¹.

Compliance with Uniform Principles

The experiment was carried out by XXXX organisations, contractor companies and Official Research institutes, all of which follow the EPPO standards and are officially recognized by the competent authorities to carry out field registration trials in accordance with the principles of Good Experimental Practice (GEP).

All the trials were conducted according to GEP and EPPO-guidelines/-principles and the specifications of the trial plan. All assessments and applications were done according to instructions of the protocol unless otherwise specified.

Supporting information from earlier formulations of the active substance or similar active substances

All data summarised within this National Addendum has been generated with the same product formulation Emulsifiable Concentrate containing 225 g/L cyprodinil and 75 g/L prothioconazole, identified by the product code A23282A. Information on the detailed composition of A23282A can be found in the confidential dossier of this submission (Registration Report - Part C).

Information on trials submitted

Table 3.2- aims to give an overview of all the submitted trials and Table 3.2- provides details of the reference standard used within the trials.

Table 3.2-4: Presentation of trials (efficacy trials, preliminary trials...), countries acceptable for claim justification in Poland (PL, DE, LV, LT)

Crop	Target	Country	Years	Type of trial*	Number of trials				All GEP Trials
					MAR zone	MED zone	SE zone	NE zone	
Wheat	<i>Puccinia striiformis</i>	DE	2020 2021	E, MED	2 1				Y
		LV	2021	E, MED				1	Y
		PL	2021	E, MED				3	Y

¹ <http://prawo.sejm.gov.pl/isap.nsf/download.xsp/WDU20190001890/O/D20191890.pdf>
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Crop	Target	Country	Years	Type of trial*	Number of trials				All GEP Trials
					MAR zone	MED zone	SE zone	NE zone	
	TOTAL				3			4	-
	<i>Blumeria graminis</i>	DE	2021	E, MED	3				Y
		LV	2021	E, MED				1	Y
		PL	2020 2021	E, MED				2 1	Y
		LT	2020 2021	E, MED				2 2	Y
	TOTAL				3			8	
Barley	<i>Rhynchosporium secalis</i>	DE	2021	E, MED	2				Y
		PL	2020 2021	E, MED E, MED				3 3	Y
	TOTAL				2			6	-
	<i>Ramularia collo-cygni</i>	DE	2020	E, MED	2				Y
		PL	2020 2021	E, MED E, MED				2 2	Y
	TOTAL				2			4	
	<i>Puccinia hordei</i>	PL	2020 2021	E, MED E, MED				7 6	Y
		LV	2021					2	Y
	TOTAL							15	
	<i>Blumeria graminis</i>	PL	2020 2021	E, MED E, MED				2 4	Y
		LV	2021					1	Y
	TOTAL							7	
Triticale	<i>Zymoseptoria tritici</i>	DE	2021	E, MED	2				Y
		PL	2020 2021	E, MED E, MED				1 5	Y
	TOTAL				2	-	-	6	

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

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

n.b. Some trials contained more than one disease. Therefore totals differ from the total numbers of trials conducted.

Table 3.2-5: Presentation of reference standards used in trials (efficacy trials)

Reference standard	Country where the product is registered ⁽¹⁾	Authorization number	Active substance(s)	Formulation		Application rate in trials (per treatment)	Remark
				Type ⁽²⁾	Concentration of a.s.		
FANDANGO 200 EC	DE	025315-00/024	Prothioconazole + Fluoxastrobin	EC	100 + 100	1.25 L/ha	Active ingredients registered alone and in mixture on wide range of crops across Europe
	LT	0282F/09					
	PL	R-10/2011					
	LV	0264					
FLEXITY SC	DE	025311-00/001	Metrafenone	SC	300	0.5 L/ha	Active ingredients registered alone and in mixture on wide range of crops across Europe
	LT	AS2-50F(2019)					
	PL	R-143/2019					
	LV	0265					

3.2.1 Preliminary tests (KCP 6.1)

Information on Preliminary tests can be found in the document Biological Assessment Dossier Section 3: Efficacy Data and Information, Core assessment (XXXX File No. VV-894835).

3.2.2 Minimum effective dose tests (KCP 6.2)

A comprehensive comparison of 1.0, 1.5 and 2 LPR/ha rates of A23282A in control of some target diseases has been provided in the core BAD. As the aim of this document, referring to the national Polish data requirements, is to better support the control claims at the proposed lower dose rate of 1.5 LPR/ha and at the maximum dose rate of 2.0 LPR/ha that was not sufficiently presented in the core BAD, efficacy results at 1.5 LPR/ha dose rate and comparison to the proposed maximum label dose rate of 2.0 LPR/ha and to the reference standards are provided below in the section 3.2.3. Efficacy tests.

More information on Minimum effective dose tests can be found in the document Biological Assessment Dossier Section 3: Efficacy Data and Information, Core assessment (XXXX File No. VV-894835).

3.2.3 Efficacy tests (KCP 6.2)

Trials in this document were carried out by XXXX organisations, contractor companies and Official Research institutes, all of which follow the EPPO guidelines and are officially recognized by the competent authorities to carry out field registration trials in accordance with the principles of Good Experimental Practice (GEP). The hyperlinks to relevant GEP certificates from the above-mentioned official country testing organisations are available under section 3.7.

Justification for data outside country of submission

Trials summarised in this National addendum were selected based on the latest requirements laid out in the Polish guidance document ‘Arrangements on making an assessment or comments on plant protection products by authorized entities – efficacy of plant protection products’. It states that the efficacy and phytotoxicity/selectivity studies of the plant protection products the authorisation of which is requested in Poland should be conducted in Poland and in other EPPO North East zone countries. If there are no studies from the EPPO North-East zone, studies from neighboring countries (Germany, Czech Republic, Slovakia) are acceptable. The number of studies required for new applications in major crops indicated in the guidance document is 6-15 in 2 seasons.

Referring to the above-mentioned Polish guidance document, in this National Addendum there were summarised results of 54 efficacy trials conducted in Germany, Poland, Lithuania and Latvia in 2020 and 2021.

3.2.3.1 Efficacy in wheat

Trials methodology in relation to EPPO

Trials were conducted according to the EPPO guidelines stated in Table 3.2-. Full details of the sites and applications are provided in Appendix 2. Official testing organisation certificates are available in the GEP Certificate Database System (Certibase) (<http://www.gepcertibase.eu>) and are provided via the hyperlinks in section 3.7.

The trial layout was according to the randomized complete block design with four replicates per treatment. All normal crop husbandry measures were applied to the trials area by the grower, according to crop requirements and in accordance with good agricultural practice. Trials included a range of soil types and locations to determine crop tolerance and efficacy on a number of commercially grown varieties, under a range of conditions. All the trials were placed within regions where wheat is commonly grown and data have been presented on diseases which are also indigenous to the area covered. Crop growth stages (BBCH scale) and disease levels were recorded at the time of application and assessments.

Within the trials, data are presented from a single application of A23282A applied between BBCH 30 and BBCH 69. Within the trials where the test treatments were applied at the later application timings, if required due to high early season disease pressure, a cover spray using locally registered fungicides was applied across the trials area, excluding the untreated plot, at growth stage BBCH 31-33 to maintain good agricultural practice and to keep the crop healthy until the test treatments were applied. The cover spray also included the untreated plots and an additional treatment excluding cover spray was included to reflect the disease incidence without any protection.

Pest growth at application is described on the basis of development stage. Crop growth stages are described using the standard BBCH scale. In all trials, efficacy was assessed according to EPPO guidelines.

Crop phytotoxicity was assessed at various intervals after application. All assessments were on a 0-100 scale, where 0 = no damage and 100 = total crop loss. Individual symptoms were recorded where appropriate. Where no phytotoxicity was observed, this was generally recorded within the individual trial data. Only data where phytotoxicity was recorded was presented in the dossier.

Crop yield was assessed in the majority of the efficacy trials. Plot size fulfilled the minimum of 10 m² required by EPPO. Yield assessments included grain yield [dt/ha] as well as different quality parameters (hectolitre weight [kg/hl], thousand grain weight [g], and protein content [%]). In some trials, yield parameters were analysed with a mixed sample of the four replicates. In this case no statistical analysis is presented in the summary tables.

For the overall efficacy evaluation of foliar diseases, a time window from two weeks to up to 42 days after application was used. This limit was set to reflect the maximum control that can be achieved following application of A23282A. In the majority of trials more than one assessment was undertaken, but for the results tables the mean of one selected data point per trial was calculated. The selected data point was chosen according to the following criteria: - in each trial % control/infestation on the highest leaf showing at least an infected leaf area of 5% in the check, at the timing within the defined time window when maximum control was achieved. Trials were only included where at least one product within the trial showed significant control of the disease. For all diseases efficacy evaluation was based on pest severity assessments.

Percent control is calculated according to formula of Abbott, so negative values may result if a treated variant performs worse than the untreated control. If this was the case for single assessments the values were set to 0 (= no efficacy) for the overall efficacy evaluation, to avoid an excessive influence of these values as a fungicide treatment at its worst will have no efficacy (= 0) but normally will not have any supporting effects on a disease which would be supposed if negative values were used. Therefore in the summary tables no negative values occur. However, the single trial reports contain the automatically calculated values.

The **Student-Newman-Keuls** (SNK) method is a test for simultaneous comparisons of multiple means which controls error rates among tests of multiple groups of means (multiple range test). Please note that from all of the above trials, the results in summary tables were extracted from trials reports where treatments of no relevance to this submission were also included. As statistical analyses were conducted across the whole range of treatments, significance letters relate to the whole treatment list and not just to the data shown in the extracted tables.

Table 3.2-6: Details on trial methodology from wheat trials

Guidelines	General guidelines	EPPO:PP 1/152 (4), EPPO:PP 1/181 (4), EPPO:PP 1/135 (4),
	Specific guidelines	EPPO: PP 1/026 (4) Foliar and ear diseases in cereals
Experimental design	Plot design	RCBD
	Plot size	Maritime EPPO Zone: 10.5 – 22.5 m ² North East EPPO zone: 13.8 – 25.0 m ²
	Number of replications	4
Crop	Trials per crop	Maritime EPPO Zone: 5 trials North East EPPO zone: 12 trials
	Varieties per crop	Maritime EPPO Zone: Winter wheat: Akteur (x3), Reform, Tobak. Nort- East EPPO zone: Winter: Argument, Arkadia (x2), Bosporus, Edvins, Emil (x2),

		Owacja, Ponticus. Spring wheat: Vanek, Collada, Jetstream.
	Sowing period	Maritime EPPO zone Winter wheat: October – November North-East EPPO zone Winter wheat: September - November Spring wheat: April - May
Application	Crop stage (BBCH) at application	Maritime EPPO Zone: BBCH 39-51 North-East EPPO zone: BBCH 37-53
	Timing Pest stage at application	Application timing growth stage according to protocol requirements
	Number of applications Intervals between applications	1 -
	Spray volumes	Maritime EPPO zone: 200-300 l/ha North-East EPPO zone: 250-300 l/ha
	Application method	Foliar spray
Assessment	Assessment types	Efficacy: % disease severity Yield and Quality: Yield, thousand grain weight, hectolitre weight, % protein content Phytotoxicity: General phytotoxicity, chlorosis, necrosis, discolouration (not presented in this document, please see the core BAD)
	Assessment dates	Phytotoxicity assessments: Throughout growing season Efficacy % disease severity assessments: 14-42 DAA Yield assessments: At normal crop harvest Quality assessments: At harvest or post-harvest
Other relevant information	Soil type	calcareous loam, clayey sand, fine clay loam, fine sandy loam, fine silty clay, loam, loamy fine sand, loamy sand (x3), loamy silt, sandy loam (x5), silt
	Natural / artificial inoculation	Natural infestation

Efficacy against *Puccinia striiformis* (PuccST) on wheat

Efficacy data for *Puccinia striiformis* (PuccST) control on wheat are presented from overall 7 winter wheat efficacy trials conducted in Germany, Poland and Latvia during 2020 and 2021. Efficacy was tested across a range of environmental conditions and locations to fully challenge the product. The objective was to confirm the performance of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 gai/ha cyprodinil + 150 gai/ha prothioconazole) against *Puccinia striiformis*.

Treatments were applied at application timing BBCH 37-51.

The standard FANDANGO 200 EC (prothioconazole 100 gai/L + fluoxastrobin 100 gai/L) at 1.5 LPR/ha was used in all trials.

Results

The data from the 7 trials where a single application of the test product was applied at BBCH 37-51 are summarised in Table 3.2-1.

Disease pressure across the 7 trials averaged 22.5% (range 7.5% – 35.9 %), which provided an appropriate basis for examination of the performance of A23282A. The presented data demonstrated that the proposed maximum label rate of 2.0 LPR/ha provided persistent and reliable control of PuccST on wheat. Overall, across the results the presented data demonstrated that the proposed maximum label rate of 2.0 LPR/ha of A23282A provided a mean of 86.7% (range 70.9% - 100%) control of *Puccinia striiformis*, relative to the untreated.

Direct comparison of A23282A and FANDANGO 200 EC showed the efficacy of the test product to be comparable to that of the standard FANDANGO 200 EC (87.8%).

The proposed lower label rate of 1.5 LPR/ha provided reliable control of PuccST on wheat as well. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A provided a mean of 83.3% (range 62.1% - 100%) control of *Puccinia striiformis*, relative to the untreated. No statistically significant differences between dose rates were recorded in any of the trial.

Conclusions

The presented data from Germany, Poland and Latvia confirmed that A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 gai/ha cyprodinil + 150 gai/ha prothioconazole) was effective against *Puccinia striiformis* (PuccST). The product provided comparable efficacy compared to the commercial standard FANDANGO 200 EC.

These dose rates should thus be considered to be effective against *Puccinia striiformis* (PuccST) on winter wheat when applied between BBCH 30-69 in Poland.

Table 3.2-1: Efficacy against *Puccinia striiformis* on winter wheat in Germany, Poland and Latvia

Trial locations: Germany, Poland, Latvia								Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC			
Crop: WHEAT Pest: PUCCINIA STRIIFORMIS Assessment data type: PEST SEVERITY								Product Rate Appl. Timing Active Ingredient				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			1.5 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN			
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessme nt date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control			
DEDSZF1372020	AKTEUR	05-Jun-20	49 (39 - 51)	06-Jul-20	31	71 (69 - 73)	LEAF 2	34.3	a	8.8	bcd	74.3	7.9	bcd	76.9	4.8	cd	85.9			
DEDSZF2832020	AKTEUR	20-May-20	39 (39 - 45)	26-Jun-20	37	75 (73 - 75)	LEAF 1	27.3	a	2.2	bcd	92	0.3	cd	98.8	0	d	100			
DEBCZF8712021	REFORM	25-May-21	41 (41 - 43)	02-Jul-21	38	75 (75 - 77)	LEAF 1	7.5	b	0	c	100	0	c	100	0	c	100			
LVRIZF7132021	EDVINS	28-May-21	37 (37 - 39)	01-Jul-21	34	75 (75 - 77)	LEAF 1	8.4	b	1	d	88.1	1.6	d	81.1	0.9	d	89.1			
PLBCZF8682021	OWACJA	31-May-21	45 (41 - 45)	02-Jul-21	32	75 (75 - 75)	LEAF 2	30.3	a	8	c	73.6	4.9	c	83.9	6.2	c	79.6			
PLSYZF6992021	ARKADIA	02-Jun-21	43 (43 - 45)	07-Jul-21	35	83 (77 - 83)	LEAF 1	35.9	a	2.6	f	92.7	1.7	f	95.1	2.4	f	93.4			
PLSYZF7182021	ARGUMENT	26-May-21	43 (41 - 45)	10-Jun-21	15	65 (61 - 69)	LEAF 3	13.7	a	5.2	c	62.1	4	c	70.9	4.6	c	66.4			
								N =7	MEAN		22.5		4.0		83.3	2.9		86.7	2.7		87.8
									MIN		7.5		0		62.1	0		70.9	0		66.4
									MAX		35.9		8.8		100	7.9		100	6.2		100

Efficacy against *Blumeria graminis* (ERYSGR) on wheat

Efficacy data for *Blumeria graminis* (ERYSGR) control on wheat are presented from 11 (8 winter wheat and 3 spring wheat) efficacy trials conducted in Germany, Poland, Lithuania and Latvia during 2020 and 2021. Efficacy was tested across a range of environmental conditions and locations to fully challenge the product. The objective was to confirm the performance of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 gai/ha cyprodinil + 150 gai/ha prothioconazole) against *Blumeria graminis*.

The treatments were applied at application timing BBCH 37-53.

The standard FANDANGO 200 EC (prothioconazole 100 gai/L + fluoxastrobin 100 gai/L) at 1.5 LPR/ha was used in all the trials.

Results

The data from 11 trials where a single application of the test product was applied at BBCH 37-53 are summarised in Table 3.2-.

Disease pressure across the 11 trials averaged 15.7% (range 5.4% – 86.2%), which provided an appropriate basis for examination of the performance of A23282A. The presented data demonstrated that the proposed maximum label rate of 2.0 LPR/ha provided persistent and reliable control of ERYSGR on wheat. Overall, across the results the presented data demonstrated that the proposed recommended rate of 2.0 LPR/ha of A23282A provided a mean of 89.5% (range 66.2% - 100%) control of *Blumeria graminis*, relative to the untreated.

Direct comparison of A23282A and FANDANGO 200 EC showed the efficacy of the test product to be increased compared to that of the standard FANDANGO 200 EC (83.4%).

The proposed lower label rate of 1.5 LPR/ha provided reliable control of ERYSGR on wheat as well. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A provided a mean of 80.0% (range 50.5% - 100%) control of *Blumeria graminis*, relative to the untreated. No statistically significant differences between dose rates were recorded in 9 trials out of 10 where both dose rates were tested. Significant lower control at 1.5 LPR/ha was recorded in 1 trial in Poland (PLSYZF7092021).

Conclusions

The presented data from Germany, Poland, Lithuania and Latvia confirmed that A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 gai/ha cyprodinil + 150 gai/ha prothioconazole) was effective against *Blumeria graminis* (ERYSGR). The product provided increased efficacy when applied at the proposed maximum label rate of 2.0 LPR/ha and comparable efficacy when applied at proposed lower label rate of 1.5 LPR/ha, compared to the commercial standard FANDANGO 200 EC.

These dose rates should thus be considered to be effective against *Blumeria graminis* (ERYSGR) on winter and spring wheat when applied between BBCH 30-69 in Poland.

Table 3.2-8: Efficacy against *Blumeria graminis* on wheat in Germany, Poland, Lithuania and Latvia

Trial locations: Germany, Poland, Lithuania and Latvia						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: WHEAT Pest: BLUMERIA GRAMINIS Assessment data type: PEST SEVERITY						Product Rate Appl. Timing Active Ingredient				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			1.5 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. - (min max)	Part assessed	Mean	SNK	Mean	SNK	% Control	Mean	SNK	% Control	Mean	SNK	% Control
DEBCZF8662021	AKTEUR	28-May-21	49 (49 - 49)	05-Jul-21	38	75 (75 - 83)	LEAF 1	86,2	a	32,3	c	62,5	19,3	c	77,6	19	c	78
DEBCZF8712021	REFORM	25-May-21	41 (41 - 43)	02-Jul-21	38	75 (75 - 77)	LEAF 3	11,1	a	0	c	100	0	c	100	0	c	100
DESYZF7142021	TOBAK	27-May-21	39 (37 - 39)	14-Jun-21	18	61 (59 - 61)	LEAF 2	16,9	a	0,5	c	97,1	0,1	c	99,6	1	c	94,2
LTAKZF1092020	SW VANEK*	12-Jun-20	37 (37 - 41)	30-Jun-20	18	65 (65 - 69)	LEAF 3	8,7	a	0,6	bc	92,9	0,4	bcd	95,4	0,7	bc	92,6
LTAKZF1152020	SW COLLADA*	19-Jun-20	45 (43 - 45)	31-Jul-20	42	77 (77 - 77)	LEAF 1	5,7	a	0,6	b	89,1	0,3	bc	94,3	0,1	bc	98,1
PLDSZF7172020	EMIL	11-May-20	37 (37 - 39)	01-Jun-20	21	53 (53 - 57)	LEAF 3	8,9	a	2,8	bc	68,2	0,7	c	92,7	6,6	ab	26,2
PLDSZF7592020	PONTICUS	28-May-20	47 (45 - 47)	18-Jun-20	21	65 (65 - 65)	LEAF 2	5,4	a	0	b	100	0	b	100	0	b	100
LTAKZF7162021	EMIL	08-Jun-21	49 (49 - 52)	22-Jun-21	14	65 (65 - 65)	LEAF 3	9,7	a	4,8	bc	50,5	3,3	bc	66,2	2,9	c	70,3
LVRIZF6952021	BOSPORUS	31-May-21	39 (37 - 41)	14-Jun-21	14	61 (59 - 65)	LEAF 3	6,9	a	1,7	b	75	2,3	ab	66,2	2,3	ab	66,1
PLSYZF7092021	ARKADIA	26-May-21	39 (39 - 41)	16-Jun-21	21	65 (65 - 69)	LEAF 2	7,7	a	2,7	b	64,6	0,5	c	93	0,6	c	92,8
LTAKZF7222021	SW JETSTREAM*	25-Jun-21	51 (51 - 53)	14-Jul-21	19	75 (75 - 77)	LEAF 2	5,7	a	-	-	-	0	c	99,7	0	c	99,5

*spring wheat

N =11	MEAN		15.7		4.6		80.0	2.4		89.5	3.0		83.4
	MIN		5.4		0		50.5	0		66.2	0		26.2
	MAX		86.2		32.3		100	19.3		100	19		100

Yield (and relevant quality indicators), from efficacy trials (in the presence of disease) at 1.5 LPR/ha and at 2.0 LPR/ha

Winter wheat

A summary of the yield data from winter wheat efficacy trials where foliar diseases were present are presented in Table 0-. Yield data were obtained from a total of 14 trials at application timing BBCH 37-51 carried out during 2020 and 2021 in Germany, Poland, Latvia and Lithuania.

The objective was to confirm the yield response of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) in the presence of foliar diseases. The yield was compared in the trials targeted for foliar diseases to the standard FANDANGO 200 EC at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin).

Results

For the efficacy trials the mean yield from the untreated across 14 trials was 65.5 dt/ha (range 44.4 dt/ha – 79.1 dt/ha). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha increased the recorded winter wheat yield in all, except one, trials compared with the untreated control. In 10 out of the 14 trials the yield achieved with A23282A was statistically significantly higher than in the untreated. Overall, across all the trials, A23282A gave a mean increase in winter wheat yield of 15.7% (range 97.3% – 140.7% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in yield of the test product to be comparable to that of the standard FANDANGO 200 EC (14.9%).

The proposed lower label rate of 1.5 LPR/ha increased the recorded winter wheat yield in all 14 trials compared with the untreated control. In 9 trials the yield achieved with A23282A was statistically significantly higher than in the untreated. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A gave a mean increase in winter wheat yield of 13.5 % (range 100.7 % – 141.1 % of control) when compared to the untreated control. No statistically significant differences between dose rates were recorded in any of the trial.

Table 0-9: Yield data for winter wheat in the presence of foliar disease in Germany, Poland, Latvia and Lithuania at application timing BBCH 37-51

Trial locations: Germany, Poland, Latvia, Lithuania						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: WINTER WHEAT Assessment data type, unit: YIELD, dt/ha						Product Rate Appl. Timing Active Ingredient				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			1.5 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control
DEDSZF1372020	AKTEUR	05-Jun-20	49 (39 - 51)	11-Aug-20	67	99 (92 - 99)	GRAIN	75.8	d	87	c	114.8	87.9	bc	116.1	91.2	b	120.4
DEDSZF2832020	AKTEUR	20-May-20	39 (39 - 45)	07-Aug-20			GRAIN	75	a	84	a	112	85.8	a	114.4	88.2	a	117.6
DEBCZF8662021	AKTEUR	28-May-21	49 (49 - 49)	13-Aug-21			GRAIN	55.2	abc	58	abc	105.2	61.5	abc	111.6	69.6	a	126.1
DEBCZF8712021	REFORM	06-May-21 25-May-21	41 (41 - 43)	13-Aug-21			GRAIN	72.1	b	88.3	a	122.5	91.4	a	126.9	88.2	a	122.4
DESYZF7142021	TOBAK	27-May-21	39 (37 - 39)	15-Aug-21			GRAIN	74.5	d	82.7	abc	110.9	83.7	ab	112.3	86.3	a	115.8
PLDSZF7172020	EMIL	11-May-20	37 (37 - 39)	12-Aug-20	93	99 (99 - 99)	GRAIN	75.2	a	75.7	a	100.7	73.1	a	97.3	74	a	98.5
PLDSZF7592020	PONTICUS	28-May-20	47 (45 - 47)	01-Aug-20	65	99 (99 - 99)	GRAIN	68.1	de	74.7	abcd	109.6	81.3	a	119.3	73.2	abcde	107.4
LTAKZF7162021	EMIL	08-Jun-21	49 (49 - 52)	26-Jul-21	48	89 (89 - 89)	GRAIN	75.8	d	82.7	ab	109	80	abc	105.6	80.3	abc	105.9
LVRIZF6952021	BOSPORUS	31-May-21	39 (37 - 41)	30-Jul-21	60	89 (89 - 89)	GRAIN	44.4	b	51.7	a	116.2	51.6	a	116.1	49.1	a	110.4
LVRIZF7132021	EDVINS	28-May-21	37 (37 - 39)	05-Aug-21	69	89 (89 - 89)	GRAIN	52.2	cd	57	ab	109.4	59.1	a	113.4	56.1	ab	107.6
PLBCZF8682021	OWACJA	31-May-21	45 (41 - 45)	11-Aug-21	72	89 (89 - 89)	GRAIN	79.1	cd	85.8	ab	108.5	87.4	a	110.6	86.7	ab	109.6
PLSYZF6992021	ARKADIA	02-Jun-21	43 (43 - 45)	29-Jul-21	57	99 (99 - 99)	GRAIN	51.8	d	65.8	ab	126.8	66.5	a	128.4	64.9	ab	125.1
PLSYZF7092021	ARKADIA	26-May-21	39 (39 - 41)	10-Aug-21	76	89 (89 - 89)	GRAIN	69.7	ab	71.3	ab	102.4	75	a	107.7	76.1	a	109.3
PLSYZF7182021	ARGUMENT	26-May-21	43 (41 - 45)	29-Jul-21	64	99 (99 - 99)	GRAIN	48.5	b	68.4	a	141.1	68.2	a	140.7	64.4	a	132.8
						N = 14	MEAN											
								65.5				113.5	75.2		115.7	74.9		114.9

Trial locations: Germany, Poland, Latvia, Lithuania						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: WINTER WHEAT Assessment data type, unit: YIELD, dt/ha						Product Rate Appl. Timing Active Ingredient				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			1.5 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control
						MIN		44.4		51.7		100.7	51.6		97.3	49.1		98.5
						MAX		79.1		88.3		141.1	91.4		140.7	91.2		132.8

Spring wheat

A summary of the yield data from spring wheat where foliar diseases were present are presented in Table 0-1. Yield data were obtained from a total of 3 trials carried out during 2020 and 2021 in Lithuania.

The objective was to confirm the yield response of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) in the presence of foliar diseases. A23282A was applied as a foliar spray between BBCH 37-53. The yield was compared to the standard FANDANGO 200 EC at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin).

Results

For the efficacy trials the mean yield from the untreated across the 3 trials was 68.0 dt/ha (range 51.5 dt/ha – 81.2 dt/ha). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha increased the recorded spring wheat yield statistically significantly in two out of the 3 trials compared with the untreated control. Overall, across all the trials A23282A gave a mean increase in spring wheat yield of 5.1% (range 99.7% – 108.6% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in yield of the test product to be comparable to that of the standard FANDANGO 200 EC (6.3%).

The proposed lower label rate of 1.5 LPR/ha (n = 2) increased the recorded spring wheat yield in both trials compared with the untreated control. In both trials the yield achieved with A23282A was statistically significantly higher than in the untreated. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A gave a mean increase in spring wheat yield of 9.2 % (range 109 % – 109.4 % of control) when compared to the untreated control. No statistically significant differences between dose rates were recorded in any of the trial.

Table 0-1: Yield data for spring wheat in the presence of foliar disease in Lithuania, at application timing BBCH 37-53

Trial locations: Lithuania						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: SPRING WHEAT Assessment data type, unit: YIELD, dt/ha						Product Rate	Appl. Timing			1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			1.5 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control
LTAKZF1092020	SW VANEK	12-Jun-20	37 (37 - 41)	24-Aug-20	73	99 (99 - 99)	GRAIN	71.3	c	77.8	ab	109	77.4	ab	108.6	76	ab	106.5
LTAKZF1152020	SW COLLADA	19-Jun-20	45 (43 - 45)	21-Aug-20	63	89 (89 - 89)	GRAIN	81.2	c	88.8	a	109.4	86.9	ab	107	87.1	ab	107.3
LTAKZF7222021	JETSTREAM	25-Jun-21	51 (51 - 53)	16-Aug-21	52	89 (89 - 89)	GRAIN	51.5	b	-	-	-	51.3	b	99.7	54.1	ab	105

N = 3	MEAN		68.0		83.3		109.2	71.9		105.1	72.4		106.3
	MIN		51.5		77.8		109	51.3		99.7	54.1		105.0
	MAX		81.2		88.8		109.4	86.9		108.6	87.1		107.3

Wheat yield in presence of disease - Overall conclusion

Winter wheat yield

The data presented from efficacy trials where foliar diseases were present, collected across Germany, Poland, Latvia and Lithuania, clearly demonstrated that plots treated with A23282A applied at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the proposed maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) consistently provided an increase in winter wheat yield when compared to the untreated control. The observed yields were comparable to those of the standard FANDANGO 200 EC at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin).

No significant differences between tested dose rates were recorded in any of the trial.

A summary of the data is presented in Table 0-2.

Table 0-2: Mean yield of winter wheat treated with A23282A in presence of foliar disease, summarised across Germany, Poland, Latvia and Lithuania

Winter wheat	Yield quantity data (mean % relative to untreated)		
	A23282A 1.5 LPR/ha	A23282A 2 LPR/ha	FANDANGO 200 EC 1.5 LPR/ha
Yield (n=14)	113.5 (100.7-141.1)	115.7 (97.3-140.7)	114.9 (98.5-132.8)

Spring wheat yield

The data presented from efficacy trials where foliar diseases were present, collected in Lithuania, clearly demonstrated that plots treated with A23282A applied at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the proposed maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) consistently provided an increase in spring wheat yield when compared to the untreated control. The observed yields were comparable to those of the standard FANDANGO 200 EC at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin).

No significant differences between tested dose rate were recorded in any of the trial.

A summary of the data is presented in in **Błąd! Nie można odnaleźć źródła odwołania..**

Table 0-3: Mean yield of spring wheat treated with A23282A in presence of foliar disease, summarised across Lithuania

Spring wheat	Yield quantity data (mean % relative to untreated)		
	A23282A 1.5 LPR/ha	A23282A 2 LPR/ha	FANDANGO 200 EC 1.5 LPR/ha
Yield (n=3)	109.2 (109-109.4) (n=2)	105.1 (99.7-108.6)	106.3 (105.0-107.3)

Overall conclusion

The data summarized across Germany, Poland, Latvia and Lithuania confirmed that A23282A applied at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the proposed maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) had no adverse effect on yield in the presence of disease. In the presence of disease, the data confirmed that controlling disease led to increases in triticales yield, indicating that untreated disease can lead to significant yield reductions.

The data presented within this section fully support the proposed label claim of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) for the control of foliar diseases on winter and spring wheat in Poland.

Quality – Germany, Poland, Lithuania and Latvia data

Winter wheat

A summary of the yield quality data from winter wheat efficacy trials in presence of disease are presented in Table 0-4 for hectolitre weight, Table 0-5 for the thousand grain weight and Table 0-6 for protein content. Yield quality data were obtained from 13 winter wheat trials carried out during 2020 and 2021 in Germany, Poland, Lithuania and Latvia.

The objective was to confirm the yield quality response of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) in the presence of disease. A23282A was applied as a foliar spray between BBCH 37-52. A23282A was compared to the standard FANDANGO 200 EC at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin).

The qualitative parameters assessed were hectolitre weight (HLW), thousand grain weight (TGW) and protein content.

Results

Hectolitre weight

Data for hectolitre weight are presented in Table 0-4.

For the efficacy trials the mean hectolitre weight from the untreated across the 13 trials was 71.2 kg/hl (range 60.9 kg/hl – 84.5 kg/hl). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha increased the recorded winter wheat hectolitre weight compared with the untreated control. Overall, across all the trials A23282A gave a mean increase in winter wheat hectolitre weight of 1.3% (range 96.8% – 104.7% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in hectolitre weight of the test product to be comparable to that of the standard FANDANGO 200 EC (1.0%).

The impact of lower label rate of 1.5 LPR/ha on HLW was assessed in 7 trials. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A gave a mean increase in winter wheat HLW of 2.2 % (range 100.2% – 104.4% of control) when compared to the untreated control. No statistically significant differences between dose rates were recorded.

Thousand grain weight

Data for thousand grain weight are in Table 0-5.

For the efficacy trials the mean thousand grain weight from the untreated across the 13 trials was 37.0 g (range 29.7 g – 43.2 g). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha increased the recorded winter wheat thousand grain weight compared with the untreated control. Overall, across all the trials A23282A gave a mean increase in winter wheat thousand grain weight of 8.4% (range 102.4% – 118% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in thousand grain weight of the test product to be slightly higher to that of the standard FANDANGO 200 EC (5.7%).

The impact of lower label rate of 1.5 LPR/ha on TGW was assessed in 4 trials. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A gave a mean

increase in winter wheat TGW of 4.8% (range 101.4% – 110.6% of control) when compared to the untreated control. No statistically significant differences between dose rates were recorded.

Protein content

Data for protein content are presented in Table 0-6.

For the efficacy trials the mean protein content from the untreated across the 13 trials was 13.0% (range 11.1% – 14.5%). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha had no negative impact on the recorded winter wheat protein content. Overall, across all the trials, A23282A gave a mean protein content of 99.2% (range 90.1% - 102.8% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean protein content of the test product to be comparable to that of the standard FANDANGO 200 EC (98.9%).

The impact of lower label rate of 1.5 LPR/ha on protein content was assessed in 5 trials. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A had no negative impact on the recorded winter wheat protein content. Overall, across all the trials A23282A gave a mean protein content of 99.4% (range 93.8% - 102.5% of control) when compared to the untreated control. No statistically significant differences between dose rates were recorded.

Table 0-4: Hectolitre weight (HLW) of winter wheat in the presence of disease in Germany, Poland, Lithuania and Latvia, at application timing BBCH 37-52

Trial locations: Germany, Poland, Lithuania, Latvia						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: WINTER WHEAT Assessment data type, unit: HECTOLITRE WEIGHT, kg/hl						Product Rate Appl. Timing Active Ingredient				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			1.5 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% of control	Mean	SNK	% of control	Mean	SNK	% of control
DEDSZF1372020	AKTEUR	05-Jun-20	49 (39 - 51)	11-Aug-20	67	99 (92 - 99)	GRAIN	73.5	d	76.6	bc	104.3	76.9	b	104.7	78.4	a	106.7
DEDSZF2832020	AKTEUR	20-May-20	39 (39 - 45)	07-Aug-20	79	97 (97 - 97)	GRAIN	64.7	a	65.6	a	101.4	65.5	a	101.2	65.3	a	100.9
DEBCZF8662021	AKTEUR	28-May-21	49 (49 - 49)	13-Aug-21	77	89 (89 - 89)	GRAIN	70.6	a	73.7	a	104.4	70.9	a	100.3	70.5	a	99.8
DEBCZF8712021	REFORM	25-May-21	41 (41 - 43)	25-Aug-21	92	99 (99 - 99)	GRAIN	75.2		-	-	-	74.8		99.5	74.8		99.5
DESYZF7142021	TOBAK	27-May-21	39 (37 - 39)	15-Aug-21	80	99 (99 - 99)	GRAIN	68	cd	69.5	ab	102.2	69.6	ab	102.5	69.5	ab	102.2
PLDSZF7172020	EMIL	11-May-20	37 (37 - 39)	16-Sep-20	128	99 (99 - 99)	GRAIN	63	a	63.1	a	100.2	62.2	a	98.8	62.1	a	98.5
LTAKZF7162021	EMIL	08-Jun-21	49 (49 - 52)	28-Jul-21	50	99 (99 - 99)	GRAIN	78.4	b	79.4	a	101.3	79.5	a	101.4	79.3	a	101.2
LVRIZF6952021	BOSPORUS	31-May-21	39 (37 - 41)	03-Aug-21	64	99 (99 - 99)	GRAIN	60.9		-	-	-	60.4		99.2	61.1		100.3
LVRIZF7132021	EDVINS	28-May-21	37 (37 - 39)	27-Aug-21	91	99 (99 - 99)	GRAIN	70		-	-	-	71.2		101.6	69.5		99.2
PLBCZF8682021	OWACJA	31-May-21	45 (41 - 45)	22-Sep-21	114	99 (99 - 99)	GRAIN	70.4		-	-	-	73		103.7	72.4		102.8
PLSYZF6992021	ARKADIA	02-Jun-21	43 (43 - 45)	09-Aug-21	68	99 (99 - 99)	GRAIN	74	c	-	-	-	77.4	a	104.6	77.3	a	104.5
PLSYZF7092021	ARKADIA	26-May-21	39 (39 - 41)	10-Aug-21	76	89 (89 - 89)	GRAIN	72.3	a	73.3	a	101.4	73.8	a	102.1	73.5	a	101.6
PLSYZF7182021	ARGUMENT	26-May-21	43 (41 - 45)	29-Jul-21	64	99 (99 - 99)	GRAIN	84.5	a	-	-	-	81.9	a	96.8	81.2	a	96
N = 13								MEAN		71.2			72.1		101.3	71.9		101.0

Trial locations: Germany, Poland, Lithuania, Latvia						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: WINTER WHEAT Assessment data type, unit: HECTOLITRE WEIGHT, kg/hl						Product Rate Appl. Timing Active Ingredient				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			1.5 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% of control	Mean	SNK	% of control	Mean	SNK	% of control
						MIN		60.9					60.4		96.8	61.1		96
						MAX		84.5					81.9		104.7	81.2		106.7
						N = 7 MEAN		70.1		71.6		102.2	71.2		101.6	71.2		101.6
						MIN		63		63.1		100.2	62.2		98.8	62.1		98.5
						MAX		78.4		79.4		104.4	79.5		104.7	79.3		106.7

Table 0-5: Thousand grain weight (TGW) of winter wheat in the presence of disease in Germany, Poland, Lithuania and Latvia, at application timing BBCH 37-52

Trial locations: Germany, Poland, Lithuania, Latvia						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: WINTER WHEAT Assessment data type, unit: THOUSAND GRAIN WEIGHT, g						Product Rate Appl. Timing Active Ingredient				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			1.5 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	LS Mean/ Mean*	MST	Mean	SNK	% of control	Mean	SNK	% of control	Mean	SNK	% of control
DEDSZF1372020	AKTEUR	05-Jun-20	49 (39 - 51)	21-Oct-20	138	99 (99 - 99)	GRAIN	42.3		46.8		110.6	46.9		110.9	48.1		113.7
DEDSZF2832020	AKTEUR	20-May-20	39 (39 - 45)	12-Aug-20	84	99 (99 - 99)	GRAIN	43.2		45.3		104.9	44.5		103	45		104.2
DEBCZF8662021	AKTEUR	28-May-21	49 (49 - 49)	13-Aug-21	77	89 (89 - 89)	GRAIN	33.5		-	-	-	37.7		112.3	34.9		104.1
DEBCZF8712021	REFORM	25-May-21	41 (41 - 43)	25-Aug-21	92	99 (99 - 99)	GRAIN	40.6		-	-	-	41.8		103	41.5		102.2
DESYZF7142021	TOBAK	27-May-21	39 (37 - 39)	15-Aug-21	80	99 (99 - 99)	GRAIN	36.3		-	-	-	41.4		114	38.6		106.3
PLDSZF7172020	EMIL	11-May-20	37 (37 - 39)	16-Sep-20	128	99 (99 - 99)	GRAIN	34		34.7		102.1	34.8		102.4	36.9		108.5
LTAKZF7162021	EMIL	08-Jun-21	49 (49 - 52)	09-Aug-21	62	99 (99 - 99)	GRAIN	39.1	b	-	-	-	41.2	a	105.5	39.4	b	100.8
LVRIZF6952021	BOSPORUS	31-May-21	39 (37 - 41)	03-Aug-21	64	99 (99 - 99)	GRAIN	29.7		-	-	-	30.7		103.6	30.6		103.2
LVRIZF7132021	EDVINS	28-May-21	37 (37 - 39)	27-Aug-21	91	99 (99 - 99)	GRAIN	41.4		-	-	-	43.6		105.5	41.3		99.8
PLBCZF8682021	OWACJA	31-May-21	45 (41 - 45)	22-Sep-21	114	99 (99 - 99)	GRAIN	30.5		-	-	-	36		118	33.8		110.7
PLSYZF6992021	ARKADIA	02-Jun-21	43 (43 - 45)	09-Aug-21	68	99 (99 - 99)	GRAIN	37.6	b	-	-	-	44.1	a	117.1	44.4	a	118
PLSYZF7092021	ARKADIA	26-May-21	39 (39 - 41)	10-Aug-21	76	89 (89 - 89)	GRAIN	36.9	a	37.4	a	101.4	38.7	a	104.9	37.5	a	101.7
PLSYZF7182021	ARGUMENT	26-May-21	43 (41 - 45)	29-Jul-21	64	99 (99 - 99)	GRAIN	36	a	-	-	-	39.4	a	109.3	36.3	a	100.8
								N = 13	MEAN	37.0			40.1		108.4	39.1		105.7
									MIN	29.7			30.7		102.4	30.6		99.8

Trial locations: Germany, Poland, Lithuania, Latvia						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: WINTER WHEAT Assessment data type, unit: THOUSAND GRAIN WEIGHT, g						Product Rate Appl. Timing Active Ingredient				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			1.5 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	LS Mean/ Mean*	MST	Mean	SNK	% of control	Mean	SNK	% of control	Mean	SNK	% of control
						MAX		43.2					46.9		118	48.1		118
						N = 4 MEAN		39.1		41.1		104.8	41.2		105.3	41.9		107.0
						MIN		34		34.7		101.4	34.8		102.4	36.9		101.7
						MAX		43.2		46.8		110.6	46.9		110.9	48.1		113.7

Table 0-6: Protein content of winter wheat in the presence of disease in Germany, Poland, Lithuania and Latvia, at application timing BBCH 37-52

Trial locations: Germany, Poland, Lithuania, Latvia						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: WINTER WHEAT Assessment data type, unit: CONTENT - PROTEIN, %						Product Rate Appl. Timing Active Ingredient				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			1.5 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% of control	Mean	SNK	% of control	Mean	SNK	% of control
DEDSZF1372020	AKTEUR	05-Jun-20	49 (39 - 51)	21-Oct-20	138	99 (99 - 99)	GRAIN	12.9		12.1		93.8	12.7		98.4	12.6		97.7
DEDSZF2832020	AKTEUR	20-May-20	39 (39 - 45)	15-Sep-20	118	99 (99 - 99)	GRAIN	11.9		12.2		102.5	12.2		102.5	11.8		99.2
DEBCZF8662021	AKTEUR	28-May-21	49 (49 - 49)	13-Aug-21	77	89 (89 - 89)	GRAIN	12.9		-	-	-	13		100.5	12		93
DEBCZF8712021	REFORM	25-May-21	41 (41 - 43)	25-Aug-21	92	99 (99 - 99)	GRAIN	11.1		-	-	-	10		90.1	10		90.1
DESYZF7142021	TOBAK	27-May-21	39 (37 - 39)	15-Aug-21	80	99 (99 - 99)	GRAIN	12.6		-	-	-	12.8		101.6	12.8		101.6
PLDSZF7172020	EMIL	11-May-20	37 (37 - 39)	16-Sep-20	128	99 (99 - 99)	GRAIN	13.2		13.5		102.3	13.3		100.8	13.6		103
LTAKZF7162021	EMIL	08-Jun-21	49 (49 - 52)	28-Jul-21	50	99 (99 - 99)	GRAIN	13.6	a	13.6	a	99.4	13.5	a	99.1	13.7	a	100.7
LVRIZF6952021	BOSPORUS	31-May-21	39 (37 - 41)	11-Aug-21	72	99 (99 - 99)	GRAIN	14.3		-	-	-	14.3		100.1	14.1		98.4
LVRIZF7132021	EDVINS	28-May-21	37 (37 - 39)	03-Sep-21	98	99 (99 - 99)	GRAIN	13		-	-	-	13.4		102.8	13.6		104.9
PLBCZF8682021	OWACJA	31-May-21	45 (41 - 45)	22-Sep-21	114	99 (99 - 99)	GRAIN	14.5		-	-	-	14.2		97.9	14.3		98.6
PLSYZF6992021	ARKADIA	02-Jun-21	43 (43 - 45)	22-Sep-21	112	99 (99 - 99)	GRAIN	12.8	a	-	-	-	12.3	a	96.3	12.7	a	99.2
PLSYZF7092021	ARKADIA	26-May-21	39 (39 - 41)	08-Sep-21	105	89 (89 - 89)	GRAIN	12.8	a	12.7	a	99	12.7	a	99.4	12.8	a	99.8
PLSYZF7182021	ARGUMENT	26-May-21	43 (41 - 45)	05-Oct-21	132	99 (99 - 99)	GRAIN	12.8	a	-	-	-	12.8	a	100	12.8	a	100

VV-893951

Spring wheat

A summary of the yield quality data from spring wheat efficacy trials in presence of disease are presented in Table 0- for hectolitre weight, Table 0- for the thousand grain weight and Table 0- for protein content. Yield quality data were obtained from 3 spring wheat trials carried out during 2020 and 2021 in Lithuania.

The objective was to confirm the yield quality response of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) in the presence of disease. A23282A was applied as a foliar spray between BBCH 37-53. A23282A was compared to the standard FANDANGO 200 EC at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin).

The qualitative parameters assessed were hectolitre weight (HLW), thousand grain weight (TGW) and protein content.

Results

Hectolitre weight

Data for hectolitre weight are presented in Table 0-.

For the efficacy trials the mean hectolitre weight from the untreated from the 2 trials was 76.2 kg/hl (range 73.1 kg/hl – 79.2 kg/hl). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha increased the recorded spring wheat hectolitre weight compared with the untreated control. Overall, across all the trials A23282A gave a mean increase in spring wheat hectolitre weight of 1.3% (range 101.1% – 101.4% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in hectolitre weight of the test product to be increased compared to that of the standard FANDANGO 200 EC (0.4%).

The impact of lower label rate of 1.5 LPR/ha on HLW was assessed in 1 trial. A23282A applied at 1.5 LPR/ha gave an increase in spring wheat HLW of 2.2%. No statistically significant differences between dose rates were recorded.

Thousand grain weight

Data for thousand grain weight are presented in Table 0-.

For the efficacy trials the mean thousand grain weight from the untreated from the 3 trials was 43.3 g (range 36.8 g – 46.9 g). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha increased the recorded spring wheat thousand grain weight compared with the untreated control. Overall, across all the trials A23282A gave a mean increase in spring wheat thousand grain weight of 3.3% (range 103.0% – 103.5% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in thousand grain weight of the test product to be increased compared to that of the standard FANDANGO 200 EC (1.8%).

The impact of lower label rate of 1.5 LPR/ha on TGW was assessed in 2 trials. A23282A applied at 1.5 LPR/ha gave an increase in spring wheat TGW of 4.8% (range 104.7% – 104.8% of control). No statistically significant differences between dose rates were recorded.

Protein content

Data for protein content are presented in Table 0-.

For the efficacy trials the mean protein content from the untreated from the 2 trials was 14.6% (range 13.5% – 15.7%). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the later application timing had no negative impact on the recorded spring wheat protein

content. Overall, across all the trials, A23282A gave a mean increase in spring wheat protein content of 0.8% (range 99.0% - 102.6% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean protein content of the test product to be slightly lower compared to that of the standard FANDANGO 200 EC (1.7%).

The impact of lower label rate of 1.5 LPR/ha on HLW was assessed in 1 trial. A23282A applied at 1.5 LPR/ha gave an increase in spring wheat HLW of 1.3%. No statistically significant differences between dose rates were recorded.

Table 0-16: Hectolitre weight (HLW) of spring wheat in the presence of disease in Lithuania, at application timing BBCH 37-53

Trial locations: Lithuania						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: SPRING WHEAT Assessment data type, unit: HECTOLITRE WEIGHT, kg/hl						Product Rate Appl. Timing Active Ingredient				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			1.5 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK				Mean	SNK	% of control	Mean	SNK	% of control
LTAKZF1092020	SW VANEK	12-Jun-20	37 (37 - 41)	26-Aug-20	75	99 (99 - 99)	GRAIN	79.2	b	81	a	102.2	80.3	ab	101.4	80.7	a	101.8
LTAKZF7222021	SW JETSTREAM	25-Jun-21	51 (51 - 53)	16-Aug-21	52	89 (89 - 89)	GRAIN	73.1	ab	-	-	-	74	a	101.1	72.4	b	99

N = 2	MEAN		76.2					77.2		101.3	76.6		100.4
	MIN		73.1					74.0		101.1	72.4		99.0
	MAX		79.2					80.3		101.4	80.7		101.8

Table 0-17: Thousand grain weight (TGW) of spring wheat in the presence of disease in Lithuania, at application timing BBCH 37-53

Trial locations: Lithuania						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: SPRING WHEAT Assessment data type, unit: THOUSAND GRAIN WEIGHT, G						Product Rate Appl. Timing Active Ingredient				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			1.5 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% of control	Mean	SNK	% of check	Mean	SNK	% of check
LTAKZF1092020	VANEK	12-Jun-20	37 (37 - 41)	08-Sep-20	88	99 (99 - 99)	GRAIN	46.1	c	48.3	a	104.8	47.7	ab	103.4	47.7	ab	103.5
LTAKZF1152020	COLLADA	19-Jun-20	45 (43 - 45)	02-Sep-20	75	99 (99 - 99)	GRAIN	46.9	b	49.1	a	104.7	48.6	a	103.5	48.8	a	104
LTAKZF7222021	JETSTREAM	25-Jun-21	51 (51 - 53)	21-Oct-21	118	99 (99 - 99)	GRAIN	36.8	bc	-	-	-	37.9	a	103	36.1	c	98

N = 3	MEAN		43.3					48.7		104.8	44.7		103.3	44.2		101.8
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	MIN		36.8		48.3		104.7	37.9		103.0	36.1		98.0
	MAX		46.9		49.1		104.8	48.6		103.5	48.8		104.0

Table 0-18: Protein content of spring wheat in the presence of disease in Lithuania, at application timing BBCH 37-53

Trial locations: Lithuania						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: SPRING WHEAT						Product Rate				1.5 l/ha			2 l/ha			1.5 l/ha		
Assessment data type, unit: CONTENT - PROTEIN, %						Appl. Timing				POEMCR			POEMCR			POEMCR		
						Active Ingredient				CYPRODINIL			CYPRODINIL			PROTHIOCONAZOLE		
										PROTHIOCONAZOLE			PROTHIOCONAZOLE			FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% of control	Mean	SNK	% of control	Mean	SNK	% of control
LTAKZF1092020	VANEK	12-Jun-20	37 (37 - 41)	26-Aug-20	75	99 (99 - 99)	GRAIN	13.5	b	13.7	ab	101.3	13.8	a	102.6	13.7	ab	101.7
LTAKZF7222021	JETSTREAM	25-Jun-21	51 (51 - 53)	16-Aug-21	52	89 (89 - 89)	GRAIN	15.7	a	-	-	-	15.5	a	99	15.9	a	101.6

N = 2	MEAN		14.6					14.7		100.8	14.8		101.7
	MIN		13.5					13.8		99.0	13.7		101.6
	MAX		15.7					15.5		102.6	15.9		101.7

Wheat quality in presence of disease - Overall conclusion

Winter wheat

The data presented from 13 efficacy trials, collected across Germany, Poland, Latvia and Lithuania, clearly demonstrated that plots treated with A23282A at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the proposed maximum label dose rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) consistently provided an increase in hectolitre weight and thousand grain weight when compared to the untreated control. The quality parameters were similar to those of the standard FANDANGO 200 EC applied at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin).

The data also demonstrated that plots treated with A23282A at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the proposed maximum label dose rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) had no adverse effect on percentage protein content when compared with the untreated control. The results were similar to those of the standard FANDANGO 200 EC applied at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin).

No significant differences between tested dose rates were recorded for any parameter.

A summary of the data is presented in Table 0-1919.

Table 0-19: Hectolitre weight, thousand grain weight, protein content of winter wheat treated with A23282A in presence of disease

Winter wheat	Yield quality data (mean % relative to untreated)		
	A23282A 1.5 LPR/ha	A23282A 2 LPR/ha	FANDANGO 200 EC 1.5 LPR/ha
Mean HLW (n=13)	102.2 (100.2-104.4) (n=7)	101.3 (96.8-104.7)	101.0 (96-106.7)
Mean TGW (n=13)	104.8 (101.4-110.6) (n=4)	108.4 (102.4-118)	105.7 (99.8-118)
Protein content (n=13)	99.4 (93.8-102.5) (n=5)	99.2 (90.1-102.8)	98.9 (90.1-104.9)

Spring wheat

The data presented from 3 efficacy trials, collected in Lithuania, clearly demonstrated that plots treated with A23282A at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the proposed maximum label dose rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) consistently provided an increase in hectolitre weight and thousand grain weight when compared to the untreated control. The quality parameters were similar to those of the standard FANDANGO 200 EC at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin).

The data also demonstrated that plots treated with A23282A at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the proposed maximum label dose rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) had no adverse effect on percentage protein content when compared with the untreated control. The results were similar to those of the standard FANDANGO 200 EC at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin).

A summary of the data is presented in Table 0-7.

Table 0-7: Hectolitre weight, thousand grain weight, protein content of spring wheat treated with A23282A in presence of disease

Spring wheat	Yield quality data (mean % relative to untreated)		
	A23282A 1.5 LPR/ha	A23282A 2 LPR/ha	FANDANGO 200 EC 1.5 LPR/ha
Mean HLW (n=2)	102.2 (n=1)	101.3 (101.1-101.4)	100.4 (99.0-101.8)
Mean TGW (n=3)	104.8 (104.7-104.8) (n=2)	103.3 (103.0-103.5)	101.8 (98.0-104.0)
Protein content (n=2)	101.3 (n=1)	100.8 (99.0-102.6)	101.7 (101.6-101.7)

Overall conclusion

In conclusion, the data summarized across Germany, Poland, Latvia and Lithuania confirmed that A23282A applied at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the proposed maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) had no adverse effect on wheat quality in the presence of disease. In the presence of disease, the data confirmed that controlling disease led to increases in wheat grain hectolitre weight and thousand grain weight and had no adverse effect on protein quality.

The data presented within this section fully support the proposed label claim of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) for the control of foliar diseases on winter and spring wheat in Poland.

3.2.3.2 Efficacy in barley

Trials methodology in relation to EPPO

Trials were conducted according to the EPPO guidelines stated in Table 0-8. Full details of the sites and applications are provided in Appendix 2. Official testing organisation certificates are available in the GEP Certificate Database System (Certibase) (<http://www.gepcertibase.eu>) and are provided via the hyperlinks in section 3.7.

The trial layout was according to the randomized complete block design with four replicates per treatment. All normal crop husbandry measures were applied to the trials area by the grower, according to crop requirements and in accordance with good agricultural practice. Trials included a range of soil types and locations to determine crop tolerance and efficacy on a number of commercially grown varieties, under a range of conditions. All the trials were placed within regions where barley is commonly grown and data have been presented on diseases which are also indigenous to the area covered. Crop growth stages (BBCH scale) and disease levels were recorded at the time of application and assessments.

Within the trials, data are presented from a single application of A23282A applied between BBCH 31 and BBCH 59. Within the trials where the test treatments were applied at the later application timings, if required due to high early season disease pressure, a cover spray using locally registered fungicides was applied across the trials area, excluding the untreated plot, at growth stage BBCH 31-32 to maintain good agricultural practice and to keep the crop healthy until the test treatments were applied. The cover spray also included the untreated plots and an additional treatment excluding cover spray was included to reflect the disease incidence without any protection.

Pest growth at application is described on the basis of development stage. Crop growth stages are described using the standard BBCH scale. In all trials, efficacy was assessed according to EPPO guidelines.

Crop phytotoxicity was assessed at various intervals after application. All assessments were on a 0-100 scale, where 0 = no damage and 100 = total crop loss. Individual symptoms were recorded where appropriate. Where no phytotoxicity was observed, this was generally recorded within the individual trial data. Only data where phytotoxicity was recorded was presented in the dossier.

Crop yield was assessed in the majority of the efficacy trials. Plot size fulfilled the minimum of 10 m² required by EPPO. Yield assessments included grain yield [dt/ha] as well as different quality parameters (hectolitre weight [kg/hl], thousand grain weight [g], and protein content [%]). In some trials, yield parameters were analysed with a mixed sample of the four replicates. In this case no statistical analysis is presented in the summary tables.

For the overall efficacy evaluation of foliar diseases, a time window from 14 days to up to approximately 42 days after application was used. This limit was set to reflect the maximum control that can be achieved following application of A23282A. In the majority of trials more than one assessment was undertaken, but for the results tables the mean of one selected data point per trial was calculated. The selected data point was chosen according to the following criteria: - in each trial % control/infestation on the highest leaf showing at least an infected leaf area of 5% in the check, at the timing within the defined time window when maximum control was achieved. Trials were only included where at least one product within the trial showed significant control of the disease. For all diseases efficacy evaluation was based on pest severity assessments.

Percent control is calculated according to formula of Abbott, so negative values may result if a treated variant performs worse than the untreated control. If this was the case for single assessments the values were set to 0 (= no efficacy) for the overall efficacy evaluation, to avoid an excessive influence of these values as a fungicide treatment at its worst will have no efficacy (= 0) but normally will not have any supporting effects on a disease which would be supposed if negative values were used. Therefore, in the

summary tables no negative values occur. However, the single trial reports contain the automatically calculated values.

The **Student-Newman-Keuls** (SNK) method is a test for simultaneous comparisons of multiple means which controls error rates among tests of multiple groups of means (multiple range test). Please note that from all of the above trials, the results in summary tables were extracted from trials reports where treatments of no relevance to this submission were also included. As statistical analyses were conducted across the whole range of treatments, significance letters relate to the whole treatment list and not just to the data shown in the extracted tables.

Table 0-8: Details on trial methodology from barley trials

Guidelines	General guidelines	EPPO:PP 1/152 (4), EPPO:PP 1/181 (4), EPPO:PP 1/135 (4),
	Specific guidelines	EPPO: PP 1/026 (4) Foliar and ear diseases in cereals
Experimental design	Plot design	RCBD
	Plot size	Maritime EPPO Zone: 10.0 – 40.0 m ² North East EPPO zone: 10.0 – 27.0 m ²
	Number of replications	4
Crop	Trials per crop	Maritime EPPO Zone: 4 North-East EPPO zone: 27
	Varieties per crop	Maritime EPPO Zone: Winter barley: California, Lomerit, Orbit, Sandra. North-East EPPO zone: Winter barley: Astaire, Barracuda, Bartosz, Gloria (x4), Kaylin (x2), Kobuz, Kosmos (x2), Rosita, Scarpia, Tepee, Wootan (x3), Zenek, Spring barley; Ansis, Argento, Pilote C1, Rasa.
	Sowing period	Maritime EPPO zone Winter Barley: September - October North East EPPO zone Winter Barley: September - October Spring Barley: April-May
Application	Crop stage (BBCH) at application	Winter barley: BBCH 37-55; BBCH 31-32 Spring barley: BBCH 39-51; BBCH 31-33
	Timing Pest stage at application	Application timing growth stage according to protocol requirements
	Number of applications Intervals between applications	1 -
	Spray volumes	Maritime EPPO zone: 300 l/ha North East EPPO zone: 200-300 l/ha
	Application method	Foliar spray
Assessment	Assessment types	Phytotoxicity: General phytotoxicity, chlorosis, necrosis, vigour reduction, discolouration (not presented in this document, please see the core BAD) Efficacy: % disease severity Yield and Quality: Yield, thousand grain weight, hectolitre weight, % protein content

	Assessment dates	Phytotoxicity assessments: Throughout growing season Efficacy % disease severity assessments: 14-42 DAA Yield assessments: At normal crop harvest Quality assessments: At harvest or post-harvest
Other relevant information	Soil type	Maritime EPPO Zone: loess, sandy loam (x3), North-East EPPO Zone: loamy sand (x6), sandy loam (x2), calc. sandy loam (x3), fine sandy loam, sandy clay loam (x4), clay loam, loamy clay, silt (2), silt loam (x3).
	Natural / artificial inoculation	Natural infestation
	Field / Greenhouse	Field

Efficacy against *Rhynchosporium secalis* (RHYNSE)

Efficacy data for *Rhynchosporium secalis* (RHYNSE) control on barley are presented from 8 efficacy trials (all in winter barley) conducted in Germany and Poland during 2020 and 2021. Efficacy was tested across a range of environmental conditions and locations to fully challenge the product. The objective was to confirm the performance of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 gai/ha cyprodinil + 150 gai/ha prothioconazole) against *Rhynchosporium secalis*.

The treatments were applied at application timing BBCH 39-49.

The standard FANDANGO 200 EC (prothioconazole 100 gai/L + fluoxastrobin 100 gai/L) at 1.25 LPR/ha was used in all trials.

Results

The data from the 8 trials where a single application of the test product was applied at BBCH 39-49 are summarised in Table 0-9.

Disease pressure across the 8 trials averaged 10.2% (range 6.5% – 20.0%), which provided an appropriate basis for examination of the performance of A23282A. The presented data demonstrated that the proposed maximum label rate of 2.0 LPR/ha provided persistent and reliable control of RHYNSE on barley. Overall, across the results the presented data demonstrated that the proposed maximum recommended rate of 2.0 LPR/ha of A23282A provided a mean of 90.3% (range 62.7% - 100%) control of RHYNSE, relative to the untreated.

Direct comparison of A23282A and FANDANGO 200 EC showed the efficacy of the test product to be increased compared to that of the standard FANDANGO 200 EC (83.5%).

The proposed lower label rate of 1.5 LPR/ha provided reliable control of RHYNSE on barley as well. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A provided a mean of 80.3% (range 15.2% - 100%) control of *Rhynchosporium secalis*, relative to the untreated. However, if trial PLUPZF1122020 data are disregarded (the control level achieved significantly differs from all other trials in the series and no possible reasons of this effect are given in the report by the trialist), the average control of RHYNSE on barley at lower label rate of 1.5 LPR/ha is 89.6% (range 68.6% - 100%). No statistically significant differences between dose rates were recorded in 6 trials out of 7. Significant lower control at 1.5 LPR/ha was recorded in 1 trial in Poland (PLUPZF1202020).

Conclusions

The presented data from Germany and Poland confirmed that A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 gai/ha cyprodinil + 150 gai/ha prothioconazole) was effective against *Rhynchosporium secalis* (RHYNSE). The product provided increased efficacy when applied at the proposed maximum label rate of 2.0 LPR/ha and comparable efficacy when applied at proposed lower label rate of 1.5 LPR/ha, compared to the commercial standard FANDANGO 200 EC

These dose rates should thus be considered to be effective against *Rhynchosporium secalis* (RHYNSE) on winter barley when applied between BBCH 30-59 in Poland.

Table 0-9: Efficacy against *Rhynchosporium secalis* on barley in Germany and Poland, at application timing BBCH 39-49

Trial locations: Germany and Poland						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: BARLEY Pest: RHYNCHOSPORIUM SECALIS Assessment type: PEST SEVERITY ON LEAVES, %						Product Rate Appl. Timing Active Ingredient				1.5 l/ha PREVEN CYPRODINIL PROTHIOCONAZOLE			2 l/ha PREVEN CYPRODINIL PROTHIOCONAZOLE			1.25 l/ha PREVEN PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% Control	Mean	SNK	% Control	Mean	SNK	% Control
DEBCZF8512021	ORBIT	06-May-21	39 (39 - 39)	08-Jun-21	33	73 (73 - 75)	LEAF 3	20	a	2.8	bc	86.1	0.7	c	96.5	1	bc	94.9
DEBCZF8532021	LOMERIT	06-May-21	41 (39 - 45)	14-Jun-21	39	75 (75 - 77)	LEAF 2	11.5	b	0	d	100	0	d	100	0	d	100
PLSGZF1022020	KAYLIN	27-Apr-20	39 (37 - 39)	02-Jun-20	36	73 (73 - 75)	LEAF 3	7.2	a	0	d	100	0.2	cd	97.5	1.3	b	81.5
PLUPZF1122020	ROSITA	08-May-20	45 (43 - 47)	15-Jun-20	38	77 (75 - 77)	LEAF 1	8.1	b	6.9	bc	15.2*	3	d	62.7	4.4	cd	45.4
PLUPZF1202020	GLORIA	04-May-20	43 (41 - 45)	15-Jun-20	42	77 (75 - 77)	LEAF 1	11.8	a	3.3	bc	72.4	1.4	d	88.3	3.7	bc	68.7
PLBCZF8552021	ASTAIRE	16-May-21	49 (47 - 49)	15-Jun-21	30	75 (75 - 75)	LEAF 1	6.5	a	0	e	100	0	e	100	0.3	c	95.3
PLSOZF1132021	BARTOSZ	11-May-21	43 (43 - 43)	11-Jun-21	31	73 (71 - 73)	LEAF 1	9.2	a	0	e	100	0	e	100	0	e	100
PLSYZF6442021	KOSMOS	26-May-21	47 (45 - 49)	09-Jun-21	14	75 (73 - 77)	LEAF 2	7.2	a	2.2	b	68.6	1.6	b	77.6	1.3	b	81.9
		N =8	MEAN			10.2				1.9		80.3	0.9		90.3	1.5		83.5
			MIN			6.5				0		15.2	0		62.7	0		45.4
			MAX			20				6.9		100	3		100	4.4		100
		N =7*	MEAN							1.2		89.6						
			MIN							0		68.6						
			MAX							3.3		100						

Efficacy against *Ramularia collo-cygni* (RAMUCC)

Efficacy data for *Ramularia collo-cygni* (RAMUCC) control on barley are presented from 6 efficacy trials (5 winter barley and 1 spring barley trial) conducted in Germany and Poland during 2020 and 2021. Efficacy was tested across a range of environmental conditions and locations to fully challenge the product. The objective was to confirm the performance of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 gai/ha cyprodinil + 150 gai/ha prothioconazole) against *Ramularia collo-cygni*.

Treatments were applied at BBCH 39-51.

The standard FANDANGO 200 EC (prothioconazole 100 gai/L + fluoxastrobin 100 gai/L) at 1.25 LPR/ha was used in all trials.

Results

The data from the 6 trials where a single application of the test product was applied at BBCH 39-51 are summarised in Table 0-10.

Disease pressure across the 6 trials averaged 22.7% (range 7.4% – 54.1%), which provided a sufficient basis for examination of the performance of A23282A. The presented data demonstrated that the proposed maximum label rate of 2.0 LPR/ha provided persistent and reliable control of RAMUCC on barley. Overall, across the results the presented data demonstrated that the proposed maximum label rate of 2.0 LPR/ha of A23282A provided a mean of 85.2% (range 64.1% - 95.9%) control of RAMUCC, relative to the untreated.

Direct comparison of A23282A and FANDANGO 200 EC showed the efficacy of the test product to be increased compared to that of the standard FANDANGO 200 EC (68.3%).

The proposed lower label rate of 1.5 LPR/ha provided lower but still acceptable control of RAMUCC on barley. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A provided a mean of 72.4% (range 57.9% - 92%) control of *Ramularia collo-cygni*, relative to the untreated. No statistically significant differences between dose rates were recorded in 3 trials out of 6.

Conclusions

The presented data from Germany and Poland confirmed that that A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 gai/ha cyprodinil + 150 gai/ha prothioconazole) was effective against *Ramularia collo-cygni* (RAMUCC). The product provided increased efficacy when applied at the proposed maximum label rate of 2.0 LPR/ha and comparable efficacy when applied at proposed lower label rate of 1.5 LPR/ha, compared to the commercial standard FANDANGO 200 EC.

These dose rates should thus be considered to be effective against *Ramularia collo-cygni* (RAMUCC) on winter and spring barley when applied between BBCH 30-59 in Poland.

Table 0-10: Efficacy against *Ramularia collo-cygni* on barley in Germany and Poland, at application timing BBCH 39-51

Trial locations: Germany and Poland						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: BARLEY Pest: RAMULARIA COLLO-CYGNI Assessment type: PEST SEVERITY ON LEAVES, %						Product Rate Appl. Timing Active Ingredient				1.5 l/ha PREVEN CYPRODINIL PROTHIOCONAZOLE			2 l/ha PREVEN CYPRODINIL PROTHIOCONAZOLE			1.25 l/ha PREVEN PROTHIOCONAZOLE FLUXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% Control	Mean	SNK	% Control	Mean	SNK	% Control
DEDSZF4072020	SANDRA	28-Apr-20	49 (45 - 49)	27-May-20	29	75 (73 - 77)	LEAF 1	54.1	ab	22.8	cdef	57.9	15.1	ef	72.2	35.9	bcd	33.6
DEDSZF5252020	CALIFORNIA	24-Apr-20	51 (39 - 51)	03-Jun-20	40	83 (75 - 85)	LEAF 2	24.9	a	9.7	c	61.3	9	c	64.1	7.8	c	68.5
PLUPZF1112020	ZENEK	08-May-20	45 (43 - 47)	29-May-20	21	65 (61 - 69)	LEAF 3	7.7	b	3	de	61.6	0.6	f	92	4.4	d	42.5
PLUPZF1192020	KOBUZ	20-May-20	51 (49 - 55)	10-Jun-20	21	75 (71 - 77)	LEAF 2	11.2	b	2.7	c	76	0.5	ef	95.7	0.7	ef	94.2
PLSYZF6282021	TEPEE	18-May-21	47 (45 - 49)	15-Jun-21	28	75 (75 - 75)	LEAF 1	7.4	b	0.6	de	92	0.3	e	95.9	0.4	e	95.1
PLSYZF6382021	SB ARGENTO*	11-Jun-21	49 (49 - 51)	09-Jul-21	28	83 (83 - 85)	LEAF 2	30.6	b	4.4	e	85.7	2.6	f	91.5	7.5	d	75.6
										N =6	MEAN		22.7		72.4	4.7		68.3
											MIN		7.4		57.9	0.3		33.6
											MAX		54.1		92	15.1		95.1

*spring barley

Efficacy against *Puccinia hordei* (PUCCHD)

As sufficient data are available trial results on PUCCHD at proposed lower and maximum dose rates in this National Addendum are presented only from EPPO North-East zone.

Efficacy data from the North-East EPPO zone for *Puccinia hordei* (PUCCHD) control on barley are presented from 15 barley (13 in winter barley and 2 in spring barley) efficacy trials conducted in Latvia and Poland during 2020 and 2021. Efficacy was tested across a range of environmental conditions and locations to fully challenge the product. The objective was to confirm the performance of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 gai/ha cyprodinil + 150 gai/ha prothioconazole) against *Puccinia hordei*.

The treatments were applied at application timing BBCH 39-51.

The standard FANDANGO 200 EC (prothioconazole 100 gai/L + fluoxastrobin 100 gai/L) at 1.25 LPR/ha was used in all trials.

Results

The data from the 15 trials where a single application of the test product was applied at BBCH 39-51 are summarised in Table 0-11.

Disease pressure across the 15 trials averaged 14.1% (range 5.0% – 50.1%), which provided an appropriate basis for examination of the performance of A23282A. The presented data demonstrated that the proposed maximum label rate of 2.0 LPR/ha provided persistent and reliable control of PUCCHD on barley. Overall, across the results the presented data demonstrated that the proposed maximum label rate of 2.0 LPR/ha of A23282A provided a mean of 94.8% (range 81.5% - 100%) control of PUCCHD, relative to the untreated.

Direct comparison of A23282A and FANDANGO 200 EC showed the efficacy of the test product to be comparable compared to that of the standard FANDANGO 200 EC (91.5%).

The proposed lower label rate of 1.5 LPR/ha provided persistent and reliable control of PUCCHD on barley as well. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A provided a mean of 92.1% (range 77.1% - 100%) control of *Puccinia hordei*, relative to the untreated. No statistically significant differences between dose rates were recorded in 13 trials out of 15.

Conclusions

The presented data from Latvia and Poland confirmed that that A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 gai/ha cyprodinil + 150 gai/ha prothioconazole) was effective against *Puccinia hordei* (PUCCHD). The product provided comparable efficacy compared to the commercial standard FANDANGO 200 EC.

These dose rates should thus be considered to be effective against *Puccinia hordei* (PUCCHD) on winter and spring barley when applied between BBCH 30-59 in Poland.

Table 0-11: Efficacy against *Puccinia hordei* on barley in North-East EPPO zone, at application timing BBCH 39-51

EPPO zone: NORTH-EAST						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: BARLEY Pest: PUCCINIA HORDEI Assessment type: PEST SEVERITY ON LEAVES, %						Product Rate Appl. Timing Active Ingredient				1.5 l/ha PREVEN CYPRODINIL PROTHIOCONAZOLE			2 l/ha PREVEN CYPRODINIL PROTHIOCONAZOLE			1.25 l/ha PREVEN PROTHIOCONAZOLE FLUXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% Control	Mean	SNK	% Control	Mean	SNK	% Control
PLDSZF5052020	BARACUDA	10-May-20	51 (49 - 51)	15-Jun-20	36	75 (75 - 77)	LEAF 2	12.9	a	0	c	100	0	c	100	0	c	100
PLDSZF7242020	WOOTAN	08-May-20	49 (49 - 51)	19-Jun-20	42	75 (75 - 77)	LEAF 2	17.4	b	4	d	77.2	2	de	88.5	2	de	88.7
PLDSZF7532020	WOOTAN	13-May-20	51 (51 - 52)	24-Jun-20	42	77 (77 - 77)	LEAF 2	15	b	0.2	d	98.5	0.2	d	98.8	0.3	d	98.3
PLSGZF1022020	KAYLIN	27-Apr-20	39 (37 - 39)	02-Jun-20	36	73 (73 - 75)	LEAF 2	8.7	a	0	d	99.8	0	d	100	0	d	100
PLUPZF1122020	ROSITA	08-May-20	45 (43 - 47)	15-Jun-20	38	77 (75 - 77)	LEAF 1	17.5	a	4	bc	77.1	0.2	e	98.8	3.4	bc	80.3
PLUPZF1192020	KOBUZ	20-May-20	51 (49 - 55)	10-Jun-20	21	75 (71 - 77)	LEAF 2	15	b	0	d	100	0	d	100	0	d	100
PLUPZF1202020	GLORIA	04-May-20	43 (41 - 45)	25-May-20	21	65 (61 - 69)	LEAF 3	11.5	a	0	d	100	0	d	100	0	d	100
LVRIZF6112021	RASA*	28-Jun-21	39 (39 - 43)	21-Jul-21	23	83 (83 - 85)	LEAF 1	7.8	a	0.5	d	93.8	0.3	d	96.1	1.2	cd	84.7
LVRIZF6162021	ANSIS*	28-Jun-21	39 (39 - 43)	14-Jul-21	16	77 (75 - 77)	LEAF 2	5	b	0.4	c	91.8	0.7	c	87	1	c	80
PLBCZF8552021	ASTAIRE	16-May-21	49 (47 - 49)	15-Jun-21	30	75 (75 - 75)	LEAF 1	50.1	a	8.5	d	83.1	7.3	d	85.3	7.3	d	85.3
PLBCZF8562021	KAYLIN	15-May-21	49 (47 - 49)	15-Jun-21	31	75 (75 - 75)	LEAF 1	18.1	a	3.9	c	78.4	3.4	c	81.5	5.7	b	68.7
PLDSZF7092021	WOOTAN	12-May-21	39 (39 - 43)	09-Jun-21	28	71 (71 - 71)	LEAF 3	5.7	b	0.7	d	88.4	0.4	d	93.6	0.4	d	92.4
PLFPZF8542021	GLORIA	17-May-21	49 (49 - 51)	14-Jun-21	28	75 (75 - 77)	LEAF 1	6.9	a	0.5	b	93	0.5	c	92.1	0.4	c	93.7
PLSOZF1132021	BARTOSZ	11-May-21	43 (43 - 43)	11-Jun-21	31	73 (71 - 73)	LEAF 1	8.9	a	0	d	100	0	d	100	0	d	100
PLSYZF6392021	GLORIA	11-May-21	39 (33 - 41)	07-Jun-21	27	65 (61 - 65)	LEAF 3	10.8	a	0	e	100	0	de	99.7	0	de	99.9

* spring barley

N =15	MEAN		14.1		1.5		92.1	1.0		94.8	1.4		91.5
	MIN		5		0		77.1	0		81.5	0		68.7
	MAX		50.1		8.5		100	7.3		100	7.3		100

Efficacy against *Blumeria graminis* (ERYSGR)

As no acceptable data are available from EPPO Maritime zone on ERYSGR in barley at the proposed lower dose rate, in this National Addendum data are presented only from EPPO North-East zone.

Efficacy data from the North-East EPPO zone for *Blumeria graminis* (ERYSGR) control on barley are presented from 7 efficacy trials (6 winter barley and 1 spring barley trial, 9 data points) conducted in Latvia and Poland during 2020 and 2021. Efficacy was tested across a range of environmental conditions and locations to fully challenge the product. The objective was to confirm the performance of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 gai/ha cyprodinil + 150 gai/ha prothioconazole) against *Blumeria graminis*.

In some trials treatments were applied at an early application timing (BBCH 31-33) and in some trials the treatments were applied at a later application timing (BBCH 39-51). The results from the different application timings of A23282A have been presented in separate tables in the following section.

The standard FANDANGO 200 EC (prothioconazole 100 gai/L + fluoxastrobin 100 gai/L) at 1.25 LPR/ha was used in all trials.

Results

The data from the 4 trials where a single application of the test product was applied at BBCH 39-51 are summarised in Table 0-12.

Disease pressure across the 4 trials averaged 15.5% (range 5.4% – 28.2%), which provided an appropriate basis for examination of the performance of A23282A. The presented data demonstrated that the proposed maximum label rate of 2.0 LPR/ha provided persistent and reliable control of ERYSGR on barley. Overall, across the results the presented data demonstrated that the proposed maximum label rate of 2.0 LPR/ha of A23282A provided a mean of 98.0% (range 92.1% - 100%) control of ERYSGR, relative to the untreated.

Direct comparison of A23282A and FANDANGO 200 EC showed the efficacy of the test product to be comparable to that of the standard FANDANGO 200 EC (95.1%).

The proposed lower label rate of 1.5 LPR/ha at late timing provided persistent and reliable control of ERYSGR on barley as well. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A provided a mean of 95.5% (range 81.9% - 100%) control of *Blumeria graminis*, relative to the untreated. No statistically significant differences between dose rates were recorded in any of the trial.

The data from the 5 trials where a single application of the test product was applied at BBCH 31-33 are summarised in Table 0-13.

In these trials the average disease pressure in the untreated was 9.2% (range 6.4 to 12.1%). With the 2.0 LPR/ha rate of A23282A 89.8% average efficacy was achieved, which was comparable to the average efficacy provided by FANDANGO 200 EC (91.3%).

The proposed lower label rate of 1.5 LPR/ha applied at early timing provided persistent and reliable control of ERYSGR on barley as well. Overall, across the results (n=3) the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A provided a mean of 96.7% (range 93.4% - 100%) control of *Blumeria graminis*, relative to the untreated. No statistically significant differences between dose rates were recorded in 2 trials out of 3.

Conclusions

The presented data from Latvia and Poland confirmed that A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 gai/ha cyprodinil + 150 gai/ha prothioconazole) was effective against *Blumeria graminis* (ERYSGR). The product provided comparable efficacy to that of the commercial standard FANDANGO 200 EC.

These dose rates should thus be considered to be effective against *Blumeria graminis* (ERYSGR) on winter and spring barley when applied between BBCH 30-59 in Poland.

Table 0-12: Efficacy against *Blumeria graminis* on barley in North-East EPPO zone, at late application BBCH 39-51

EPPO zone: NORTH-EAST						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: BARLEY						Product Rate				1.5 l/ha			2 l/ha			1.25 l/ha		
Pest: BLUMERIA GRAMINIS						Appl. Timing				ACCRST			PREVEN			PREVEN		
Assessment type: PEST SEVERITY ON LEAVES, %						Active Ingredient				CYPRODINIL PROTHIOCONAZOLE			CYPRODINIL PROTHIOCONAZOLE			PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% Control	Mean	SNK	% Control	Mean	SNK	% Control
PLDSZF5052020	BARACUDA	10-May-20	51 (49 - 51)	01-Jun-20	22	65 (61 - 65)	LEAF 3	7	a	0	b	100	0	b	100	0	b	100
PLBCZF8562021	KAYLIN	15-May-21	49 (47 - 49)	15-Jun-21	31	75 (75 - 75)	LEAF 2	28.2	a	0	d	100	0	d	100	0	d	100
PLSYZF6232021	SB PILOTE C1*	14-Jun-21	49 (49 - 51)	28-Jun-21	14	65 (65 - 69)	LEAF 2	5.4	a	1	cd	81.9	0.4	d	92.1	1	cd	81
PLSYZF6392021	GLORIA	11-May-21	39 (33 - 41)	07-Jun-21	27	65 (61 - 65)	LEAF 2	21.4	a	0	d	100	0	d	100	0.1	cd	99.5

*spring barley

N =4	MEAN		15.5		0.3		95.5	0.1		98.0	0.3		95.1
	MIN		5.4		0		81.9	0.0		92.1	0.0		81.0
	MAX		28.2		1		100	0.4		100.0	1.0		100.0

Table 0-13: Efficacy against *Blumeria graminis* on barley in North-East EPPO zone, at early application BBCH 31-33

EPPO Zone: NORTH-EAST					Product Name			CHECK UNTREATED		A23282 [A] 1.5 l/ha			A23282 [A] 2 l/ha			FANDANGO 200 EC 1.25 l/ha		
Crop: BARLEY					Product Rate					ACCRST CYPRODINIL PROTHIOCONAZOLE			ACCRST CYPRODINIL PROTHIOCONAZOLE			ACCRST PROTHIOCONAZOLE FLUOXASTROBIN		
Assessment data type: PEST SEVERITY, %					Appl. Timing			Active Ingredient										
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control
LVRIZF7612021	WB KWS KOSMOS	29-Apr-2021	31 (31 - 32)	27-May-2021	28	51 (49 - 55)	LEAF 4	7.3	a	0.48	b	93.4	0.2	b	96.9	0.1	b	99.1
PLSOZF1062020	WB SCARPIA	20-Apr-2020	33 (33 - 33)	21-May-2020	31	61 (61 - 65)	LEAF 3	12	a	0	b	100	0	b	100	0	b	99.9
PLSOZF7672021	WB GLORIA	27-Apr-2021	31 (31 - 31)	01-Jun-2021	35	69 (69 - 69)	LEAF 3	12.1	a	0.4	d	96.6	0.1	e	98.8	0.7	d	93.9
PLSYZF6232021	SB PILOTE C1*	27-May-2021	31 (31 - 32)	14-Jun-2021	18	49 (49 - 51)	LEAF 4	8	a	-	-	-	3.1	b	61.8	2.6	b	67
PLSYZF6392021	WB GLORIA	20-Apr-2021	31 (31 - 32)	11-May-2021	21	39 (33 - 41)	LEAF 4	6.4	a	-	-	-	0.6	b	91.4	0.2	b	96.6
*spring barley																		
					N =5	MEAN		9.2					0.8		89.8	0.7		91.3
						MIN		6.4					0.0		61.8	0.0		67.0
						MAX		12.1					3.1		100.0	2.6		99.9
					N=3	MEAN		10.5		0.3		96.7	0.1		98.6	0.3		97.6
						MIN		7.3		0		93.4	0		96.9	0		93.9
						MAX		12.1		0.48		100	0.2		100	0.7		99.9

Yield (and relevant quality indicators), from efficacy trials (in the presence of disease) at 1.5 LPR/ha and at 2.0 LPR/ha

Winter barley

A summary of the yield data from winter barley efficacy trials where foliar diseases was present are presented in Table 0-1 for the late application timing and in Table 0-2 for the early application timing. Yield data were obtained from a total of 20 trials with the late application timing (BBCH 37-55) and from 12 trials with the early application timing (BBCH 31-32) carried out during 2020 and 2021 in Germany, Poland and Latvia.

The objective was to confirm the yield response of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) in the presence of foliar diseases. A23282A was applied as a foliar spray either at the late application timing between BBCH 37-55 or at the early application timing between BBCH 31-32. The yield was compared in the trials targeted for foliar diseases to those of the standard FANDANGO 200 EC at 1.25 LPR/ha (125 gai/ha prothioconazole + 125 gai/ha fluoxastrobin) and FLLEXITY 300 SC at 0.5 LPR/ha (150 gai/ha metrafenone).

Results

Late application timing (BBCH 37-55)

For the efficacy trials the mean yield from the untreated across the 20 trials was 71.5 dt/ha (range 32.9dt/ha – 122.4 dt/ha). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the later application timing increased the recorded winter barley yield in all but one of the trials compared with the untreated control. In 10 out of the 20 trials the yield achieved with A23282A was statistically significantly higher than in the untreated. Overall, across all the trials A23282A gave a mean increase in winter barley yield of 15.1% (range 99.7% – 133.1% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in yield of the test product to be increased compared to that of the standard FANDANGO 200 EC (12.9%).

The proposed lower label rate of 1.5 LPR/ha increased the recorded winter barley yield in 19 trials out of 20 compared with the untreated control. In 9 trials the yield achieved with A23282A was statistically significantly higher than in the untreated. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A gave a mean increase in winter barley yield of 13.0 % (range 98.6% – 129.6% of control) when compared to the untreated control. Statistically significant differences between dose rates were recorded in 2 trials.

Early application timing (BBCH 31-32)

For the efficacy trials the mean yield from the untreated across the 12 trials was 63.4 dt/ha (range 32.9 dt/ha – 100.5 dt/ha). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the early application timing increased the recorded winter barley yield in all trials compared with the untreated control. In 5 out of the 12 trials the yield achieved with A23282A was statistically significantly higher than in the untreated. Overall, across all the trials A23282A gave a mean increase in winter barley yield of 9.4% (range 101.7% – 122.9% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in yield of the test product to be similar compared to that of the standard FANDANGO 200 EC (10.1%).

The proposed lower label rate of 1.5 LPR/ha was tested in 2 trials. In both trials the yield achieved with A23282A was statistically significantly higher than in the untreated. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A gave a mean increase in winter barley yield of 14.1.0 % (range 111.7% – 116.5% of control) when compared to the untreated control.

Direct comparison of A23282A, FANDANGO 200 EC and FLLEXITY 300 SC showed the mean increase in yield of the test product to be similar compared to that of the standard FANDANGO 200 EC (14.1%) and increased to that of the standard FLLEXITY 300 SC (4.4%).

Table 0-1: Yield data for winter barley in the presence of foliar disease in Germany, Poland, at late application timing BBCH 37-55

Trial locations: Germany, Poland						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
CROP: WINTER BARLEY Assessment data type, unit; YIELD, dt/ha						Product Rate Appl. Timing Active Ingredient				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha PREVEN CYPRODINIL PROTHIOCONAZOLE			1.25 l/ha PREVEN PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% Control	Mean	SNK	% Control	Mean	SNK	% Control
DEDSZF4072020	SANDRA	28-Apr-20	49 (45 - 49)	08-Jul-20	71	99 (99 - 99)	GRAIN	94.9	a	99.4	a	104.7	99.2	a	104.5	100.2	a	105.6
DEDSZF5252020	CALIFORNIA	24-Apr-20	51 (39 - 51)	03-Jul-20	70	99 (99 - 99)	GRAIN	88.5	a	89.3	a	100.9	90.1	a	101.9	91	a	102.8
DEBCZF8512021	ORBIT	06-May-21	39 (39 - 39)	09-Jul-21	64	99 (99 - 99)	GRAIN	52.1	c	63	a	120.9	63.9	a	122.6	64.5	a	123.7
DEBCZF8532021	LOMERIT	06-May-21	41 (39 - 45)	23-Jul-21	78	89 (89 - 89)	GRAIN	50.5	b	64.3	a	127.3	65.7	a	130.3	61.6	a	122
PLDSZF5052020	BARACUDA	10-May-20	51 (49 - 51)	20-Jul-20	71	97 (97 - 97)	GRAIN	100.5	b	112.5	ab	112	125.1	a	124.5	120.9	a	120.3
PLDSZF7242020	WOOTAN	08-May-20	49 (49 - 51)	09-Jul-20	62	99 (99 - 99)	GRAIN	122.4	a	127.3	a	104	124.4	a	101.7	125.2	a	102.3
PLDSZF7532020	WOOTAN	13-May-20	51 (51 - 52)	13-Jul-20	61	99 (99 - 99)	GRAIN	81.5	a	93.7	a	115	87.9	a	107.8	90.1	a	110.6
PLSGZF1022020	KAYLIN	27-Apr-20	39 (37 - 39)	10-Jul-20	74	89 (89 - 89)	GRAIN	70.4	b	85.6	a	121.5	86.5	a	122.8	88.9	a	126.2
PLSOZF1062020	SCARPIA	20-Apr-20	33 (33 - 33)	14-Jul-20	85	99 (99 - 99)	GRAIN	47.6	d	61.7	ab	129.6	59.3	bc	124.6	59.8	abc	125.8
PLUPZF1112020	ZENEK	08-May-20	45 (43 - 47)	06-Jul-20	59	89 (89 - 92)	GRAIN	72	e	81.3	d	112.9	95.8	a	133.1	82.6	cd	114.8
PLUPZF1122020	ROSITA	08-May-20	45 (43 - 47)	06-Jul-20	59	89 (89 - 92)	GRAIN	82.1	d	90.7	bc	110.4	97	abc	118.1	89.9	c	109.4
PLUPZF1192020	KOBUZ	20-May-20	51 (49 - 55)	07-Jul-20	48	89 (89 - 92)	GRAIN	84.4	bc	93	ab	110.2	95.8	ab	113.5	93.2	ab	110.4
PLUPZF1202020	GLORIA	04-May-20	43 (41 - 45)	08-Jul-20	65	89 (89 - 92)	GRAIN	75.2	def	83.4	bcde	110.9	95.3	a	126.7	92.4	ab	122.9
PLBCZF8552021	ASTAIRE	16-May-21	49 (47 - 49)	25-Jul-21	70	89 (89 - 89)	GRAIN	68.7	c	81.3	a	118.3	83.6	a	121.6	81.7	a	118.8
PLBCZF8562021	KAYLIN	15-May-21	49 (47 - 49)	25-Jul-21	71	89 (89 - 89)	GRAIN	55	a	58.2	a	105.7	59.2	a	107.6	58.6	a	106.4

Trial locations: Germany, Poland						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
CROP: WINTER BARLEY Assessment data type, unit; YIELD, dt/ha						Product Rate Appl. Timing Active Ingredient				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha PREVEN CYPRODINIL PROTHIOCONAZOLE			1.25 l/ha PREVEN PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% Control	Mean	SNK	% Control	Mean	SNK	% Control
PLFPZF8542021	GLORIA	17-May-21	49 (49 - 51)	13-Jul-21	57	99 (99 - 99)	GRAIN	59.1	b	68.3	a	115.7	65.8	ab	111.5	65.3	ab	110.5
PLSOZF1132021	BARTOSZ	211-May-21	43 (43 - 43)	20-Jul-21	70	92 (92 - 92)	GRAIN	55.6	cd	64.8	a	116.6	61.1	abc	109.9	63.8	ab	114.9
PLSYZF6282021	TEPEE	18-May-21	47 (45 - 49)	14-Jul-21	57	99 (99 - 99)	GRAIN	66.3	b	69.9	a	105.4	70.8	a	106.8	70.8	a	106.7
PLSYZF6392021	GLORIA	11-May-21	39 (33 - 41)	19-Jul-21	69	89 (89 - 89)	GRAIN	32.9	a	32.4	a	98.6	32.8	a	99.7	32	a	97.3
PLSYZF6442021	KOSMOS	26-May-21	47 (45 - 49)	22-Jul-21	57	99 (99 - 99)	GRAIN	71.1	a	85.1	a	119.6	80.5	a	113.2	75.4	a	105.9

N =20	MEAN		71.5		80.3		113.0	82.0		115.1	80.4		112.9
	MIN		32.9		32.4		98.6	32.8		99.7	32		97.3
	MAX		122.4		127.3		129.6	125.1		133.1	125.2		126.2

Table 0-2: Yield data for winter barley in the presence of foliar disease in Germany, Poland and Latvia, at early application timing BBCH 31-32

Trial locations: Germany, Poland, Latvia CROP: WINTER BARLEY Assessment data type, unit; YIELD, dt/ha						Product Name Product Rate Appl. Timing Active Ingredient	CHECK OVERSPRAY		A23282 [A] 1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			A23282 [A] 2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			FANDANGO 200 EC 1.25 l/ha POEMCR PROTHIOCONAZOLE FLUXASTROBIN			FLEXITY 300 SC 0.5 l/ha ACCRST METRAFENONE		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after first applic	Crop GS at asse. - maj. (min - max)	Mean	SNK	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control
DEBCZF8512021	ORBIT	23-Apr-21	32 (32 - 32)	09-Jul-21	77	99 (99 - 99)	52.1	c	-	-	-	60.3	ab	115.7	63.6	a	122			
DEBCZF8532021	LOMERIT	20-Apr-21	32 (31 - 33)	23-Jul-21	94	89 (89 - 89)	50.5	b	-	-	-	62	a	122.9	60.4	a	119.6			
LVRIZF7612021	KOSMOS	29-Apr-21	31 (31 - 32)	08-Jul-21	70	89 (89 - 89)	91.9	c	102.7	a	111.7	102.1	ab	111	96.2	bc	104.7	96.1	bc	104.5
PLSOZF7672021	GLORIA	27-Apr-21	31 (31 - 31)	20-Jul-21	84	92 (92 - 92)	56.5	c	65.9	ab	116.5	62.9	abc	111.3	69.8	a	123.4	58.9	bc	104.3
PLBCZF8552021	ASTAIRE	04-May-21	32 (32 - 32)	25-Jul-21	82	89 (89 - 89)	68.7	c	-	-	-	79.4	ab	115.6	76.7	ab	111.6			
PLBCZF8562021	KAYLIN	06-May-21	32 (32 - 33)	25-Jul-21	80	89 (89 - 89)	55	a	-	-	-	58.4	a	106.2	59	a	107.3			
PLDSZF7092021	WOOTAN	28-Apr-21	32 (32 - 33)	13-Jul-21	76	99 (99 - 99)	100.5	a	-	-	-	103.9	a	103.4	99.8	a	99.3			
PLFPZF8542021	GLORIA	19-Apr-21	31 (31 - 32)	13-Jul-21	85	99 (99 - 99)	59.1	b	-	-	-	60.5	ab	102.4	62.9	ab	106.6			
PLSOZF1132021	BARTOSZ	27-Apr-21	31 (31 - 32)	20-Jul-21	84	92 (92 - 92)	55.6	cd	-	-	-	58.1	bcd	104.5	60.6	abc	109			
PLSYZF6282021	TEPEE	04-May-21	32 (31 - 32)	14-Jul-21	71	99 (99 - 99)	66.3	b	-	-	-	69.6	a	104.9	70	a	105.6			
PLSYZF6392021	GLORIA	20-Apr-21	31 (31 - 32)	19-Jul-21	90	89 (89 - 89)	32.9	a	-	-	-	33.5	a	101.7	31.9	a	96.9			
PLSYZF6442021	KOSMOS	05-May-21	32 (31 - 33)	22-Jul-21	78	99 (99 - 99)	71.1	a	-	-	-	77.6	a	109.1	82.3	a	115.7			

Trial locations: Germany, Poland, Latvia CROP: WINTER BARLEY Assessment data type, unit; YIELD, dt/ha						Product Name Product Rate Appl. Timing Active Ingredient	CHECK OVERSPRAY		A23282 [A] 1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			A23282 [A] 2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			FANDANGO 200 EC 1.25 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN			FLEXITY 300 SC 0.5 l/ha ACCRST METRAFENONE		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after first applic	Crop GS at asse. - maj. (min - max)	Mean	SNK	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control
					N =12	MEAN	63.4					69.0		109.1	69.4		110.1			
						MIN	32.9					33.5		101.7	31.9		96.9			
						MAX	100.5					103.9		122.9	99.8		123.4			
					N =2	MEAN	74.2		84.3		114.1	74.2		111.2	83.0		114.1	77.5		104.4
						MIN	56.5		65.9		111.7	56.5		111	69.8		104.7	58.9		104.3
						MAX	91.9		102.7		116.5	91.9		111.3	96.2		123.4	96.1		104.5

Spring barley

A summary of the yield data from spring barley efficacy trials where foliar diseases were present are presented in Table 0-29 for the late application timing and in Table 0-3 for the early application timing. Yield data were obtained from a total of 6 trials with the late application timing (BBCH 39-51) and from 6 trials with the early application timing (BBCH 31-33) carried out during 2021 in Germany, Poland and Latvia.

The objective was to confirm the yield response of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) in the presence of foliar diseases. A23282A was applied as a foliar spray either at the late application timing between BBCH 39-51 or at the early application timing between BBCH 31-33. The yield was compared in the trials targeted for foliar diseases to those of the standard FANDANGO 200 EC at 1.25 LPR/ha (120 gai/ha prothioconazole + 120 gai/ha fluoxastrobin).

Results

Late application timing (BBCH 39-51)

For the efficacy trials the mean yield from the untreated across the 6 trials was 46.6 dt/ha (range 21 dt/ha – 76.6 dt/ha). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the later application timing increased the recorded spring barley yield in all, except one, trials compared with the untreated control. In 3 out of the 6 trials the yield achieved with A23282A was statistically significantly higher than in the untreated. Overall, across all the trials, A23282A gave a mean increase in spring barley yield of 11.9% (range 98.6% – 123.0% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in yield of the test product to be slightly increased to that of the standard FANDANGO 200 EC (9.0%).

The proposed lower label rate of 1.5 LPR/ha increased the recorded spring barley yield in 5 out of 6 trials compared with the untreated control. In 3 trials the yield achieved with A23282A was statistically significantly higher than in the untreated. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A gave a mean increase in spring barley yield of 9.3 % (range 98.4% – 122.1% of control) when compared to the untreated control. Statistically significant differences between dose rates were not recorded in any of the trial.

Early application timing (BBCH 31-33)

For the efficacy trials the mean yield from the untreated across the 6 trials was 46.6 dt/ha (range 21 dt/ha – 76.6 dt/ha). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the early application timing increased the recorded spring barley yield in all, except one, trials compared with the untreated control. In 1 out of the 6 trials the yield achieved with A23282A was statistically significantly higher than in the untreated. Overall, across all the trials, A23282A gave a mean increase in spring barley yield of 6.7% (range 98.2% – 113.2% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in yield of the test product to be comparable to that of the standard FANDANGO 200 EC (5.6%).

The impact of a lower label rate of 1.5 LPR/ha at the early application timing on the yield was not tested in the presented trials.

Table 0-29: Yield data for spring barley in the presence of foliar disease in Germany, Poland and Latvia, at late application timing BBCH 39-51

Trial locations: Germany, Poland, Latvia						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
CROP: SPRING BARLEY Assessment data type, unit; YIELD, dt/ha						Product Rate	Product Rate			1.5 l/ha			2 l/ha			1.25 l/ha		
						Appl. Timing	Appl. Timing			PREVEN			PREVEN			PREVEN		
						Active Ingredient	Active Ingredient			CYPRODINIL			CYPRODINIL			PROTHIOCONAZOLE		
										PROTHIOCONAZOLE			PROTHIOCONAZOLE			FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% Control	Mean	SNK	% Control	Mean	SNK	% Control
DESYZF6352021	SB AVALON	14-Jun-21	49 (47 - 51)	20-Jul-21	36	89 (89 - 89)	GRAIN	58	a	59	a	101.7	62.1	a	107.1	60	a	103.4
DESYZF6402021	SB PLANET	14-Jun-21	49 (49 - 51)	19-Jul-21	35	89 (89 - 89)	GRAIN	76.6	a	75.4	a	98.4	75.5	a	98.6	73.2	a	95.6
LVRIZF6112021	SB RASA	28-Jun-21	39 (39 - 43)	05-Aug-21	38	89 (89 - 89)	GRAIN	21	c	25.6	a	122.1	25.8	a	123	25.2	a	120.2
LVRIZF6162021	SB ANSIS	28-Jun-21	39 (39 - 43)	05-Aug-21	38	89 (89 - 89)	GRAIN	22.8	c	26	a	113.6	26.2	a	114.7	25.4	ab	111.2
PLSYZF6232021	SB PILOTE C1	14-Jun-21	49 (49 - 51)	20-Aug-21	67	89 (89 - 89)	GRAIN	59.1	ab	61.2	ab	103.6	64.1	ab	108.5	62.3	ab	105.5
PLSYZF6382021	SB ARGENTO	11-Jun-21	49 (49 - 51)	29-Jul-21	48	99 (99 - 99)	GRAIN	41.8	b	48.7	a	116.5	49.9	a	119.4	49.4	a	118.2

N =6	MEAN		46.6		49.3		109.3	50.6		111.9	49.3		109.0
	MIN		21		25.6		98.4	25.8		98.6	25.2		95.6
	MAX		76.6		75.4		122.1	75.5		123	73.2		120.2

Table 0-3: Yield data for spring barley in the presence of foliar disease in Germany, Poland and Latvia, at early application timing BBCH 31-33

Trial locations: Germany, Poland, Latvia						Product Name	CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
CROP: SPRING BARLEY Assessment data type, unit; YIELD, dt/ha						Product Rate Appl. Timing Active Ingredient			1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			1.25 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after first applic	Crop GS at asse. - maj. (min - max)	Mean	SNK	Mean	SNK	% Control	Mean	SNK	% Control	Mean	SNK	% Control
DESYZF6352021	SB AVALON	21-May-21	31 (30 - 30)	20-Jul-21	60	89 (89 - 89)	58	a	-	-	-	62.3	a	107.4	58.5	a	100.8
DESYZF6402021	SB PLANET	21-May-21	31 (30 - 32)	19-Jul-21	59	89 (89 - 89)	76.6	a	-	-	-	75.2	a	98.2	75.9	a	99.1
LVRIZF6112021	SB RASA	13-Jun-21	31 (31 - 31)	05-Aug-21	53	89 (89 - 89)	21	c	-	-	-	23.7	ab	113.2	22.8	bc	108.8
LVRIZF6162021	SB ANSIS	11-Jun-21	31 (31 - 31)	05-Aug-21	55	89 (89 - 89)	22.8	c	-	-	-	23.9	bc	104.8	24.2	abc	105.9
PLSYZF6232021	SB PILOTE C1	27-May-21	31 (31 - 32)	20-Aug-21	85	89 (89 - 89)	59.1	ab	-	-	-	61.7	ab	104.4	63.6	ab	107.7
PLSYZF6382021	SB ARGENTO	31-May-21	32 (32 - 33)	29-Jul-21	59	99 (99 - 99)	41.8	b	-	-	-	46.8	ab	112	46.6	ab	111.3

N=6	MEAN	46.6					48.9		106.7	48.6		105.6
	MIN	21					23.7		98.2	22.8		99.1
	MAX	76.6					75.2		113.2	75.9		111.3

Barley yield in presence of disease - Overall conclusion

Winter barley

The data presented from efficacy trials where foliar diseases were present, collected across Germany, Poland and Latvia, clearly demonstrated that plots treated with A23282A applied at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) consistently provided an increase in winter barley yield when compared to the untreated control. The observed yields were at least comparable or increased compared to those of the standard FANDANGO 200 EC at 1.25 LPR/ha (125 gai/ha prothioconazole + 125 gai/ha fluoxastrobin). A summary of the data is presented in Table 0-4.

Table 0-4: Mean yield of winter barley treated with A23282A in presence of foliar disease

Winter barley	Yield quantity data (mean % relative to untreated)		
	A23282A 1.5 LPR/ha	A23282A 2 LPR/ha	FANDANGO 200 EC 1.25 LPR/ha
Yield (n=20), late application timing	113.0 (98.6-129.6)	115.1 (99.7-133.1)	112.9 (97.3-126.2)
Yield (n=12), early application timing	114.1 (111.7-116.5) (n=2)	109.1 (101.7-122.9)	110.1 (96.9-123.4)

Spring barley

The data presented from efficacy trials where foliar diseases were present, collected across Germany, Poland and Latvia, clearly demonstrated that plots treated with A23282A applied at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) consistently provided an increase in spring barley yield when compared to the untreated control. The observed yields were at least comparable or increased compared to those of the standard FANDANGO 200 EC at 1.25 LPR/ha (125 gai/ha prothioconazole + 125 gai/ha fluoxastrobin). A summary of the data is presented in Table 0-5.

Table 0-5: Mean yield of spring barley treated with A23282A in presence of foliar disease

Spring barley	Yield quantity data (mean % relative to untreated)		
	A23282A 1.5 LPR/ha	A23282A 2 LPR/ha	FANDANGO 200 EC 1.25 LPR/ha
Yield (n=6), late application timing	109.3 (98.4-122.1)	111.9 (98.6-123)	109.0 (95.6-120.2)
Yield (n=6), early application timing	-	106.7 (98.2-113.2)	105.6 (99.1-111.3)

Overall conclusion

In conclusion, the data summarized across Germany, Poland and Latvia confirmed that A23282A applied at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) had no adverse effect on yield in the presence of disease. In the presence of disease, the data confirmed that controlling disease led to increases in barley yield, indicating that untreated disease can lead to significant yield reductions.

The data presented within this section fully support the proposed label claim of A23282A applied at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) for the control of foliar diseases on winter and spring barley in Poland.

Quality – Germany, Poland and Latvia data

Winter barley

A summary of the yield quality data in presence of disease are presented in Table 0-6 and Table 0-7 for hectolitre weight, Table 0-8 and Table 0-9 for the thousand grain weight and Table 0-10 and Table 0-11 for protein content. Yield quality data were obtained from 20 winter barley trials carried out during 2020 and 2021 in Germany, Poland and Latvia.

The objective was to confirm the yield quality response of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) in the presence of disease. A23282A was applied as a foliar spray either at the late application timing between BBCH 37-55 or at the early application timing between BBCH 31-32. A23282A was compared to the standard FANDANGO 200 EC at 1.25 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin) or to the standard FLEXITY 300 SC at 0.5 LPR/ha (150 gai/ha metrafenone).

The qualitative parameters assessed were hectolitre weight (HLW), thousand grain weight (TGW) and protein content.

Results

Hectolitre weight

Data for hectolitre weight are presented from trials with the late application timing from 18 trials in Table 0-6 and with the early application timing from 12 trials in Table 0-7.

Late application timing (BBCH 37-55)

For the efficacy trials the mean hectolitre weight from the untreated across the 18 trials was 57.8 kg/hl (range 47.2 kg/hl – 69.0 kg/hl). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the later application timing slightly increased the recorded winter barley hectolitre weight compared with the untreated control. Overall, across all the trials, A23282A gave a mean increase in winter barley hectolitre weight of 1.6% (range 95.3% – 105.2% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in hectolitre weight of the test product to be comparable to that of the standard FANDANGO 200 EC (1.5%).

The impact of lower label rate of 1.5 LPR/ha on HLW was assessed in 10 trials. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A at the later application timing gave slight increase in winter barley HLW of 1.3 % (range 99% – 103.1% of control) when compared to the untreated control. No statistically significant differences between dose rates were recorded.

Early application timing (BBCH 31-32)

For the efficacy trials the mean hectolitre weight from the untreated across the 12 trials was 57.0 kg/hl (range 47.2 kg/hl – 62.7 kg/hl). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the early application timing almost had no effect on the recorded winter barley hectolitre weight compared with the untreated control. Overall, across the 12 trials A23282A gave a mean slight decrease in winter barley hectolitre weight of -0.3% and the reference standard FANDANGO 200 EC gave a mean decrease of -1.6% and across the 2 trials where the reference standard

was FLEXITY the mean hectolitre weight achieved with A23282A was 99.5% and with FLEXITY 100.1%, relative to the untreated.

The impact of lower label rate of 1.5 LPR/ha on HLW was assessed in 1 trial. In this trial the proposed lower label rate of 1.5 LPR/ha of A23282A, the reference standards FANDANGO 200 EC and FLEXITY gave a slight decrease in HLW of -2.5%, -2.0% and -0.9% respectively, when compared to the untreated control.

Thousand grain weight

Data for thousand grain weight are presented from trials with the late application timing from 19 trials in Table 0-8 and with the early application timing from 12 trials in Table 0-9.

Late application timing (BBCH 37-55)

For the efficacy trials the mean thousand grain weight from the untreated across the 19 trials was 40.1 g (range 29.3 g – 54.9 g). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the later application timing increased the recorded winter barley thousand grain weight compared with the untreated control. Overall, across all the trials, A23282A gave a mean increase in winter barley thousand grain weight of 4.8% (range 98.1% – 117% of control) when compared to the untreated control

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in thousand grain weight of the test product to be comparable to that of the standard FANDANGO 200 EC (4.6%).

The impact of lower label rate of 1.5 LPR/ha on TGW was assessed in 11 trials. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A gave a mean increase in winter barley TGW of 3.0 % (range 99.9% – 109.5% of control) when compared to the untreated control. No statistically significant differences between dose rates were recorded.

Early application timing (BBCH 31-32)

For the efficacy trials the mean thousand grain weight from the untreated across the 12 trials was 38.5 g (range 29.3 g – 48.8g). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the early application timing increased the recorded winter barley thousand grain weight compared with the untreated control. Overall, across the 12 trials A23282A gave a mean increase in winter barley thousand grain weight of 2.6% and the reference standard FANDANGO 200 EC gave a mean increase of 3.4% and across the 2 trials where the reference standard was FLEXITY the mean thousand grain weight achieved with A23282A was 102.1% and with FLEXITY 101.9%, relative to the untreated.

The impact of lower label rate of 1.5 LPR/ha on TGW was assessed in 1 trial. In this trial the proposed lower label rate of 1.5 LPR/ha of A23282A and the reference standards FANANGO gave a slight decrease in TGW of -2.1% and -1.1%, respectively, when compared to the untreated control. The standard FLEXITY gave a slight increase in TGW (2.0%).

Protein content

Data for protein content are presented from trials with the late application timing from 20 trials in Table 0-10 and with the early application timing from 11 trials in Table 0-11.

Late application timing (BBCH 37-55)

For the efficacy trials the mean protein content from the untreated across the 20 trials was 11.9% (range 8.6% – 16.5%). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the later application timing had no negative impact on the recorded winter barley protein content. Overall, across all the trials A23282A gave a mean protein content of 102.1% (range 97.6% - 115% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean protein content of the test product to be comparable to that of the standard FANDANGO 200 EC (101.5%).

The impact of lower label rate of 1.5 LPR/ha on protein content was assessed in 11 trials. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A gave a mean increase in winter barley protein content of 1.8% (range 96.4% – 115.3% of control) when compared to the untreated control. The mean protein content was comparable to that of 2.0 LPR/ha dose rate (1.1%) and to the standard FANDANGO 200 EC (1.4%).

Early application timing (BBCH 31-32)

For the efficacy trials the mean protein content from the untreated across the 11 trials was 11.4% (range 8.6%– 16.5%). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the early application timing had no negative impact on the recorded winter barley protein content. Overall, across the 11 trials A23282A gave a mean increase in winter barley protein content of 1.5% and the reference standard FANDANGO 200 EC gave a mean increase of 2.6% and across the 2 trials where the reference standard was FLEXITY the mean protein content achieved with A23282A was -0.7% and with FLEXITY -1.1%, relative to the untreated.

The impact of a lower label rate of 1.5 LPR/ha at the early application timing on protein content was not tested in the presented trials.

Table 0-6: Hectolitre weight (HLW) of winter barley in the presence of disease in Germany and Poland, at late application timing BBCH 37-55

Trial locations: Germany, Poland						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
CROP: WINTER BARLEY Assessment data type, unit; HECTOLITRE WEIGHT, kg/hl						Product Rate Appl. Timing Active Ingredient				1.5 l/ha PREVEN CYPRODINIL PROTHIOCONAZOLE			2 l/ha PREVEN CYPRODINIL PROTHIOCONAZOLE			1.25 l/ha PREVEN PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% Control	Mean	SNK	% Control	Mean	SNK	% Control
DEDSZF5252020	CALIFORNIA	24-Apr-20	51 (39 - 51)	01-Feb-21	283	99 (99 - 99)	GRAIN	69		69		100	69		100	69.3		100.6
DEBCZF8512021	ORBIT	06-May-21	39 (39 - 39)	09-Jul-21	64	89 (89 - 89)	GRAIN	51.7		-	-	-	51.8		100.2	52.1		100.8
DEBCZF8532021	LOMERIT	06-May-21	41 (39 - 45)	05-Aug-21	91	99 (99 - 99)	GRAIN	51.3		-	-	-	52.9		103.1	54.1		105.5
PLDSZF7242020	WOOTAN	08-May-20	49 (49 - 51)	15-Sep-20	130	99 (99 - 99)	GRAIN	52.6	a	54.1	a	102.8	54.6	a	103.8	53.5	a	101.6
PLSGZF1022020	KAYLIN	27-Apr-20	39 (37 - 39)	21-Jul-20	85	99 (99 - 99)	GRAIN	63.9	bc	64.9	ab	101.5	65.8	a	103	65	ab	101.7
PLSOZF1062020	SCARPIA	20-Apr-20	33 (33 - 33)	17-Jul-20	88	99 (99 - 99)	GRAIN	54		55.5		102.9	55.7		103.1	55		101.8
PLUPZF1112020	ZENEK	08-May-20	45 (43 - 47)	27-Jul-20	80	99 (99 - 99)	GRAIN	55	a	54.8	a	99.7	55	a	100	54.4	a	98.9
PLUPZF1122020	ROSITA	08-May-20	45 (43 - 47)	27-Jul-20	80	99 (99 - 99)	GRAIN	61	a	60.4	a	99	62.6	a	102.7	62.7	a	102.9
PLUPZF1192020	KOBUZ	20-May-20	51 (49 - 55)	30-Jul-20	71	99 (99 - 99)	GRAIN	58.7	a	59.9	a	102	59.7	a	101.7	59.5	a	101.2
PLUPZF1202020	GLORIA	04-May-20	43 (41 - 45)	06-Aug-20	94	99 (99 - 99)	GRAIN	64.3	a	64	a	99.5	63.6	a	98.8	65	a	101.1
PLBCZF8552021	ASTAIRE	16-May-21	49 (47 - 49)	13-Sep-21	120	99 (99 - 99)	GRAIN	54.2		-	-	-	57		105.2	56.9		105
PLBCZF8562021	KAYLIN	15-May-21	49 (47 - 49)	13-Sep-21	121	99 (99 - 99)	GRAIN	55.4		-	-	-	56.8		102.5	56.8		102.5
PLDSZF7092021	WOOTAN	12-May-21	39 (39 - 43)	13-Jul-21	62	99 (99 - 99)	GRAIN	62.4	a	64.3	a	103.1	62.6	a	100.4	63.9	a	102.5
PLFPZF8542021	GLORIA	17-May-21	49 (49 - 51)	13-Jul-21	57	99 (99 - 99)	GRAIN	47.2	ab	48.2	ab	102.2	48.4	ab	102.4	50.7	a	107.3

Trial locations: Germany, Poland						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
CROP: WINTER BARLEY Assessment data type, unit; HECTOLITRE WEIGHT, kg/hl						Product Rate Appl. Timing Active Ingredient				1.5 l/ha PREVEN CYPRODINIL PROTHIOCONAZOLE			2 l/ha PREVEN CYPRODINIL PROTHIOCONAZOLE			1.25 l/ha PREVEN PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% Control	Mean	SNK	% Control	Mean	SNK	% Control
PLSOZF1132021	BARTOSZ	11-May-21	43 (43 - 43)	23-Jul-21	73	99 (99 - 99)	GRAIN	58.5	b	-	-	-	60	ab	102.6	60.5	a	103.4
PLSYZF6282021	TEPEE	18-May-21	47 (45 - 49)	15-Jul-21	58	99 (99 - 99)	GRAIN	61.1	b	-	-	-	63.4	a	103.7	63.4	a	103.8
PLSYZF6392021	GLORIA	11-May-21	39 (33 - 41)	19-Jul-21	69	89 (89 - 89)	GRAIN	59.9	a	-	-	-	59.8	a	99.9	60.7	a	101.5
PLSYZF6442021	KOSMOS	26-May-21	47 (45 - 49)	22-Jul-21	57	99 (99 - 99)	GRAIN	59.4	a	-	-	-	56.6	a	95.3	50.9	a	85.7

N =18	MEAN		57.8					58.6		101.6	58.6		101.5
	MIN		47.2					48.4		95.3	50.7		85.7
	MAX		69					69		105.2	69.3		107.3
N =10	MEAN		58.8		59.5		101.3	59.7		101.6	59.9		102.0
	MIN		47.2		48.2		99	48.4		98.8	50.7		98.9
	MAX		69		69		103.1	69		103.8	69.3		107.3

Table 0-7: Hectolitre weight (HLW) of winter barley in the presence of disease in Germany, Poland and Latvia, early application timing BBCH 31-32

Trial locations: Germany, Poland, Latvia						Product Name	CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC			FLEXITY 300 SC		
CROP: WINTER BARLEY						Product Rate			1.5 l/ha			2 l/ha			1.25 l/ha			0.5 l/ha		
Assessment data type, unit; HECTOLITRE WEIGHT, kg/hl						Appl. Timing			POEMCR			POEMCR			POEMCR					
						Active Ingredient			CYPRODINIL PROTHIOCONAZOLE			CYPRODINIL PROTHIOCONAZOLE			PROTHIOCONAZOLE FLUXASTROBIN			METRAFENONE		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after first applic	Crop GS at asse. - maj. (min - max)	Mean	SNK				Mean	SNK	% Control	Mean	SNK	% Control	Mean	SNK	% Control
DEBCZF8512021	ORBIT	23-Apr-21	32 (32 - 32)	09-Jul-21	77	89 (89 - 89)	51.7		-	-	-	48.4		93.6	48.6		94			
DEBCZF8532021	LOMERIT	20-Apr-21	32 (31 - 33)	05-Aug-21	107	99 (99 - 99)	51.3		-	-	-	51.3		100	52		101.4			
PLBCZF8552021	ASTAIRE	04-May-21	32 (32 - 32)	13-Sep-21	132	99 (99 - 99)	54.2		-	-	-	55.6		102.6	55.1		101.7			
PLBCZF8562021	KAYLIN	06-May-21	32 (32 - 33)	13-Sep-21	130	99 (99 - 99)	55.4		-	-	-	55.1		99.5	55.3		99.8			
PLDSZF7092021	WOOTAN	28-Apr-21	32 (32 - 33)	13-Jul-21	76	99 (99 - 99)	62.4	a	-	-	-	62.1	a	99.6	63.2	a	101.3			
PLFPZF8542021	GLORIA	19-Apr-21	31 (31 - 32)	13-Jul-21	85	99 (99 - 99)	47.2	ab	-	-	-	46.8	ab	99	46.1	b	97.6			
PLSOZF1132021	BARTOSZ	27-Apr-21	31 (31 - 32)	23-Jul-21	87	99 (99 - 99)	58.5	b	-	-	-	59.2	ab	101.2	60.3	a	103			
PLSYZF6282021	TEPEE	04-May-21	32 (31 - 32)	15-Jul-21	72	99 (99 - 99)	61.1	b	-	-	-	63.5	a	103.9	63.2	a	103.4			
PLSYZF6392021	GLORIA	20-Apr-21	31 (31 - 32)	19-Jul-21	90	89 (89 - 89)	59.9	a	-	-	-	61.5	a	102.8	58.3	a	97.3			
PLSYZF6442021	KOSMOS	05-May-21	32 (31 - 33)	22-Jul-21	78	99 (99 - 99)	59.4	a	-	-	-	56.5	a	95.1	48.6	a	81.8			
LVRIZF7612021	KOSMOS	29-Apr-21	31 (31 - 32)	12-Jul-21	74	99 (99 - 99)	60.7		59.2		97.5	59.6		98.2	59.5		98	60.2		99.1
PLSOZF7672021	GLORIA	27-Apr-21	31 (31 - 31)	26-Jul-21	90	99 (99 - 99)	62.7	a	-	-	-	63.2	a	100.7	63.9	a	101.9	63.4	a	101

N =12	MEAN	57.0					56.9		99.7	56.2		98.4			
	MIN	47.2					46.8		93.6	46.1		81.8			
	MAX	62.7					63.5		103.9	63.9		103.4			
N =2	MEAN	61.7					61.4		99.5	61.7		100.0			100.1

Trial locations: Germany, Poland, Latvia CROP: WINTER BARLEY Assessment data type, unit; HECTOLITRE WEIGHT, kg/hl						Product Name Product Rate Appl. Timing Active Ingredient	CHECK OVERSPRAY		A23282 [A] 1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			A23282 [A] 2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			FANDANGO 200 EC 1.25 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN			FLEXITY 300 SC 0.5 l/ha METRAFENONE		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after first applic	Crop GS at asse. - maj. (min - max)	Mean	SNK				Mean	SNK	% Control	Mean	SNK	% Control	Mean	SNK	% Control
						MIN	60.7					59.6		98.2	59.5		98			99.1
						MAX	62.7					63.2		100.7	63.9		101.9			101

Table 0-8: Thousand grain weight (TGW) of winter barley in the presence of disease in Germany and Poland, at late application timing BBCH 37-55

Trial locations: Germany, Poland						Product Name		CHECK 1		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
CROP: WINTER BARLEY Assessment data type, unit; THOUSAND GRAIN WEIGHT, G						Product Rate Appl. Timing Active Ingredient				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha ACCRST CYPRODINIL PROTHIOCONAZOLE			1.25 l/ha ACCRST PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control
DEBCZF8512021	ORBIT	06-May-21	39 (39 - 39)	09-Jul-21	64	89 (89 - 89)	GRAIN	36.9		-	-	-	36.2		98.1	35.8		96.9
DEBCZF8532021	LOMERIT	06-May-21	41 (39 - 45)	05-Aug-21	91	99 (99 - 99)	GRAIN	30.4		-	-	-	31.6		103.9	33.6		110.5
DEDSZF5252020	CALIFORNIA	24-Apr-20	51 (39 - 51)	01-Feb-21	283	99 (99 - 99)	GRAIN	54.9		56		102	54.6		99.6	56.4		102.9
PLBCZF8552021	ASTAIRE	16-May-21	49 (47 - 49)	13-Sep-21	120	99 (99 - 99)	GRAIN	29.8		-	-	-	34.8		117	33.9		114
PLBCZF8562021	KAYLIN	15-May-21	49 (47 - 49)	13-Sep-21	121	99 (99 - 99)	GRAIN	39.4		-	-	-	41		104	41.9		106.3
PLDSZF7092021	WOOTAN	12-May-21	39 (39 - 43)	21-Sep-21	132	99 (99 - 99)	GRAIN	29.3		31		105.9	32.1		109.5	30.6		104.6
PLFPZF8542021	GLORIA	17-May-21	49 (49 - 51)	23-Aug-21	98	99 (99 - 99)	GRAIN	38.7		38.7		99.9	39		100.7	38.7		99.9
PLSOZF1132021	BARTOSZ	11-May-21	43 (43 - 43)	22-Jul-21	72	99 (99 - 99)	GRAIN	33.5	b	-	-	-	36.5	a	109	36.8	a	109.9
PLSYZF6282021	TEPEE	18-May-21	47 (45 - 49)	15-Jul-21	58	99 (99 - 99)	GRAIN	41.5	b	-	-	-	43.5	a	104.8	43.5	a	104.8
PLSYZF6392021	GLORIA	11-May-21	39 (33 - 41)	19-Jul-21	69	89 (89 - 89)	GRAIN	48.8	b	-	-	-	53.3	ab	109.3	53.8	a	110.4
PLSYZF6442021	KOSMOS	26-May-21	47 (45 - 49)	22-Jul-21	57	99 (99 - 99)	GRAIN	41.6	a	-	-	-	41.4	a	99.4	40.5	a	97.4
PLDSZF5052020	BARACUDA	10-May-20	51 (49 - 51)	20-Jul-20	71	97 (97 - 97)	GRAIN	39.6	a	40.6	a	102.4	41.8	a	105.5	38.9	a	98.2
PLDSZF7242020	WOOTAN	08-May-20	49 (49 - 51)	15-Sep-20	130	99 (99 - 99)	GRAIN	41.7		43.5		104.3	42.9		102.9	46.5		111.5
PLSGZF1022020	KAYLIN	27-Apr-20	39 (37 - 39)	21-Jul-20	85	99 (99 - 99)	GRAIN	49.5	a	49.6	a	100.3	49.3	a	99.6	49	a	98.9
PLSOZF1062020	SCARPIA	20-Apr-20	33 (33 - 33)	17-Jul-20	88	99 (99 - 99)	GRAIN	37.2		39.5		106	41.9		112.6	41.4		111.1
PLUPZF1112020	ZENEK	08-May-20	45 (43 - 47)	27-Jul-20	80	99 (99 - 99)	GRAIN	42.4	ab	42.8	ab	101.1	42.9	ab	101.3	42.5	ab	100.4

Trial locations: Germany, Poland						Product Name		CHECK 1		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
CROP: WINTER BARLEY Assessment data type, unit; THOUSAND GRAIN WEIGHT, G						Product Rate Appl. Timing				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha ACCRST CYPRODINIL PROTHIOCONAZOLE			1.25 l/ha ACCRST PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control
PLUPZF1122020	ROSITA	08-May-20	45 (43 - 47)	27-Jul-20	80	99 (99 - 99)	GRAIN	42.9	ab	43	ab	100.4	43.6	ab	101.8	43.7	a	102
PLUPZF1192020	KOBUZ	20-May-20	51 (49 - 55)	30-Jul-20	71	99 (99 - 99)	GRAIN	35.6	ab	36.2	ab	101.5	36.7	ab	103	36.7	ab	103.1
PLUPZF1202020	GLORIA	04-May-20	43 (41 - 45)	06-Aug-20	94	99 (99 - 99)	GRAIN	48.6	c	53.2	a	109.5	53.3	a	109.8	51.1	b	105.1
N =19		MEAN				40.1							41.9		104.8	41.9		104.6
		MIN				29.3							31.6		98.1	30.6		96.9
		MAX				54.9							54.6		117	56.4		114
N =11		MEAN				41.9				43.1		103.0	43.5		104.2	43.2		103.4
		MIN				29.3				31		99.9	32.1		99.6	30.6		98.2
		MAX				54.9				56		109.5	54.6		112.6	56.4		111.5

Table 0-9: Thousand grain weight (TGW) of winter barley in the presence of disease in Germany, Poland and Latvia, at early application timing BBCH 31-32

Trial locations: Germany, Poland, Latvia						Product Name		CHECK 1		A23282 [A]			A23282 [A]			FANDANGO 200 EC			FLEXITY 300 SC		
CROP: WINTER BARLEY						Product Rate		Product Rate		1.5 l/ha			2 l/ha			1.25 l/ha			0.5 l/ha		
Assessment data type, unit; THOUSAND GRAIN WEIGHT, G						Appl. Timing		Appl. Timing		CYPRODINIL			CYPRODINIL			PROTHIOCONAZOL			ACCRST		
						Active Ingredient				PROTHIOCONAZOL			PROTHIOCONAZOL			E			METRAFENONE		
										E			E			FLUOXASTROBIN					
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after first applic	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% contro l	Mean	SNK	% contro l	Mean	SNK	% contro l	Mean	SNK	% control
DEBCZF8512021	ORBIT	23-Apr-21	32 (32 - 32)	09-Jul-21	77	89 (89 - 89)	GRAIN	36.9		-	-	-	34.9		94.4	35.7		96.7			
DEBCZF8532021	LOMERIT	20-Apr-21	32 (31 - 33)	05-Aug-21	107	99 (99 - 99)	GRAIN	30.4		-	-	-	30.3		99.7	31.2		102.6			
PLBCZF8552021	ASTAIRE	04-May-21	32 (32 - 32)	13-Sep-21	132	99 (99 - 99)	GRAIN	29.8		-	-	-	33.3		111.9	31.2		104.9			
PLBCZF8562021	KAYLIN	06-May-21	32 (32 - 33)	13-Sep-21	130	99 (99 - 99)	GRAIN	39.4		-	-	-	39.1		99.3	40.4		102.4			
PLDSZF7092021	WOOTAN	28-Apr-21	32 (32 - 33)	21-Sep-21	146	99 (99 - 99)	GRAIN	29.3		-	-	-	32		109.2	31.6		107.8			
PLFPZF8542021	GLORIA	19-Apr-21	31 (31 - 32)	23-Aug-21	126	99 (99 - 99)	GRAIN	38.7		-	-	-	40		103.3	39.2		101.2			
PLSOZF1132021	BARTOSZ	27-Apr-21	31 (31 - 32)	22-Jul-21	86	99 (99 - 99)	GRAIN	33.5	b	-	-	-	35.9	a	107.2	36.3	a	108.3			
PLSYZF6282021	TEPEE	04-May-21	32 (31 - 32)	15-Jul-21	72	99 (99 - 99)	GRAIN	41.5	b	-	-	-	43.3	a	104.3	43.5	a	104.7			
PLSYZF6392021	GLORIA	20-Apr-21	31 (31 - 32)	19-Jul-21	90	89 (89 - 89)	GRAIN	48.8	b	-	-	-	50	ab	102.6	52.6	ab	107.9			
PLSYZF6442021	KOSMOS	05-May-21	32 (31 - 33)	22-Jul-21	78	99 (99 - 99)	GRAIN	41.6	a	-	-	-	39.7	a	95.4	41.6	a	99.9			
LVRIZF7612021	KOSMOS	29-Apr-21	31 (31 - 32)	12-Jul-21	74	99 (99 - 99)	GRAIN	44.5		43.6		97.9	44.9		100.8	44.1		98.9	45.4		102
PLSOZF7672021	GLORIA	27-Apr-21	31 (31 - 31)	23-Jul-21	87	99 (99 - 99)	GRAIN	47	a	-	-	-	48.6	a	103.4	49.7	a	105.8	47.8	a	101.8

N =12	MEAN		38.5					39.3		102.6	39.8		103.4							
	MIN		29.3					30.3		94.4	31.2		96.7							
	MAX		48.8					50		111.9	52.6		108.3							
N =2	MEAN		45.8					46.8		102.1	46.9		102.4							101.9
	MIN		44.5					44.9		100.8	44.1		98.9							101.8

Trial locations: Germany, Poland, Latvia						Product Name		CHECK 1		A23282 [A]			A23282 [A]			FANDANGO 200 EC			FLEXITY 300 SC		
CROP: WINTER BARLEY Assessment data type, unit; THOUSAND GRAIN WEIGHT, G						Product Rate Appl. Timing				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOL E			2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOL E			1.25 l/ha POEMCR PROTHIOCONAZOL E FLUOXASTROBIN			0.5 l/ha ACCRST METRAFENONE		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after first applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% contro l	Mean	SNK	% contro l	Mean	SNK	% contro l	Mean	SNK	% control
						MAX		47					48.6		103.4	49.7		105.8			102

Table 0-10: Protein content of winter barley in the presence of foliar disease in Germany and Poland, at late application timing BBCH 37-55

Trial locations: Germany, Poland						Product Name		CHECK 1		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
CROP: WINTER BARLEY Assessment data type, unit; PROTEIN CONTENT, %						Product Rate Appl. Timing				1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha ACCRST CYPRODINIL PROTHIOCONAZOLE			1.25 l/ha ACCRST PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	MEAN	SNK	MEAN	SNK	% control	MEAN	SNK	% control	MEAN	SNK	% control
DEBCZF8512021	ORBIT	06-May-21	39 (39 - 39)	09-Jul-21	64	99 (99 - 99)	GRAIN	12.6		-	-	-	12.8		101.7	12.4		98.8
DEBCZF8532021	LOMERIT	06-May-21	41 (39 - 45)	05-Aug-21	91	99 (99 - 99)	GRAIN	16.5		-	-	-	16.1		97.6	15.9		96.4
DEDSZF4072020	SANDRA	28-Apr-20	49 (45 - 49)	30-Sep-20	155	99 (99 - 99)	GRAIN	12.9		13		100.8	13		100.8	13		100.8
DEDSZF5252020	CALIFORNIA	24-Apr-20	51 (39 - 51)	01-Feb-21	283	99 (99 - 99)	GRAIN	12.6		12.6		100	13		103.2	12.4		98.4
PLBCZF8552021	ASTAIRE	16-May-21	49 (47 - 49)	13-Sep-21	120	99 (99 - 99)	GRAIN	11.7		-	-	-	11.7		100	12.3		105.1
PLBCZF8562021	KAYLIN	15-May-21	49 (47 - 49)	13-Sep-21	121	99 (99 - 99)	GRAIN	8.6		-	-	-	8.5		98.8	8.7		101.2
PLDSZF7092021	WOOTAN	12-May-21	39 (39 - 43)	21-Sep-21	132	99 (99 - 99)	GRAIN	11.1		12.8		115.3	11		99.1	13.2		118.9
PLFPZF8542021	GLORIA	17-May-21	49 (49 - 51)	26-Aug-21	101	99 (99 - 99)	GRAIN	10.3		-	-	-	11		106.8	10.3		100

Trial locations: Germany, Poland						Product Name		CHECK 1		A23282 [A]			A23282 [A]			FANDANGO 200 EC			
CROP: WINTER BARLEY Assessment data type, unit; PROTEIN CONTENT, %						Product Rate Appl. Timing Active Ingredient					1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			2 l/ha ACCRST CYPRODINIL PROTHIOCONAZOLE			1.25 l/ha ACCRST PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	MEAN	SNK	MEAN	SNK	% control	MEAN	SNK	% control	MEAN	SNK	% control	
PLSOZF1132021	BARTOSZ	11-May-21	43 (43 - 43)	02-Aug-21	83	99 (99 - 99)	GRAIN	9.4	a	-	-	-	9.7	a	102.9	9.9	a	105.4	
PLSYZF6282021	TEPEE	18-May-21	47 (45 - 49)	30-Sep-21	135	99 (99 - 99)	GRAIN	10.8	a	-	-	-	11.2	a	104.4	11.3	a	104.6	
PLSYZF6392021	GLORIA	11-May-21	39 (33 - 41)	24-Sep-21	136	89 (89 - 89)	GRAIN	12.6	a	-	-	-	12.9	a	102.8	12.7	a	101.4	
PLSYZF6442021	KOSMOS	26-May-21	47 (45 - 49)	12-Oct-21	139	99 (99 - 99)	GRAIN	10.7		-	-	-	12.3		115	10.9		101.9	
PLDSZF5052020	BARACUDA	10-May-20	51 (49 - 51)	01-Sep-20	114	99 (99 - 99)	GRAIN	12.5		13.4		107.2	13.5		108	13		104	
PLDSZF7242020	WOOTAN	08-May-20	49 (49 - 51)	15-Sep-20	130	99 (99 - 99)	GRAIN	10.7		10.4		97.2	10.8		100.9	10.8		100.9	
PLSGZF1022020	KAYLIN	27-Apr-20	39 (37 - 39)	21-Jul-20	85	99 (99 - 99)	GRAIN	12.9	a	12.9	a	99.4	12.9	a	100.2	12.7	a	98.5	
PLSOZF1062020	SCARPIA	20-Apr-20	33 (33 - 33)	16-Jul-20	87	99 (99 - 99)	GRAIN	12.1		12.2		100.9	12		98.9	11.2		92.3	
PLUPZF1112020	ZENEK	08-May-20	45 (43 - 47)	28-Aug-20	112	99 (99 - 99)	GRAIN	10.8		11.2		103.7	10.6		98.1	10.9		100.9	
PLUPZF1122020	ROSITA	08-May-20	45 (43 - 47)	27-Aug-20	111	99 (99 - 99)	GRAIN	11.1		10.7		96.4	11.2		100.9	11.2		100.9	
PLUPZF1192020	KOBUZ	20-May-20	51 (49 - 55)	31-Aug-20	103	99 (99 - 99)	GRAIN	14.6		14.1		96.6	14.6		100	14.5		99.3	
PLUPZF1202020	GLORIA	04-May-20	43 (41 - 45)	31-Aug-20	119	99 (99 - 99)	GRAIN	13.5		13.8		102.2	13.8		102.2	13.6		100.7	
						N =20	MEAN		11.9				12.1		102.1	12.0		101.5	
							MIN		8.6				8.5		97.6	8.7		92.3	
							MAX		16.5				16.1		115	15.9		118.9	
						N =11	MEAN		12.3		12.5	101.8	12.4		101.1	12.4		101.4	
							MIN		10.7		10.4	96.4	10.6		98.1	10.8		92.3	
							MAX		14.6		14.1	115.3	14.6		108	14.5		118.9	

Table 0-11: Protein content of winter barley in the presence of foliar disease in Germany, Poland and Latvia, at early application timing BBCH 31-32

Trial locations: Germany, Poland, Latvia						Product Name Product Rate Appl. Timing Active Ingredient	CHECK 1		A23282 [A] 1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			A23282 [A] 2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			FANDANGO 200 EC 1.25 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN			FLEXITY 300 SC 0.5 l/ha ACCRST METRAFENONE		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessme nt date	Days after first applic	Crop GS at asse. - maj. (min - max)	MEAN	SNK	MEA N	SNK	% control	MEA N	SNK	% control	MEA N	SNK	% control	Mean	SNK	% control
DEBCZF8512021	ORBIT	23-Apr-21	32 (32 - 32)	09-Jul-21	77	99 (99 - 99)	12.6		-	-	-	12.9		102.6	13.3		105.7			
DEBCZF8532021	LOMERIT	20-Apr-21	32 (31 - 33)	05-Aug-21	107	99 (99 - 99)	16.5		-	-	-	16.1		97.6	16.5		100			
PLBCZF8552021	ASTAIRE	04-May-21	32 (32 - 32)	13-Sep-21	132	99 (99 - 99)	11.7		-	-	-	11.5		98.3	12.3		105.1			
PLBCZF8562021	KAYLIN	06-May-21	32 (32 - 33)	13-Sep-21	130	99 (99 - 99)	8.6		-	-	-	8.5		98.8	8.8		102.3			
PLDSZF7092021	WOOTAN	28-Apr-21	32 (32 - 33)	21-Sep-21	146	99 (99 - 99)	11.1		-	-	-	11.5		103.6	11.5		103.6			
PLFPZF8542021	GLORIA	19-Apr-21	31 (31 - 32)	26-Aug-21	129	99 (99 - 99)	10.3		-	-	-	10.8		104.9	10.5		101.9			
PLSOZF1132021	BARTOSZ	27-Apr-21	31 (31 - 32)	02-Aug-21	97	99 (99 - 99)	9.4	a	-	-	-	9.8	a	103.6	9.8	a	104.2			
PLSYZF6282021	TEPEE	04-May-21	32 (31 - 32)	30-Sep-21	149	99 (99 - 99)	10.8	a	-	-	-	10.9	a	101.4	11.1	a	102.6			
PLSYZF6392021	GLORIA	20-Apr-21	31 (31 - 32)	24-Sep-21	157	89 (89 - 89)	12.6	a	-	-	-	12.8	a	101.6	12.8	a	102.2			
PLSYZF6442021	KOSMOS	05-May-21	32 (31 - 33)	12-Oct-21	160	99 (99 - 99)	10.7		-	-	-	11.5		107.5	10.5		98.1			
LVRIZF7612021	KOSMOS	29-Apr-21	31 (31 - 32)	22-Jul-21	84	99 (99 - 99)	11.1		-	-	-	10.7		96.5	10.9		98.4	11.3		101.9
PLSOZF7672021	GLORIA	27-Apr-21	31 (31 - 31)	02-Aug-21	97	99 (99 - 99)	11.7	a	-	-	-	11.9	a	102.1	12.5	a	107	11.2	a	95.8
N =11		MEAN	11.4									11.6		101.5	11.7		102.6			
		MIN	8.6									8.5		96.5	8.8		98.1			
		MAX	16.5									16.1		107.5	16.5		107			
N =2		MEAN	11.4									11.3		99.3	11.7		102.7	11.3		98.9
		MIN	11.1									10.7		96.5	10.9		98.4	11.2		95.8

Trial locations: Germany, Poland, Latvia						Product Name Product Rate Appl. Timing Active Ingredient	CHECK 1		A23282 [A] 1.5 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			A23282 [A] 2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			FANDANGO 200 EC 1.25 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN			FLEXITY 300 SC 0.5 l/ha ACCRST METRAFENONE		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessme nt date	Days after first applic	Crop GS at asse. - maj. (min - max)	MEAN	SNK	MEA N	SNK	% control	MEA N	SNK	% control	MEA N	SNK	% control	Mean	SNK	% control
						MAX	11.7					11.9		102.1	12.5		107	11.3		101.9

Spring barley

A summary of the yield quality data from spring barley efficacy trials in presence of disease are presented in Table 0-12 and Table 0-40 for hectolitre weight, Table 0-41 and Table 0-42 for the thousand grain weight and Table 0-43 and Table 0-44 for protein content. Yield quality data were obtained from 6 spring barley trials carried out during 2021 in Germany, Poland and Latvia.

The objective was to confirm the yield quality response of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) in the presence of disease. A23282A was applied as a foliar spray either at the late application timing between BBCH 39-51 or at the early application timing between BBCH 31-33. A23282A was compared to the standard FANDANGO 200 EC at 1.25 LPR/ha (125 gai/ha prothioconazole + 125 gai/ha fluoxastrobin).

The qualitative parameters assessed were hectolitre weight (HLW), thousand grain weight (TGW) and protein content.

Results

Hectolitre weight

Data for hectolitre weight are presented from trials with the late application timing from 6 trials in Table 0-12 and with the early application timing from 6 trials in Table 0-40.

Late application timing (BBCH 39-51)

For the efficacy trials the mean hectolitre weight from the untreated across the 6 trials was 60.0 kg/hl (range 56.4 kg/hl – 64.1 kg/hl). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the later application timing slightly increased the recorded spring barley hectolitre weight compared with the untreated control. Overall, across all the trials, A23282A gave a mean increase in spring barley hectolitre weight of 1.2% (range 98.3% – 107.1% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in hectolitre weight of the test product to be comparable to that of the standard FANDANGO 200 EC (1.7%).

The impact of lower label rate of 1.5 LPR/ha on HLW was assessed in 2 trials. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A at the later application timing gave slight increase in spring barley HLW of 0.7 % (range 99.9% – 101.4% of control) when compared to the untreated control. No statistically significant differences between dose rates were recorded.

Early application timing (BBCH 31-33)

For the efficacy trials the mean hectolitre weight from the untreated across the 6 trials was 60.0 kg/hl (range 56.4 kg/hl – 64.1 kg/hl). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the early application timing increased the recorded spring barley hectolitre weight compared with the untreated control. Overall, across the 6 trials, A23282A gave a mean increase in spring barley hectolitre weight of 1.0% and the reference standard FANDANGO 200 EC gave a mean increase of 1.7%, relative to the untreated.

The impact of a lower label rate of 1.5 LPR/ha at the early application timing on HLW was not tested in the presented trials.

Thousand grain weight

Data for thousand grain weight are presented from trials with the late application timing from 6 trials in Table 0-41 and with the early application timing from 6 trials in Table 0-42.

Late application timing (BBCH 39-51)

For the efficacy trials the mean thousand grain weight from the untreated across the 6 trials was 41.4 g (range 36.7 g – 45 g). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the later application timing increased the recorded spring barley thousand grain weight compared with the untreated control. Overall, across all the trials A23282A gave a mean increase in spring barley thousand grain weight of 4.0% (range 97.9% – 116.8% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in thousand grain weight of the test product to be comparable to that of the standard FANDANGO 200 EC (4.4%).

The impact of lower label rate of 1.5 LPR/ha on TGW was assessed in 2 trials. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A gave a mean increase in spring barley TGW of 4.2 % (range 101.9% – 106.4% of control) when compared to the untreated control. No statistically significant differences between dose rates were recorded.

Early application timing (BBCH 31-33)

For the efficacy trials the mean thousand grain weight from the untreated across the 6 trials was 41.4 g (range 36.7 g – 45 g). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the early application timing increased the recorded spring barley thousand grain weight compared with the untreated control. Overall, across the 6 trials A23282A gave a mean increase in spring barley TGW of 4.7% and the reference standard FANDANGO 200 EC gave a mean increase of 4.8% relative to the untreated.

The impact of a lower label rate of 1.5 LPR/ha at the early application timing on TGW was not tested in the presented trials.

Protein content

Data for protein content are presented from trials with the late application timing from 6 trials in Table 0-43 and with the early application timing from 6 trials in Table 0-44.

Late application timing (BBCH 39-51)

For the efficacy trials the mean protein content from the untreated across the 6 trials was 12.9% (range 10.9% – 15.9%). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the later application timing had no negative impact on the recorded spring barley protein content. Overall, across all the trials A23282A gave a mean increase in spring barley protein content of 0.6% (range 98% - 104.2% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean protein content of the test product to be comparable to that of the standard FANDANGO 200 EC (-0.9% decrease).

The impact of lower label rate of 1.5 LPR/ha on protein content was assessed in 2 trials. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A gave a mean decrease in spring barley protein content of -1.6% (range 96.8% – 100% of control) when compared to the untreated control. No statistically significant differences between dose rates were recorded.

Early application timing (BBCH 31-33)

For the efficacy trials the mean protein content from the untreated across the 6 trials was 12.9% (range 10.9% – 15.9%). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha at the early application timing had no negative impact on the recorded spring barley protein content.

Overall, across the 6 trials A23282A gave a mean protein content of 99.7% and the reference standard FANDANGO 200 EC gave a mean protein content of 96.3%, relative to the untreated.

The impact of a lower label rate of 1.5 LPR/ha at the early application timing on protein content was not tested in the presented trials.

Table 0-12: Hectolitre weight (HLW) of spring barley in the presence of disease in Germany, Poland and Latvia, at late application timing BBCH 39-51

Trial locations: Germany, Poland, Latvia						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
CROP: SPRING BARLEY						Product Rate				1.5 l/ha			2 l/ha			1.25 l/ha		
Assessment data type, unit; HECTOLITRE WEIGHT, kg/hl						Appl. Timing				PREVEN			PREVEN			PREVEN		
						Active Ingredient				CYPRODINIL PROTHIOCONAZOLE			CYPRODINIL PROTHIOCONAZOLE			PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% Control	Mean	SNK	% Control	Mean	SNK	% Control
DESYZF6352021	SB AVALON	14-Jun-21	49 (47 - 51)	20-Jul-21	36	99 (99 - 99)	GRAIN	59	a	59.9	a	101.4	60	a	101.7	59.5	a	100.7
DESYZF6402021	SB PLANET	14-Jun-21	49 (49 - 51)	20-Jul-21	36	99 (99 - 99)	GRAIN	64.1	a	64	a	99.9	63.9	a	99.7	64.5	a	100.6
LVRIZF6112021	SB RASA	28-Jun-21	39 (39 - 43)	27-Aug-21	60	99 (99 - 99)	GRAIN	60.4		-	-	-	59.4		98.3	59.8		99.1
LVRIZF6162021	SB ANSIS	28-Jun-21	39 (39 - 43)	27-Aug-21	60	99 (99 - 99)	GRAIN	61.5		-	-	-	61.3		99.7	61.9		100.6
PLSYZF6232021	SB PILOTE C1	14-Jun-21	49 (49 - 51)	20-Aug-21	67	89 (89 - 89)	GRAIN	58.4	a	-	-	-	58.9	a	100.8	58.9	a	100.9
PLSYZF6382021	SB ARGENTO	11-Jun-21	49 (49 - 51)	09-Aug-21	59	99 (99 - 99)	GRAIN	56.4	b	-	-	-	60.4	a	107.1	61.1	a	108.4

N =6	MEAN		60.0					60.7		101.2	61.0		101.7
	MIN		56.4					58.9		98.3	58.9		99.1
	MAX		64.1					63.9		107.1	64.5		108.4
N =2	MEAN		61.6		62.0		100.7	62.0		100.7	62.0		100.7
	MIN		59		59.9		99.9	60		99.7	59.5		100.6
	MAX		64.1		64		101.4	63.9		101.7	64.5		100.7

Table 0-40: Hectolitre weight (HLW) of spring barley in the presence of disease in Germany, Poland and Latvia, at early application timing BBCH 31-33

Trial locations: Germany, Poland, Latvia CROP: SPRING BARLEY Assessment data type, unit; HECTOLITRE WEIGHT, kg/hl						Product Name Product Rate Appl. Timing Active Ingredient	CHECK OVERSPRAY		A23282 [A] 1.5 l/ha PREVEN CYPRODINIL PROTHIOCONAZOLE			A23282 [A] 2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			FANDANGO 200 EC 1.25 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after first applic	Crop GS at asse. - maj. (min - max)	Mean	SNK				Mean	SNK	% Control	Mean	SNK	% Control
DESYZF6352021	SB AVALON	21-May-21	31 (30 - 30)	20-Jul-21	60	99 (99 - 99)	59	a	-	-	-	60	a	101.5	59.2	a	100.3
DESYZF6402021	SB PLANET	21-May-21	31 (30 - 32)	20-Jul-21	60	99 (99 - 99)	64.1	a	-	-	-	64.9	a	101.2	64.5	a	100.7
LVRIZF6112021	SB RASA	13-Jun-21	31 (31 - 31)	27-Aug-21	75	99 (99 - 99)	60.4		-	-	-	59.6		98.7	60.6		100.4
LVRIZF6162021	SB ANSIS	11-Jun-21	31 (31 - 31)	27-Aug-21	77	99 (99 - 99)	61.5		-	-	-	61.6		100.2	62.4		101.4
PLSYZF6232021	SB PILOTE C1	27-May-21	31 (31 - 32)	20-Aug-21	85	89 (89 - 89)	58.4	a	-	-	-	57.1	a	97.8	59.4	a	101.7
PLSYZF6382021	SB ARGENTO	31-May-21	32 (32 - 33)	09-Aug-21	70	99 (99 - 99)	56.4	b	-	-	-	60	a	106.3	59.4	a	105.4
N =6							MEAN	60.0				60.5		101.0	60.9		101.7
							MIN	56.4				57.1		97.8	59.2		100.3
							MAX	64.1				64.9		106.3	64.5		105.4

Table 0-41: Thousand grain weight (TGW) of spring barley in the presence of disease in Germany, Poland and Latvia, at late application timing BBCH 39-51

Trial locations: Germany, Poland, Latvia						Product Name		CHECK 1		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
CROP: SPRING BARLEY						Product Rate				1.5 l/ha			2 l/ha			1.25 l/ha		
Assessment data type, unit; THOUSAND GRAIN WEIGHT, G						Appl. Timing				PREVEN CYPRODINIL PROTHIOCONAZOLE			ACCRST CYPRODINIL PROTHIOCONAZOLE			ACCRST PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK				Mean	SNK	% control	Mean	SNK	% control
DESYZF6352021	SB AVALON	14-Jun-21	49 (47 - 51)	20-Jul-21	36	99 (99 - 99)	GRAIN	39.2	b	41.7	a	106.4	40.7	ab	103.8	40.7	ab	103.9
DESYZF6402021	SB PLANET	14-Jun-21	49 (49 - 51)	20-Jul-21	36	99 (99 - 99)	GRAIN	45.0	a	45.8	a	101.9	44.4	a	98.8	45.7	a	101.7
LVRIZF6112021	SB RASA	28-Jun-21	39 (39 - 43)	27-Aug-21	60	99 (99 - 99)	GRAIN	43.2		-	-	-	42.3		97.9	41.8		96.6
LVRIZF6162021	SB ANSIS	28-Jun-21	39 (39 - 43)	27-Aug-21	60	99 (99 - 99)	GRAIN	44.5		-	-	-	44.5		100.2	45.2		101.6
PLSYZF6232021	SB PILOTE C1	14-Jun-21	49 (49 - 51)	20-Aug-21	67	89 (89 - 89)	GRAIN	39.7	b	-	-	-	42.2	a	106.3	42.3	a	106.7
PLSYZF6382021	SB ARGENTO	11-Jun-21	49 (49 - 51)	09-Aug-21	59	99 (99 - 99)	GRAIN	36.7	b	-	-	-	42.9	a	116.8	42.5	a	115.7

N =6	MEAN		41.4					42.8		104.0	43.0		104.4
	MIN		36.7					40.7		97.9	40.7		96.6
	MAX		45					44.5		116.8	45.7		115.7
N =2	MEAN		42.1			43.8		104.2	42.6		101.3	43.2	102.8
	MIN		39.2			41.7		101.9	40.7		98.8	40.7	101.7
	MAX		45			45.8		106.4	44.4		103.8	45.7	103.9

Table 0-42: Thousand grain weight (TGW) of spring barley in the presence of disease in Germany, Poland and Latvia, at early application timing BBCH 31-33

Trial locations: Germany, Poland, Latvia						Product Name		CHECK 1		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
CROP: SPRING BARLEY Assessment data type, unit; THOUSAND GRAIN WEIGHT, G						Product Rate Appl. Timing Active Ingredient				1.5 l/ha PREVEN CYPRODINIL PROTHIOCONAZOLE			2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			1.25 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after first applic	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control
DESYZF6352021	SB AVALON	21-May-21	31 (30 - 30)	20-Jul-21	60	99 (99 - 99)	GRAIN	39.2	b	-	-	-	41.6	ab	106.1	41.2	ab	105
DESYZF6402021	SB PLANET	21-May-21	31 (30 - 32)	20-Jul-21	60	99 (99 - 99)	GRAIN	45.0	a	-	-	-	45.3	a	100.8	45.5	a	101.3
LVRIZF6112021	SB RASA	13-Jun-21	31 (31 - 31)	27-Aug-21	75	99 (99 - 99)	GRAIN	43.2		-	-	-	42.9		99.2	42.7		98.9
LVRIZF6162021	SB ANSIS	11-Jun-21	31 (31 - 31)	27-Aug-21	77	99 (99 - 99)	GRAIN	44.5		-	-	-	45.7		102.7	46.3		104.1
PLSYZF6232021	SB PILOTE C1	27-May-21	31 (31 - 32)	20-Aug-21	85	89 (89 - 89)	GRAIN	39.7	b	-	-	-	41	a	103.4	41.6	a	104.8
PLSYZF6382021	SB ARGENTO	31-May-21	32 (32 - 33)	09-Aug-21	70	99 (99 - 99)	GRAIN	36.7	b	-	-	-	42.5	a	115.7	42.1	a	114.9
N =6								MEAN		41.4			43.2		104.7	43.2		104.8
								MIN		36.7			41		99.2	41.2		98.9
								MAX		45			45.7		115.7	46.3		114.9

Table 0-43: Protein content of spring barley in the presence of foliar disease in Germany, Poland and Latvia, at late application timing BBCH 39-51

Trial locations: Germany, Poland, Latvia						Product Name		CHECK 1		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
CROP: SPRING BARLEY						Product Rate				1.5 l/ha			2 l/ha			1.25 l/ha		
Assessment data type, unit; PROTEIN CONTENT, %						Appl. Timing				PREVEN CYPRODINIL PROTHIOCONAZOLE			ACCRST CYPRODINIL PROTHIOCONAZOLE			ACCRST PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	MEAN	SNK	Mean	SNK	% control	MEAN	SNK	% control	MEAN	SNK	% control
DESYZF6352021	AVALON	14-Jun-21	49 (47 - 51)	20-Jul-21	36	99 (99 - 99)	GRAIN	12.6	a	12.2	a	96.8	13.1	a	104.2	12.5	a	99.6
DESYZF6402021	SB PLANET	14-Jun-21	49 (49 - 51)	20-Jul-21	36	99 (99 - 99)	GRAIN	10.9	a	10.9	a	100	11.2	a	103	10.5	a	96.3
LVRIZF6112021	SB RASA	28-Jun-21	39 (39 - 43)	03-Sep-21	67	99 (99 - 99)	GRAIN	15.2		-	-	-	14.9		98	15		98.7
LVRIZF6162021	SB ANSIS	28-Jun-21	39 (39 - 43)	03-Sep-21	67	99 (99 - 99)	GRAIN	15.9		-	-	-	15.7		98.9	16.3		102.1
PLSYZF6232021	SB PILOTE C1	14-Jun-21	49 (49 - 51)	08-Sep-21	86	89 (89 - 89)	GRAIN	11.2	a	-	-	-	11.2	a	99.8	11.2	a	100
PLSYZF6382021	SB ARGENTO	11-Jun-21	49 (49 - 51)	13-Sep-21	94	99 (99 - 99)	GRAIN	11.6	a	-	-	-	11.6	ab	99.4	11.4	ab	97.6

N = 6	MEAN		12.9					13.0		100.6	12.8		99.1
	MIN		10.9					11.2		98	10.5		96.3
	MAX		15.9					15.7		104.2	16.3		102.1
N = 2	MEAN		11.8				11.6	98.4	12.2	103.6	11.5		98.0
	MIN		10.9				10.9	96.8	11.2	103	10.5		96.3
	MAX		12.6				12.2	100	13.1	104.2	12.5		99.6

Table 0-44: Protein content of spring barley in the presence of foliar disease in Trial locations: Germany, Poland and Latvia, at early application timing BBCH 31-32

Trial locations: Germany, Poland, Latvia						Product Name Product Rate Appl. Timing Active Ingredient	CHECK 1		A23282 [A] 1.5 l/ha PREVEN CYPRODINIL PROTHIOCONAZOLE			A23282 [A] 2 l/ha POEMCR CYPRODINIL PROTHIOCONAZOLE			FANDANGO 200 EC 1.25 l/ha POEMCR PROTHIOCONAZOLE FLUOXASTROBIN					
CROP: SPRING BARLEY Assessment data type, unit; PROTEIN CONTENT, %																				
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after first applic	Crop GS at asse. - maj. (min - max)	MEAN	SNK	Mean	SNK	% control	MEAN	SNK	% control	MEAN	SNK	% control			
DESYZF6352021	AVALON	21-May-21	31 (30 - 30)	20-Jul-21	60	99 (99 - 99)	12.6	a	-	-	-	12.9	a	102.4	11.9	a	94.4			
DESYZF6402021	SB PLANET	21-May-21	31 (30 - 32)	20-Jul-21	60	99 (99 - 99)	10.9	a	-	-	-	11	a	100.7	10.7	a	98.6			
LVRIZF6112021	SB RASA	13-Jun-21	31 (31 - 31)	03-Sep-21	82	99 (99 - 99)	15.2		-	-	-	15.4		100.9	14.8		97.4			
LVRIZF6162021	SB ANSIS	11-Jun-21	31 (31 - 31)	03-Sep-21	84	99 (99 - 99)	15.9		-	-	-	15.8		99.4	15.2		95.4			
PLSYZF6232021	SB PILOTE C1	27-May-21	31 (31 - 32)	08-Sep-21	104	89 (89 - 89)	11.2	a	-	-	-	11.1	a	99.6	11	a	98.4			
PLSYZF6382021	SB ARGENTO	31-May-21	32 (32 - 33)	13-Sep-21	105	99 (99 - 99)	11.6	a	-	-	-	11.1	bc	95.3	10.9	c	93.8			
									N = 6	MEAN	12.9				12.9		99.7	12.4		96.3
										MIN	10.9				11		95.3	10.7		93.8
										MAX	15.9				15.8		102.4	15.2		98.6

Barley quality in presence of disease - Overall conclusion

Winter barley

The data presented from 20 efficacy trials, collected across Germany, Poland and Latvia, clearly demonstrated that plots treated with A23282A at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) consistently provided an increase in hectolitre weight and thousand grain weight when compared to the untreated control. The quality parameters were similar to those of the standards FANDANGO 200 EC at 1.25 LPR/ha (125 gai/ha prothioconazole + 125 gai/ha fluoxastrobin) and FLEXITY 300 SC at 0.5 LPR/ha (150 gai/ha metrofenone).

The data also demonstrated that, plots treated with A23282A at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) had no adverse effect on percentage protein content when compared with the untreated control. The results were similar to those of the standards FANDANGO 200 EC at 1.25 LPR/ha (125 gai/ha prothioconazole + 1250 gai/ha fluoxastrobin) and FLEXITY 300 SC at 0.5 LPR/ha (150 gai/ha metrafenone).

A summary of the data across countries are presented in Table 0-45.

Table 0-45: Hectolitre weight, thousand grain weight and protein content of winter barley treated with A23282A in presence of disease, early and late application timings

Winter barley	Yield quality data (mean % relative to untreated)		
	A23282A 1.5 LPR/ha	A23282A 2 LPR/ha	FANDANGO 200 EC 1.25 LPR/ha
Mean HLW (n=18), late application timing	101.3 (99-103.1 (n=10)	101.6 (95.3-105.2)	101.5 (85.7-107.3)
Mean HLW (n=12), early application timing	97.5 (n=1)	99.7 (93.6-103.9)	98.4 (81.8-103.4)
Mean TGW (n=19), late application timing	103.0 (99.9-109.5) (n=11)	104.8 (98.1-117)	104.6 (96.9-114)
Mean TGW (n=12), early application timing	97.9 (n=1)	102.6 (94.4-111.9)	103.4 (96.7-108.3)
Protein content (n=20), late application timing	101.8 (96.4-115.3) (n=11)	102.1 (97.6-115)	101.5 (92.3-118.9)
Protein content (n=11), early application timing	-	101.5 (96.5-107.5)	102.6 (98.1-107)

Spring barley

The data presented from 6 efficacy trials, collected across Germany, Poland and Latvia, clearly demonstrated that plots treated with A23282A at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) consistently provided an increase in hectolitre weight and thousand grain weight when compared to the untreated control. The quality parameters were similar to those of the standards FANDANGO 200 EC at 1.25 LPR/ha (125 gai/ha prothioconazole + 125 gai/ha fluoxastrobin) and FLEXITY 300 SC at 0.5 LPR/ha (150 gai/ha metrofenone).

The data also demonstrated that, plots treated with A23282A at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) had no adverse effect on percentage protein content when compared with the untreated control. The results were similar to those of the standards FANDANGO 200 EC at 1.25 LPR/ha (125 gai/ha prothioconazole + 125 gai/ha fluoxastrobin) and FLEXITY 300 SC at 0.5 LPR/ha (150 gai/ha metrafenone).

A summary of the data across countries is presented in Table 0-46.

Table 0-46: Hectolitre weight, thousand grain weight and protein content of spring barley treated with A23282A in presence of disease, early and late application timings

Spring barley	Yield quality data (mean % relative to untreated)		
	A23282A 1.5 LPR/ha	A23282A 2 LPR/ha	FANDANGO 200 EC 1.25 LPR/ha
Mean HLW (n=6), late application timing	100.7 (99.9-101.4) (n=2)	101.2 (98.3-107.1)	101.7 (99.1-108.4)
Mean HLW (n=6), early application timing	-	101.0 (97.8-106.3)	101.7 (100.3-105.4)
Mean TGW (n=6), late application timing	104.2 (101.9-106.4) (n=2)	104.0 (97.9-116.8)	104.4 (96.6-115.7)
Mean TGW (n=6), early application timing	-	104.7 (99.2-115.7)	104.8 (98.9-114.9)
Protein content (n=6), late application timing	98.4 (96.8-100) (n=2)	100.6 (98-104.2)	99.1 (96.3-102.1)
Protein content (n=6), early application timing	-	99.7 (95.3-102.4)	96.3 (93.8-98.6)

Overall conclusion

In conclusion, the data summarized across Germany, Poland and Latvia confirmed that A23282A applied at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) had no adverse effect on barley quality in the presence of disease. In the presence of disease, the data confirmed that controlling disease led to increases in barley grain hectolitre weight and thousand grain weight and had no adverse effect on protein quality.

The data presented within this section fully support the proposed label claim of A23282A at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) for the control of foliar diseases on winter and spring barley in Poland.

3.2.3.3 Efficacy in Triticale

Trials methodology in relation to EPPO

Trials were conducted according to the EPPO guidelines stated in Table 0-47. Full details of the sites and applications are provided in Appendix 2. Official testing organisation certificates are available in the GEP Certificate Database System (Certibase) (<http://www.gepcertibase.eu>) and are provided via the hyperlinks in section 3.7.

The trial layout was according to the randomized complete block design with four replicates per treatment. All normal crop husbandry measures were applied to the trials area by the grower, according to crop requirements and in accordance with good agricultural practice. Trials included a range of soil types and locations to determine crop tolerance and efficacy on a number of commercially grown varieties, under a range of conditions. All the trials were placed within regions where triticale is commonly grown and data have been presented on diseases which are also indigenous to the area covered. Crop growth stages (BBCH scale) and disease levels were recorded at the time of application and assessments.

Within the trials, data are presented from a single application of A23282A applied between BBCH 37 and BBCH 55. Within the trials where the test treatments were applied at the later application timings, if required due to high early season disease pressure, a cover spray using locally registered fungicides was applied across the trials area, excluding the untreated plot, at growth stage BBCH 31-32 to maintain good agricultural practice and to keep the crop healthy until the test treatments were applied. The cover spray also included the untreated plots and an additional treatment excluding cover spray was included to reflect the disease incidence without any protection.

Pest growth at application is described on the basis of development stage. Crop growth stages are described using the standard BBCH scale. In all trials, efficacy was assessed according to EPPO guidelines.

Crop phytotoxicity was assessed at various intervals after application. All assessments were on a 0-100 scale, where 0 = no damage and 100 = total crop loss. Individual symptoms were recorded where appropriate. Where no phytotoxicity was observed, this was generally recorded within the individual trial data. Only data where phytotoxicity was recorded was presented in the dossier.

Crop yield was assessed in the majority of the efficacy trials. Plot size fulfilled the minimum of 10 m² required by EPPO. Yield assessments included grain yield [dt/ha] as well as different quality parameters (hectolitre weight [kg/hl], thousand grain weight [g], and protein content [%]). In some trials, yield parameters were analysed with a mixed sample of the four replicates. In this case no statistical analysis is presented in the summary tables.

For the overall efficacy evaluation of foliar diseases, a time window from 14 days to up to approximately 42 days after application was used. This limit was set to reflect the maximum control that can be achieved following application of A23282A. In the majority of trials more than one assessment was undertaken, but for the results tables the mean of one selected data point per trial was calculated. The selected data point was chosen according to the following criteria: - in each trial % control/infestation on the highest leaf showing at least an infected leaf area of 5% in the check, at the timing within the defined time window when maximum control was achieved. Trials were only included where at least one product within the trial showed significant control of the disease. For all diseases efficacy evaluation was based on pest severity assessments.

Percent control is calculated according to formula of Abbott, so negative values may result if a treated variant performs worse than the untreated control. If this was the case for single assessments the values were set to 0 (= no efficacy) for the overall efficacy evaluation, to avoid an excessive influence of these values as a fungicide treatment at its worst will have no efficacy (= 0) but normally will not have any supporting effects on a disease which would be supposed if negative values were used. Therefore, in the summary tables no negative values occur. However, the single trial reports contain the automatically calculated values.

The **Student-Newman-Keuls (SNK)** method is a test for simultaneous comparisons of multiple means which controls error rates among tests of multiple groups of means (multiple range test). Please note that from all of the above trials, the results in summary tables were extracted from trials reports where treatments of no relevance to this submission were also included. As statistical analyses were conducted across the whole range of treatments, significance letters relate to the whole treatment list and not just to the data shown in the extracted tables.

Table 0-47: Details on trial methodology from triticale trials

Guidelines	General guidelines	EPPO:PP 1/152 (4), EPPO:PP 1/181 (4), EPPO:PP 1/135 (4), EPPO:PP 1/225 (4)
	Specific guidelines	EPPO: PP 1/026 (4) Foliar and ear diseases in cereals
Experimental design	Plot design	RCBD
	Plot size	Maritime EPPO Zone: 12.45 – 20.0 m ² North East EPPO zone: 14.0 – 27.5 m ²
	Number of replications	4
Crop	Trials per crop	Maritime EPPO Zone: 2 North-East EPPO zone: 6
	Varieties per crop	Maritime EPPO Zone: Lombardo (x2), North East EPPO zone: Belcanto, Dolindo, Fredro, Meloman, Rotondo, Tadeus
	Sowing period	Maritime EPPO zone Winter Triticale: September – October North East EPPO zone Winter Triticale: September – November
Application	Crop stage (BBCH) at application	Maritime EPPO Zone: BBCH 49-55 North East EPPO zone: BBCH 37-53
	Timing Pest stage at application	Application timing growth stage according to protocol requirements
	Number of applications Intervals between applications	1 -
	Spray volumes	Maritime EPPO zone: 200-300 l/ha North East EPPO zone: 200-300 l/ha
	Application method	Foliar spray
Assessment	Assessment types	Phytotoxicity: General phytotoxicity, chlorosis, necrosis, vigour reduction, discolouration (not presented in this document, please see the core BAD) Efficacy: % disease severity Yield and Quality: Yield, thousand grain weight, hectolitre weight, % protein content

	Assessment dates	Phytotoxicity assessments: Throughout growing season Efficacy % disease severity assessments: 14-42 DAA Yield assessments: At normal crop harvest Quality assessments: At harvest or post-harvest
Other relevant information	Soil type	Maritime EPPO Zone: loamy sand, sandy loam, North East EPPO zone: clayed sand, loamy sand, sandy loam (x3), silt.
	Natural / artificial inoculation	Natural infestation
	Field / Greenhouse	Field

Efficacy against *Zymoseptoria tritici* (SEPTTR) on triticales

Efficacy data for *Zymoseptoria tritici* (SEPTTR) control on triticales are presented from 8 winter triticales efficacy trials conducted in Germany and Poland during 2020 and 2021. Efficacy was tested across a range of environmental conditions and locations to fully challenge the product. The objective was to confirm the performance of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 gai/ha cyprodinil + 150 gai/ha prothioconazole) against *Zymoseptoria tritici*.

In the trials specifically targeted for this pathogen, treatments were all applied at BBCH 37-55.

The standard FANDANGO 200 EC (prothioconazole 100 gai/L + fluoxastrobin 100 gai/L) at 1.5 LPR/ha was used in all trials.

Results

The data from the 8 trials are summarised in Table 0-48.

Disease pressure across the 8 trials averaged 12.8% (range 6.2% – 28.9%), which provided an appropriate basis for examination of the performance of A23282A. The presented data demonstrated that the proposed maximum label rate of 2.0 LPR/ha provided persistent and reliable control of SEPTTR on triticales. Overall, across the results the presented data demonstrated that the proposed recommended rate of 2.0 LPR/ha of A23282A provided a mean of 95.6% (range 83.7% - 100.0%) control of SEPTTR, relative to the untreated.

Direct comparison of A23282A and FANDANGO 200 EC showed the efficacy of the test product to be clearly increased compared to that of the standard FANDANGO 200 EC (80.5%).

The proposed lower label rate of 1.5 LPR/ha provided reliable control of SEPTTR on triticales as well. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A provided a mean of 90.1% (range 74.5% - 100%) control of *Zymoseptoria tritici*, relative to the untreated. No statistically significant differences between dose rates were recorded in 7 trials out of 8.

Conclusions

The presented data from Germany and Poland confirmed that A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 gai/ha cyprodinil + 150 gai/ha prothioconazole) was effective against *Zymoseptoria tritici* (SEPTTR). The product provided clearly increased efficacy compared to that of the commercial standard FANDANGO 200 EC.

These rates should thus be considered to be effective against *Zymoseptoria tritici* (SEPTTR) on winter triticales when applied between BBCH 30-69 in Poland.

Table 0-48: Efficacy against *Septoria tritici* on winter triticale in Germany and Poland

Trial locations: Germany and Poland						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC			
Crop: WINTER TRITICALE Pest: ZYMOSEPTORIA TRITICI Assessment type, unit: PEST SEVERITY, %area						Product Rate Appl. Timing Active Ingredient				1.5 l/ha			2 l/ha			1.5 l/ha			
										CYPRODINIL PROTHIOCONAZOLE			CYPRODINIL PROTHIOCONAZOLE			PROTHIOCONAZOLE FLUOXASTROBIN			
Trial reference number	Variety	Applicati on Date(s)	Crop GS at applic.	Assessme nt date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control	
DEDSZF9282021	LOMBARDO	01-Jun-21	51 (49 - 55)	24-Jun-21	23	71 (71 - 73)	LEAF 2	10.6	a	0.7	bc	93.7	0.1	c	98.8	1.7	bc	84.1	
DESYZF6852021	LOMBARDO	02-Jun-21	55 (51 - 59)	14-Jul-21	42	83 (77 - 83)	LEAF 1	19.2	a	2.9	cd	84.8	0.2	d	99	3.2	cd	83.2	
PLDSZF7132020	FREDRO	18-May-20	51 (51 - 53)	29-Jun-20	42	83 (83 - 83)	LEAF 1	9.7	a	2.5	bc	74.5	0.4	cd	95.5	2.9	bc	69.6	
PLBCZF8642021	MELOMAN	24-May-21	41 (39 - 41)	30-Jun-21	37	75 (73 - 75)	LEAF 1	28.9	a	1.1	e	96.4	0	f	100	5.1	bc	82.2	
PLBCZF8652021	BELCANTO	20-May-21	39 (37 - 39)	22-Jun-21	33	75 (75 - 77)	LEAF 1	6.2	a	0	e	100	0	e	100	2.8	abc	54.9	
PLSYZF6762021	ROTONDO	31-May-21	49 (49 - 51)	05-Jul-21	35	77 (77 - 83)	LEAF 1	11.4	a	1.2	cd	89.2	0.9	cd	92.5	1.3	c	88.6	
PLSYZF6772021	DOLINDO	13-May-21	37 (37 - 37)	10-Jun-21	28	65 (61 - 65)	LEAF 2	10	a	1.7	b	82.8	1.6	b	83.7	1.7	b	83	
PLSYZF6782021	TADEUS	14-May-21	37 (37 - 39)	10-Jun-21	27	65 (61 - 65)	LEAF 3	6.4	b	0.1	c	99	0.3	c	95.3	0.1	c	98.5	
						N =8	MEAN		12.8		1.3		90.1	0.4		95.6	2.4		80.5
							MIN		6.2		0		74.5	0		83.7	0.1		54.9
							MAX		28.9		2.9		100	1.6		100	5.1		98.5

Yield (and relevant quality indicators), from efficacy trials (in the presence of disease) at 1.5 LPR/ha and at 2.0 LPR/ha

A summary of the yield data from triticale efficacy trials where foliar diseases were present are presented in Table 0-49. Yield data were obtained from a total of 7 winter triticale trials carried out in 2021 in Germany and Poland.

The objective was to confirm the yield response of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) in the presence of *Septoria tritici*. A23282A was applied as a foliar spray between BBCH 37-55. The yield was compared to the standard FANDANGO 200 EC at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin).

Results

For the efficacy trials the mean yield from the untreated across the 7 trials was 63.7 dt/ha (range 43.4 dt/ha – 84.4 dt/ha). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha increased the recorded triticale yield in all trials compared with the untreated control. In 3 trials the yield achieved with A23282A was statistically significantly higher than in the untreated. Overall, across all the trials, A23282A gave a mean increase in triticale yield of 15.4 % (range 103.5 % – 125.3 % of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in yield of the test product to be slightly increased compared to that of the standard FANDANGO 200 EC (13.3 %).

The proposed lower label rate of 1.5 LPR/ha increased the recorded triticale yield in 6 trials out of 7 compared with the untreated control. In 3 trials the yield achieved with A23282A was statistically significantly higher than in the untreated. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A gave a mean increase in triticale yield of 13.9 % (range 104.3 % – 121.2 % of control) when compared to the untreated control. No statistically significant differences between dose rates were recorded in any of the trial.

Conclusion

The data summarized across Germany and Poland confirmed that A23282A applied at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) had no adverse effect on yield in the presence of disease. In the presence of disease, the data confirmed that controlling disease led to increases in triticale yield, indicating that untreated disease can lead to significant yield reductions.

The data presented within this section fully support the proposed label claim of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) for the control of *Septoria tritici* on winter triticale in Poland.

Table 0-49: Yield data for triticale in the presence of SEPTTR in Germany and Poland

Trial locations: Germany, Poland						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: WINTER TRITICALE Pest: - Assessment type, unit: YIELD, dt/ha						Product Rate Appl. Timing Active Ingredient				1.5 l/ha			2 l/ha			1.5 l/ha		
										CYPRODINIL PROTHIOCONAZOLE			CYPRODINIL PROTHIOCONAZOLE			PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control
DEDSZF9282021	LOMBARDO	01-Jun-21	51 (49 - 55)	09-Aug-21	69	97 (97 - 97)	GRAIN	55	cdef	59.7	bc	108.6	58.1	bcd	105.7	53	def	96.4
DESYZF6852021	LOMBARDO	02-Jun-21	55 (51 - 59)	21-Aug-21	80	99 (99 - 99)	GRAIN	80.6	a	79.8	a	99	82.5	a	102.3	79.2	a	98.3
PLBCZF8642021	MELOMAN	24-May-21	41 (39 - 41)	15-Aug-21	83	89 (89 - 89)	GRAIN	84.4	c	91.9	a	108.9	92.7	a	109.9	94.6	a	112.1
PLBCZF8652021	BELCANTO	20-May-21	39 (37 - 39)	13-Aug-21	85	89 (89 - 89)	GRAIN	56.4	d	67.4	ab	119.5	68.2	ab	120.9	64.1	bc	113.5
PLSYZF6762021	ROTONDO	31-May-21	49 (49 - 51)	30-Jul-21	60	99 (99 - 99)	GRAIN	70.8	b	85.9	a	121.2	88.7	a	125.3	85.3	a	120.4
PLSYZF6772021	DOLINDO	13-May-21	37 (37 - 37)	04-Aug-21	83	89 (89 - 89)	GRAIN	63.3	b	66	a	104.3	65.6	ab	103.5	65.3	ab	103
PLSYZF6782021	TADEUS	14-May-21	37 (37 - 39)	02-Aug-21	80	89 (89 - 89)	GRAIN	43.4	a	50.3	a	115.8	51.1	a	117.6	51.1	a	117.7
										N =7	MEAN		63.7		72.3		113.9	73.3
											MIN		43.4		50.3		104.3	51.1
											MAX		84.4		91.9		121.2	92.7
													113.9	73.3		115.4	72.1	113.3
													104.3	51.1		103.5	51.1	103
													121.2	92.7		125.3	94.6	120.4

Triticale yield in presence of disease - Overall conclusion

The data presented from 7 efficacy trials where *Septoria tritici* was present, collected across the Germany and Poland, clearly demonstrated that plots treated with A23282A applied at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) consistently provided an increase in triticale yield when compared to the untreated control. The observed yields were similar to those of the standard FANDANGO 200 EC at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin). No significant differences between dose rates were recorded.

A summary of the data is presented in Table 0-50.

Table 0-50: Mean yield of triticale treated with A23282A in presence of SEPTTR

Winter triticale	Yield quantity data (mean % relative to untreated)		
	A23282A 1.5 LPR/ha	A23282A 2 LPR/ha	FANDANGO 200 EC 1.5 LPR/ha
Yield (n=7)	113.9 (104.3-121.2) (n=2)	115.4 (103.5-125.3)	113.3 (103-120.4)

Overall conclusion

In conclusion, the data summarized across Germany and Poland confirmed that A23282A applied at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) had no adverse effect on yield in the presence of disease. In the presence of disease, the data confirmed that controlling disease led to increases in triticale yield, indicating that untreated disease can lead to significant yield reductions.

The data presented within this section fully support the proposed label claim of A23282A applied at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) for the control of *Septoria tritici* on winter triticale under in Poland.

Quality – Germany and Poland

A summary of the yield quality data from triticale efficacy trials where foliar diseases were present are presented in Table 0-51, Table 0-52 and Table 0-53. Yield quality data were obtained from 7 winter triticale trials carried out during 2021 in Germany and Poland.

The objective was to confirm the yield quality response of A23282A at 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) in the presence of *Septoria tritici*. A23282A was applied as a foliar spray between BBCH 37-55. The yield quality was compared to the standard FANDANGO 200 EC at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin).

The qualitative parameters assessed were hectolitre weight (HLW), thousand grain weight (TGW) and protein content.

Results

Hectolitre weight

For the foliar disease trials data for hectolitre weight are presented in Table 0-51. Mean untreated hectolitre weight across the 7 trials was 71.9 kg/hl (range 67.9 kg/hl – 74.8 kg/hl). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2 LPR/ha increased the hectolitre weight compared with the untreated control. Overall, across both trials A23282A gave a mean increase in hectolitre weight of 1.8% (range 100.1% – 103.7% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in hectolitre weight of the test product to be similar to that of the standard FANDANGO 200 EC (1.4%).

The impact of lower label rate of 1.5 LPR/ha on HLW was assessed in 2 trials. Overall, across the results the presented data demonstrated that the proposed lower label rate of 1.5 LPR/ha of A23282A gave a mean decrease in triticale HLW of -1.3 % (range 98.4 % – 99% of control) when compared to the untreated control. No statistically significant differences between dose rates were recorded.

Thousand grain weight

For the foliar disease trials data for thousand grain weight are presented in Table 0-52. Mean untreated thousand grain weight across the five trials was 37.3 g (range 32.1 g – 43.0 g). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2 LPR/ha increased the thousand grain weight compared with the untreated control. Overall, across all trials A23282A gave a mean increase in thousand grain weight of 7.1% (range 98.3% – 123.6% of control) when compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in thousand grain weight of the test product to be similar to that of the standard FANDANGO 200 EC (6.4%).

The impact of a lower label rate of 1.5 LPR/ha on TGW was not tested in the presented trials.

Protein content

For the foliar disease trial, data for percentage protein content are presented in Table 0-53. Untreated protein content was 10.7% (range 9.7% – 11.8%). The data demonstrated that a single application of A23282A at the proposed maximum label rate of 2.0 LPR/ha gave a mean increase protein content of 1.4% (range 98.9% – 106.6% of control) compared to the untreated control.

Direct comparison of A23282A and FANDANGO 200 EC showed the mean increase in protein content of the test product to be similar to that of the standard FANDANGO 200 EC (2.7%).

The impact of a lower label rate of 1.5 LPR/ha on protein content was not tested in the presented trials.

Table 0-51: Hectolitre weight (HLW) in the presence of SEPTTR in Germany and Poland

Trial locations: Germany, Poland						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: WINTER TRITICALE Pest: -						Product Rate Appl. Timing				1.5 l/ha			2 l/ha			1.5 l/ha		
Assessment type, unit: HECTOLITRE WEIGHT, kg/hl						Active Ingredient				CYPRODINIL PROTHIOCONAZOLE			CYPRODINIL PROTHIOCONAZOLE			PROTHIOCONAZOLE FLUOXASTROBIN		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control
DEDSZF9282021	LOMBARDO	01-Jun-21	51 (49 - 55)	09-Aug-21	69	99 (99 - 99)	GRAIN	59.5	a	58.9	a	99	59.8	a	100.6	58.9	a	99
DESYZF6852021	LOMBARDO	02-Jun-21	55 (51 - 59)	21-Aug-21	80	99 (99 - 99)	GRAIN	56.2	a	55.3	a	98.4	57.8	a	102.7	56.5	a	100.5
PLBCZF8642021	MELOMAN	24-May-21	41 (39 - 41)	17-Sep-21	116	99 (99 - 99)	GRAIN	67.9		-	-	-	70.2		103.4	69.7		102.7
PLBCZF8652021	BELCANTO	20-May-21	39 (37 - 39)	20-Sep-21	123	99 (99 - 99)	GRAIN	74.8		-	-	-	76		101.6	75.5		100.9
PLSYZF6762021	ROTONDO	31-May-21	49 (49 - 51)	10-Aug-21	71	99 (99 - 99)	GRAIN	73.1	b	-	-	-	75.8	a	103.7	75.6	a	103.4
PLSYZF6772021	DOLINDO	13-May-21	37 (37 - 37)	04-Aug-21	83	99 (99 - 99)	GRAIN	73.2	b	-	-	-	73.3	ab	100.1	73.2	b	100
PLSYZF6782021	TADEUS	14-May-21	37 (37 - 39)	02-Aug-21	80	89 (89 - 89)	GRAIN	70.6	a	-	-	-	70.8	a	100.3	70.5	a	99.8

N =7	MEAN		71.9					73.2		101.8	72.9		101.4
	MIN		67.9					70.2		100.1	69.7		99.8
	MAX		74.8					76		103.7	75.6		103.4
N =2	MEAN		57.9			57.1		98.7	58.8	101.7	57.7		99.8
	MIN		56.2			55.3		98.4	57.8	100.6	56.5		99
	MAX		59.5			58.9		99	59.8	102.7	58.9		100.5

Table 0-52: Thousand Grain Weight (TGW) in the presence of SEPTTR in Germany and Poland

Trial locations: Germany, Poland						Product Name		CHECK OVERSPRAY		A23282 [A] 1.5 l/ha CYPRODINIL PROTHIOCONAZOLE			A23282 [A] 2 l/ha CYPRODINIL PROTHIOCONAZOLE			FANDANGO 200 EC 1.5 l/ha PROTHIOCONAZOLE FLUOXASTROBIN		
Crop: WINTER TRITICALE Pest: - Assessment type, unit: THOUSAND GRAIN WEIGHT, g						Product Rate Appl. Timing Active Ingredient		Mean		Mean			Mean			Mean		
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control
DEDSZF9282021	LOMBARDO	01-Jun-21	51 (49 - 55)	02-Nov-21	154	99 (99 - 99)	GRAIN	34.6		-	-	-	34		98.3	35.2		101.7
DESYZF6852021	LOMBARDO	02-Jun-21	55 (51 - 59)	21-Aug-21	80	99 (99 - 99)	GRAIN	43		-	-	-	44.7		104	42.4		98.6
PLBCZF8642021	MELOMAN	24-May-21	41 (39 - 41)	17-Sep-21	116	99 (99 - 99)	GRAIN	32.1		-	-	-	35.5		110.6	36.8		114.6
PLBCZF8652021	BELCANTO	20-May-21	39 (37 - 39)	20-Sep-21	123	99 (99 - 99)	GRAIN	33.4		-	-	-	36.8		110.2	35.6		106.7
PLSYZF6762021	ROTONDO	31-May-21	49 (49 - 51)	10-Aug-21	71	99 (99 - 99)	GRAIN	35.7	c	-	-	-	44.1	a	123.6	42.9	b	120.2
PLSYZF6772021	DOLINDO	13-May-21	37 (37 - 37)	04-Aug-21	83	99 (99 - 99)	GRAIN	42.3	a	-	-	-	42.3	a	100	42.4	a	100.2
PLSYZF6782021	TADEUS	14-May-21	37 (37 - 39)	02-Aug-21	80	89 (89 - 89)	GRAIN	39.9	a	-	-	-	41.3	a	103.3	41	a	102.6

N =7	MEAN		37.3					39.8		107.1	39.5		106.4
	MIN		32.1					34		98.3	35.2		98.6
	MAX		43					44.7		123.6	42.9		120.2

Table 0-53: Protein content in the presence of SEPTTR in Germany and Poland

Trial locations: Germany, Poland						Product Name		CHECK OVERSPRAY		A23282 [A]			A23282 [A]			FANDANGO 200 EC		
Crop: WINTER TRITICALE						Product Rate				1.5 l/ha			2 l/ha			1.5 l/ha		
Pest: -						Appl. Timing				CYPRODINIL PROTHIOCONAZOLE			CYPRODINIL PROTHIOCONAZOLE			PROTHIOCONAZOLE FLUOXASTROBIN		
Assessment type, unit: CONTENT - PROTEIN, %						Active Ingredient												
Trial reference number	Variety	Application Date(s)	Crop GS at applic.	Assessment date	Days after last applic.	Crop GS at asse. - maj. (min - max)	Part assessed	Mean	SNK	Mean	SNK	% control	Mean	SNK	% control	Mean	SNK	% control
DEDSZF9282021	LOMBARDO	01-Jun-21	51 (49 - 55)	02-Nov-21	154	99 (99 - 99)	GRAIN	11		-	-	-	11		100	11.3		102.7
DESYZF6852021	LOMBARDO	02-Jun-21	55 (51 - 59)	21-Aug-21	80	99 (99 - 99)	GRAIN	10.7		-	-	-	11		102.8	11.3		105.6
PLBCZF8642021	MELOMAN	24-May-21	41 (39 - 41)	17-Sep-21	116	99 (99 - 99)	GRAIN	9.1		-	-	-	9.7		106.6	9.8		107.7
PLBCZF8652021	BELCANTO	20-May-21	39 (37 - 39)	20-Sep-21	123	99 (99 - 99)	GRAIN	10.8		-	-	-	10.8		100	10.9		100.9
PLSYZF6762021	ROTONDO	31-May-21	49 (49 - 51)	22-Sep-21	114	99 (99 - 99)	GRAIN	10.9	a	-	-	-	10.8	a	98.9	10.8	a	98.9
PLSYZF6772021	DOLINDO	13-May-21	37 (37 - 37)	04-Aug-21	83	99 (99 - 99)	GRAIN	11.8	a	-	-	-	11.8	a	100	11.8	a	100.4

N =6	MEAN		10.7					10.9		101.4	11.0		102.7
	MIN		9.1					9.7		98.9	9.8		98.9
	MAX		11.8					11.8		106.6	11.8		107.7

Triticale quality in presence of disease - Overall conclusion

The data presented from 7 winter triticale trials in presence of *Septoria tritici* collected across Germany and Poland, clearly demonstrated that plots treated with A23282A at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) consistently provided an increase in hectolitre weight and thousand grain weight when compared to the untreated control. The quality parameters were similar to those of the standard FANDANGO 200 EC at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin).

Plots treated with A23282A at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) had no effect on hectolitre weight.

The data also demonstrated that, plots treated with A23282A at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) had no adverse effect on percentage protein content when compared with the untreated control. The results were similar to those of the standard FANDANGO 200 EC at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin).

A summary of the data is presented in Table 0-5454.

Table 0-54: Hectolitre weight of triticale treated with A23282A in presence of SEPTTR

Winter triticale	Yield quality data (mean % relative to untreated)		
	A23282A 1.5 LPR/ha	A23282A 2 LPR/ha	FANDANGO 200 EC 1.5 LPR/ha
Mean HLW (n=7)	98.7 (98.4-99) (n=2)	101.8 (100.1-103.7)	101.4 (99.8-103.4)
Mean TGW (n=7)	-	107.1 (98.3-123.6)	106.4 (98.6-120.2)
Protein content (n=6)	-	101.4 (98.9-106.6)	102.7 (98.9-107.7)

Overall conclusion

In conclusion, the data summarized across Germany and Poland confirmed that A23282A applied at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) had no adverse effect on triticale quality in the presence of disease. In the presence of disease, the data confirmed that controlling disease led to increases in triticale hectolitre weight and thousand grain weight and had no adverse effect on protein quality.

The data presented within this section fully support the proposed label claim of A23282A at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) for the control of *Septoria tritici* on winter triticale in Poland.

3.2.3.4 Summary and conclusion on the efficacy

According to the presented results in this National Addendum, the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) of A23282A were effective in controlling foliar diseases in wheat, barley and triticale and provided efficacy which was at least comparable to the efficacy of the commercial standards FANDANGO 200 EC at 1.5 LPR/ha (150 gai/ha prothioconazole + 150 gai/ha fluoxastrobin) and FLEXITY 300 SC at 0.5 LPR/ha (150 gai/ha metrafenone).

Moreover, A23282A at the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and at the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) had a positive effect on the yield and quality of wheat, barley and triticale in the presence of disease and should be considered as effective against the major foliar diseases, for which activity of A23282A is claimed.

As a result, the proposed lower label rate of 1.5 LPR/ha (337.5 gai/ha cyprodinil + 112.5 gai/ha prothioconazole) and the maximum label rate of 2.0 LPR/ha (450 g/ha cyprodinil and 150 g/ha prothioconazole) of A23282A should be considered to be effective against foliar diseases of winter and spring wheat, winter and spring barley and winter triticale in Poland.

These conclusions are made within the scope of the data presented in this National Addendum. They supplement and should be considered in conjunction with the conclusions drawn for Poland following zonal core assessment.

A summary of the data is presented in Table 0-54.

Table 0-55: Summary of efficacy of A23282A against foliar diseases in cereals

Crop	Target	Trial origin	Untreated		A23282A 1.5 L/ha		A23282A 2 L/ha		FANDANGO 200 EC 1.5 L/ha	
			Mean	min-max	Mean	min-max	Mean	min-max	Mean	min-max
			% disease severity		Mean % disease control					
Winter wheat (n=7)	<i>Puccinia striiformis</i>	Germany, Poland and Latvia	22.5	7.5-35.9	83.3	62.1-100	86.7	70.9-100	87.8	66.4-100
Winter wheat (n=8) Spring wheat (n=3)	<i>Blumeria graminis</i>	Germany, Poland, Lithuania and Latvia	15.7	5.4-86.2	80.0	50.5-100	89.5	66.2-100	83.4	26.2-100
Winter barley (n=8) (n=7) ¹	<i>Rhynchosporium secalis</i>	Germany and Poland	10.2	6.5-20	80.3	15.2-100	90.3	62.7-100	83.5	45.4-100
Winter barley (n=5) Spring barley (n=1)	<i>Ramularia collo- cygni</i>	Germany and Poland	22.7	7.4-54.1	72.4	57.9-92	85.2	64.1- 95.9	68.3	33.6-95.1
Winter barley (n=13) Spring barley (n=2)	<i>Puccinia hordei</i>	Poland and Latvia	14.1	5-50.1	92.1	77.1-100	94.8	81.5-100	91.5	68.7-100
Winter barley (n=6) Spring barley (n=1)	<i>Blumeria graminis</i>	Poland and Latvia	15.5	5.4-28.2	95.5 ²	81.9-100	98.0	92.1-100	95.1	81.0-100
			9.2	6.4-12.1	96.7 ³	93.4-100	89.8	61.8-100	91.3	67.0-99.9
Winter triticale (n=8)	<i>Zymoseptoria tritici</i>	Germany and Poland	12.8	6.2-28.9	90.1	74.5-100	95.6	83.7-100	80.5	54.9-98.5

¹ one trial is excluded, ² - late treatment, ³ - early treatment

Efficacy

The National Addendum was prepared according to the national Polish data requirements, to support the registration of A23282A at the rate of 1.5-2.0 L/ha for some disease control in cereal crops in Poland. This document presents the trials from countries and zones recognized by Polish registration authorities. The applicant submitted 54 trials conducted in Poland, Latvia, and Lithuania (North-East EPPO zone) and in neighboring Germany (Maritime EPPO zone). The numbers of trials (in brackets) submitted for diseases control consist of *Puccinia striiformis* (7 trials) and *Blumeria graminis* (11) on wheat; *Rhynchosporium secalis* (8), *Ramularia collo-cygni* (6), *Puccinia hordei* (15), *Blumeria graminis* (7) on barley and *Zymoseptoria tritici* (8) on triticale. All trials are considered acceptable for efficacy justification of the plant protection products in Poland.

The National reviewer confirms that all submitted trials were carried out by organizations officially recognized for efficacy testing of plant protection products, according to GEP and with EPPO general and specific guidelines, with no major deviation from these guidelines.

The data show that A23282A tested at the rate of 1.5 L/ha, was effective against diseases covered by the tests. In presented trials, the efficacy of A23282A, after the use of 1.5 l/ha was slightly lower compared to the rate of 2 L/ha, but the level of effectiveness was fully acceptable. The better effect of a higher dose compared to the lower rate is understandable, and it confirms that the rates of A23282A were properly chosen for cereal disease control. It should be also noted that both rates, 1.5 L/ha and 2.0 L/ha were as effective as the reference product, and the differences were not significant. In some tests A23282A showed better efficacy, in others lower than the reference product. This allows to conclude that A23282A has similar or higher effectiveness than the reference product.

The data from efficacy trials infected with foliar diseases, clearly demonstrate that on the plots treated with A23282A at the rates of 1.5 and 2.0 L/ha the yield of cereal crops has been increased in comparison to untreated control, and were comparable to those of the reference product. Moreover, it should be stated that the yields of cereals sprayed A23282A at the rate of 1.5 L/ha were slightly lower than after the rate of 2.0 l/ha, but the differences were insignificant and still fully acceptable. It confirms that the rate of 1.5 L/ha can be used for disease control in Poland.

Diseases control in wheat

***Zymoseptoria tritici* (*Septoria tritici*) – SEPTTR**

The number of trials for registration of A23282A for *Zymoseptoria tritici* control on winter wheat in Poland is sufficient (PL - 11 trials, LV - 2 trials, LT - 1 trial). For registration on spring wheat, there is no Polish data, but the evaluator suggests acceptance of 2 trials conducted in LT, and the missing data extrapolate from winter wheat.

***Puccinia recondita* – PUCCRE**

For the registration of A23282A for *Puccinia recondita* control on winter wheat in Poland, 2 trials conducted in Poland and 2 from DE may be taken into account, and the missing data should be provided by the applicant as post-registration data within 1 year. The evaluator states, that *Puccinia recondita* should be included in the label, in recommendations for winter wheat, despite the insufficient number of trials, due to its high effectiveness against this pathogen. For *Puccinia recondita*, the applicant submitted only 1 trial from spring wheat, performed in Hungary, and no tests from Poland. It is not possible to register the product in spring wheat.

***Puccinia striiformis* – PUCCST**

For the registration in Poland, in winter wheat, 4 trials conducted in Poland (1 with early application and 3 with late application) and 3 trials from DE should be considered, which meets the registration requirements. For spring wheat no trials from Poland was presented, so the registrations is not accepted.

***Blumeria graminis* – ERYSGR**

For registration in Poland, in winter wheat, 10 trials from N-E zone (2 trials from PL, 1 from LV, 1 from LT, at early application; and 3 trials from PL, 1 from LV, and 2 from LT, at late application) and 4 trials from DE (1 with early application, 3 with late application) can be considered. For

Blumeria graminis control in spring wheat, there are no trials conducted in Poland, but the data of 3 trials conducted in LT can be taken into account and the missing data extrapolated from winter wheat. The evaluator accepts the registration of A23282A for *Blumeria graminis* control in winter and spring wheat.

Eyespot (*Pseudocercospora herpotrichoides*) – PSDCHE

For registration in Poland, in winter wheat, 9 trials from N-E zone (5 trials conducted in Poland) and 4 trials from DE can be considered, so the requirements for registration are met. For spring wheat no trials from Poland was presented, so the registration is not accepted.

Diseases control in barley

***Pyrenophora teres* – PY**

For registration in Poland, in winter barley, 11 trials from N-E zone (10 conducted in Poland) and 3 trials from DE (Maritime zone) can be considered. For registration in spring barley 4 trials from N-E zone (1 – PL and 3 – LT) and 1 trial from DE can be considered and missing data can be extrapolated from winter barley.

***Rhynchosporium secalis* – RHYNSE**

For registration A23282A in Poland, for *Rhynchosporium secalis* control in winter barley, 8 trials from Poland (2 at early application and 6 at late application) and 3 trials conducted in DE, Maritime zone (1 at early application, 2 at late application), can be considered. No trials on spring barley, meeting Polish requirements, were presented, so the registration of A23282A for *Rhynchosporium secalis* control can not be accepted.

***Ramularia collo-cygni* – RAMUCC**

For registration of A23282A in winter barley, in Poland, 3 trials from N-E zone (all PL) and 2 trials from DE (Maritime zone) can be considered, and the missing trial should be provided by applicant as post-registration data within 1 year. For registration in spring barley, only 1 trial from N-E zone (PL) can be considered, and the missing data can be extrapolated from winter barley.

***Puccinia hordei* – PUCCHD**

For registration of A23282A in Poland, for *Puccinia hordei* control in winter barley, 18 trials from N-E zone (16 from PL) and 3 trials from DE, Maritime zone (at late application) can be considered. For registration in spring barley the applicant did not present the trials from Poland, only 2 trials from Maritime zone (FR, DK). It not meet a Polish requirements, although the data extrapolation from winter barley is possible.

***Blumeria graminis* – ERYSGR**

For the registration in Poland, in winter barley, 8 trials from N-E zone (7 from PL) at early and late application can be considered. For registration in spring barley 1 trial from PL (N-E zone) can be considered and the missing data can be extrapolated from winter barley.

Eyespot (*Pseudocercospora herpotrichoides*) – PSDCHE

For registration in Poland, in winter barley, 9 trials from N-E zone (7 from PL) and 1 trial from DE can be considered. No trials from spring barley presented in the report.

Diseases control in rye

***Rhynchosporium secalis* – RHYNSE**

For registration in Poland, in winter rye, 8 trials from PL and 4 trials from DE can be considered. For registration in spring rye no data from Poland, but possible registration can be based on 1 trial from LT (N-E zone) and missing data extrapolated from winter barley.

Diseases control in triticales

***Zymoseptoria tritici* – SEPTTR**

For registration A23282A in Poland, for *Zymoseptoria tritici* control in winter triticales, 6 trials from PL and 2 trials from DE can be considered. For registration in spring triticales no data from Poland, so it hard to accept such registration. Possible registration can be base on data extrapolated from winter wheat.

Diseases control in oat

***Blumeria graminis* – ERYSGR**

The registration of A23282A in Poland, for *Blumeria graminis* on spring oat is not possible, due to only 1 trial carried out in this crop and no possibility of extrapolation from other crops.

A23282A applied at the rates of 1.5 and 2.0 L/ha, had no negative effect on the yield quality parameters. In most experiments, this fungicide caused an increase of hectolitre weight (HLW) and thousand grain weight (TGW) in comparison to untreated control, and the results were similar to the reference product. The single application of A23282A, at both rates, had no negative impact on protein content in grains. No significant differences between dose rates were recorded.

Presented data have shown a good efficacy of A23282A in the prevention and control of fungal diseases in cereals as well as its high selectivity to treated crop species, what was described in details and discussed in the Core Assessment. The efficacy of the tested fungicide was comparable to that of the reference products. The information included on Core assessment indicated that A23282A did not affect negatively on propagation, succeeding crops and other plants including adjacent crops.

The National Reviewer considers that A23282A (Kayak Era), containing the two active substances: cyprodinil (225 g/L) and prothioconazole (75 g/L) intended for diseases control in cereal crops meets the applicable requirements, both in the terms of number and location of trials and efficacy in diseases control, for the registration of plant protection products in Poland.

The proposed label claim: the application of A23282A (Kayak Era), at the rate of 1.5-2.0 L/ha for diseases control in wheat, barley, triticale and rye. The fungicide should be recommended as a foliar application in one treatment per season, at the growth stages at BBCH 30-69 in wheat, rye and triticale or 30-59 in barleys, with water volume 100–400 L/ha.

3.3 Information on the occurrence or possible occurrence of the development of resistance (KCP 6.3)

For Information on the occurrence or possible occurrence of the development of resistance please refer to the document Biological Assessment Dossier Section 3: Efficacy Data and Information, Core assessment (XXXX File No. VV-894835).

Comments of zRMS	Comments in Core assessment.
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3.4 Adverse effects on treated crops (KCP 6.4)

No new additional trials apart from those that were used for preparation of the Biological Assessment Dossier, Core assessment, were used to prepare this National Addendum.

As the aim of this National Addendum in most cases is to justify the effectiveness of the lower dose rate and address the efficacy claims in control of diseases according to the National Polish data requirements, no different conclusions with regard to product safety to cereals compared to the Core assessment could be drawn. Therefore, no information is presented in this section.

For information on Adverse effects on treated crops please refer to the document Biological Assessment Dossier Section 3: Efficacy Data and Information, Core assessment (XXXX File No. VV-894835).

Comments of zRMS	Comments in Core assessment.
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3.5 Observations on other undesirable or unintended side-effects (KCP 6.5)

3.5.1 Impact on succeeding crops (KCP 6.5.1)

Information on Impact on succeeding crops can be found in the document Biological Assessment Dossier Section 3: Efficacy Data and Information, Core assessment (XXXX File No. VV-894835).

3.5.2 Impact on other plants including adjacent crops (KCP 6.5.2)

Information on Impact on other plants including adjacent crops can be found in the document Biological Assessment Dossier Section 3: Efficacy Data and Information, Core assessment (XXXX File No. VV-894835).

Tank cleaning

Information on Tank cleaning can be found in the document Biological Assessment Dossier Section 3: Efficacy Data and Information, Core assessment (XXXX File No. VV-894835).

Comments of zRMS	Comments in Core assessment.
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3.5.3 Effects on beneficial and other non-target organisms (KCP 6.5.3)

Information on Effects on beneficial and other non-target organisms can be found in the document Biological Assessment Dossier Section 3: Efficacy Data and Information, Core assessment (XXXX File VV-894835).

3.5.4 Summary and conclusion

When applied in accordance with the uses supported in this submission, A23282A would not be expected to have an adverse effect to succeeding crops, adjacent crops and beneficial organisms and non-target arthropods.

3.6 Other/special studies

No further studies are submitted in support of this application.

3.7 List of test facilities including the corresponding certificates

The following table gives information about the testing facilities where trials were done. All facilities are certified and the trials conducted according to GEP.

The corresponding certificates are available in the GEP Certificate Database System (Certibase) (<http://www.gepcertibase.eu>) via the hyperlinks provided in table 3.7-1 below.

Table 3.7-1: List of test facilities

Hyperlink to certificate	Test facility	Country	Address	Number of Trials	
				2020	2021
1d6cc452412	Acceres Field Research Germany GmbH	Germany	Loofter Strasse 9, 25593 Christinenthal	-	1
1d6cb233955 1d6cb233651	Syngenta Agro GmbH	Germany	Am Technologiepark 1-5, Maintal, 63477	4	1
1d6cb2337f2	BioChem agrar Agroplan, Udem, Germany	Germany	Bünnert 72, Udem, 47589	-	4
1d6cb233691	SynTech Research Germany GmbH, Christinenthal, Germany	Germany	Schillerstrasse 16, Untergruppenbach, 74199	-	2
1d6cb2646ff	Latvian Plant Protection Research Centre, Riga, Latvia	Latvia	Struktoru 14a, Riga, LV 1039	-	5
1d6cb2646df	Institute of Agriculture, LAMMC, Akademija, Lithuania	Lithuania	Instituto al. 1, Akademija, Kedainiai, LT 58344	2	2
1d6cb264389	Field Research Support Kościan PL	Poland	Kościan, Dworcowa 2, Wielkopolskie, 64-000	-	1
1d6cb2643e1	Poznan University of Life Sciences	Poland	Dojazd 11, Poznań/ Wielkopolska, 62-632	4	-
1d6cb264381	SGS Polska Sp. z o.o., Warszawa, Poland	Poland	Marszowice 19, Oława, 55-200	1	-
1d6cb2646f1	Institute Ochrony Roslin, Sosnowice, Poland	Poland	ul. Gliwicka 29, Sosnowice/śląskie, 44-153	1	2
1d6cb2642cc	University of Life Sciences in Lublin, Poland	Poland	Skromna 8, Lublin + lubelskie, 20-704	-	-
1d6cb264634	Syngenta Polska Sp. z o.o.	Poland	Szamocka 8, Warszawa/mazowiecki, 01-748	6	1
1d6cb2643ad	BioChem agrar Polska Spółka z o.o.	Poland	ul. Kozielska 48, Urbanowice, 47-270	-	5
1d6cb26432e	SynTech Research Poland	Poland	ul. Jagiellonska 69/1, Bydgoszcz, 85-027	-	11

Appendix 1 Lists of data considered in support of the evaluation

Comments of zRMS	All data listed in Appendix 1 were relied on for the evaluation of A23282A (Kayak Era).
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List of data submitted by the applicant and relied on

KCP numbers	Eppo Zone	Author	Year	Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or Unpublished	Vertebrate study Y/N	Owner XXXX
KCP 6.2	MAR	Moderegger A.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field XXXX DEDSZF4072020 GEP Unpublished VV-941101	N	XXX
KCP 6.2	MAR	Fischbach M.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field BioChem Agrar, Gerichshain, Germany DEBCZF8712021 GEP Unpublished VV-941029	N	XXX
KCP 6.2	MAR	Heino C.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field XXXX DEDSZF1372020 GEP Unpublished VV-941031	N	XXX
KCP 6.2	MAR	Hey A.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field BioChem agrar Agroplan, Uedem, Germany DEBCZF8512021 GEP Unpublished VV-No. VV-941026	N	XXX
KCP 6.2	MAR	Ingenerf M.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field Bichem agrar Agroplan, Uedem, Germany DEBCZF8662021 GEP Unpublished VV-No. VV-941028	N	XXX

KCP numbers	Eppo Zone	Author	Year	Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or Unpublished	Vertebrate study Y/N	Owner XXXX
KCP 6.2	MAR	Krüger D.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on triticale - Field XXXX DEDSZF9282021 GEP Unpublished VV-941105	N	XXX
KCP 6.2	MAR	Merz D.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field XXXX DEDSZF5252020 GEP Unpublished VV-941102	N	XXX
KCP 6.2	MAR	Nannen D.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field Acceres Field Research Germany GmbH DESYZF7142021 GEP Unpublished VV-No. VV-941110	N	XXX
KCP 6.2	MAR	Nannen D.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on triticale - Field Acceres Field Research Germany GmbH DESYZF6852021 GEP Unpublished VV-941109	N	XXX
KCP 6.2	MAR	Röhr A.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field BioChem Agrar, Gerichshain, Germany DEBCZF8532021 GEP Unpublished VV-941027	N	XXX
KCP 6.2	MAR	Terhalle S.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field XXXX DEDSZF2832020 GEP Unpublished VV-941093	N	XXX

KCP numbers	Eppo Zone	Author	Year	Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or Unpublished	Vertebrate study Y/N	Owner XXXX
KCP 6.2	MAR	Strbac S.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley – Field SynTech Research Germany GmbH, Christinenthal, Germany DESYZF6402021 GEP Unpublished VV-953827	N	XXX
KCP 6.2	MAR	Strbac S.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley – Field SynTech Research Germany GmbH, Christinenthal, Germany DESYZF6352021 GEP Unpublished VV-941108	N	XXX
KCP 6.2	NE	Adam G.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field XXXX PLDSZF7092021 GEP Unpublished VV-941770	N	XXX
KCP 6.2	NE	Ciemniak W.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field Field Research Support Kościan PL PLFPZF8542021 GEP Unpublished VV-942010	N	XXX
KCP 6.2	NE	Ćwiek M.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field SynTech Research Poland PLSYZF6282021 GEP Unpublished VV-941991	N	XXX
KCP 6.2	NE	Garbowski A.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on triticale - Field XXXX PLDSZF7132020 GEP Unpublished VV-941771	N	XXX
KCP 6.2	NE	Garbowski A.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field	N	XXX

KCP numbers	Eppo Zone	Author	Year	Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or Unpublished	Vertebrate study Y/N	Owner XXXX
				Syngenta Polska Sp. z o.o PLDSZF7172020 GEP Unpublished VV-941772		
KCP 6.2	NE	Garbowski A.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field Syngenta Polska Sp. z o.o PLDSZF7242020 GEP Unpublished VV-941774	N	XXX
KCP 6.2	NE	Hamkało N.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field SGS Polska Sp. z o.o., Warszawa, Poland PLSGZF1022020 GEP Unpublished VV-No. VV-942013	N	XXX
KCP 6.2	NE	Kasperek M.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field SynTech Research Poland PLSYZF6232021 GEP Unpublished VV-941990	N	XXX
KCP 6.2	NE	Kasperek M.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field SynTech Research Poland PLSYZF7092021 GEP Unpublished VV-942003	N	XXX
KCP 6.2	NE	Kostera M.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field Syngenta Polska Sp. z o.o PLDSZF7532020 GEP Unpublished VV-941778	N	XXX
KCP 6.2	NE	Kostera M.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field Syngenta Polska Sp. z o.o PLDSZF7592020	N	XXX

KCP numbers	Eppo Zone	Author	Year	Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or Unpublished	Vertebrate study Y/N	Owner XXXX
				GEP Unpublished VV-941780		
KCP 6.2	NE	Kozłowski J.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field SynTech Research Poland PLSYZF6442021 GEP Unpublished VV-941994	N	XXX
KCP 6.2	NE	Kozłowski J.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field SynTech Research Poland PLSYZF7182021 GEP Unpublished VV-942005	N	XXX
KCP 6.2	NE	Krzyżińska B.	2021	CDL+PTZ - Registration trials - Efficacy testing against eyespot on barley - Field Institute of Plant Protection - National Research Institute, Sosnowice Branch PLSOZF7672021 GEP Unpublished VV-941988	N	XXX
KCP 6.2	NE	Krzyżińska B.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field Institute Ochrony Roslin, Sosnowice, Poland PLSOZF1132021 GEP Unpublished VV-942016	N	XXX
KCP 6.2	NE	Maczynska A.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field Institute Ochrony Roslin, Sosnowice, Poland PLSOZF1062020 GEP Unpublished VV-942014	N	XXX
KCP 6.2	NE	Paluch M.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on triticale - Field BioChem agrar Polska Spolka z o.o. PLBCZF8652021	N	XXX

KCP numbers	Eppo Zone	Author	Year	Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or Unpublished	Vertebrate study Y/N	Owner XXXX
				GEP Unpublished VV-941724		
KCP 6.2	NE	Pejka Ł.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on triticale - Field SynTech Research Poland PLSYZF6772021 GEP Unpublished VV-942000	N	XXX
KCP 6.2	NE	Potocka K.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field SynTech Research Poland PLSYZF6392021 GEP Unpublished VV-941993	N	XXX
KCP 6.2	NE	Potocka K.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on triticale - Field SynTech Research Poland PLSYZF6782021 GEP Unpublished VV-942001	N	XXX
KCP 6.2	NE	Ramanauskienė J.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field LAMMC LTAKZF7162021 GEP Unpublished VV-941638	N	XXX
KCP 6.2	NE	Sabeckis A.	2021	CDL+PTZ - Registration trials - Crop Safety in Wheat - Field LAMMC LTAKZF7222021 GEP Unpublished VV-941639	N	XXX
KCP 6.2	NE	Sawinska Z.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field Poznan University of Life Sciences PLUPZF1122020 GEP Unpublished VV-942065	N	XXX

KCP numbers	Eppo Zone	Author	Year	Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or Unpublished	Vertebrate study Y/N	Owner XXXX
KCP 6.2	NE	Sawinska Z.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field Poznan University of Life Sciences PLUPZF1192020 GEP Unpublished VV-942066	N	XXX
KCP 6.2	NE	Sawinska Z.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field Poznan University of Life Sciences PLUPZF1112020 GEP Unpublished VV-942064	N	XXX
KCP 6.2	NE	Sawinska Z.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field Poznan University of Life Sciences PLUPZF1202020 GEP Unpublished VV-942067	N	XXX
KCP 6.2	NE	Semaskiene R.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field Institute of Agriculture, LAMMC, Akademija, Lithuania LTAKZF1152020 GEP Unpublished VV-941632	N	XXX
KCP 6.2	NE	Semaskiene R.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field Lithuanian Institute of Agriculture, Akademija, Lithuania LTAKZF1092020 GEP Unpublished VV-941631	N	XXX
KCP 6.2	NE	Sikora M.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field BioChem agrar Polska Spolka z o.o. PLBCZF8562021 GEP Unpublished VV-941719	N	XXX

KCP numbers	Eppo Zone	Author	Year	Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or Unpublished	Vertebrate study Y/N	Owner XXXX
KCP 6.2	NE	Sikora M.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field BioChem agrar Polska Spolka z o.o. PLBCZF8552021 GEP Unpublished VV-941718	N	XXX
KCP 6.2	NE	Sikora M.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field BioChem agrar Polska Spolka z o.o. PLBCZF8682021 GEP Unpublished VV-941725	N	XXX
KCP 6.2	NE	Sikora M.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on triticale - Field BioChem agrar Polska Spolka z o.o. PLBCZF8642021 GEP Unpublished VV-941723	N	XXX
KCP 6.2	NE	Switkowski M.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field SynTech Research Poland PLSYZF6382021 GEP Unpublished VV-941992	N	XXX
KCP 6.2	NE	Switkowski M.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field SynTech Research Poland PLSYZF6992021 GEP Unpublished VV-942002	N	XXX
KCP 6.2	NE	Switkowski M.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on triticale - Field SynTech Research Poland PLSYZF6762021 GEP Unpublished VV-941999	N	XXX
KCP 6.2	NE	Treikale O.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field	N	XXX

KCP numbers	Eppo Zone	Author	Year	Title Source (where different from company) Company, Report No. GLP or GEP status (where relevant) Published or Unpublished	Vertebrate study Y/N	Owner XXXX
				Latvian Plant Protection Research Centre, Riga, Latvia LVRIZF6112021 GEP Unpublished VV-941646		
KCP 6.2	NE	Treikale O.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field Latvian Plant Protection Research Centre, Riga, Latvia LVRIZF6162021 GEP Unpublished VV-941706	N	XXX
KCP 6.2	NE	Treikale O.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field Latvian Plant Protection Research Centre, Riga, Latvia LVRIZF6952021 GEP Unpublished VV-941708	N	XXX
KCP 6.2	NE	Treikale O.	2021	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on wheat - Field Latvian Plant Protection Research Centre, Riga, Latvia LVRIZF7132021 GEP Unpublished VV-941709	N	XXX
KCP 6.2	NE	Treikale O.	2021	CDL+PTZ - Registration trials - Efficacy testing against eyespot on barley - Field Latvian Plant Protection Research Centre, Riga, Latvia LVRIZF7612021 GEP Unpublished VV-941711	N	XXX
KCP 6.2	NE	Walerys G.	2020	CDL+PTZ - Registration trials - Efficacy testing against foliar diseases on barley - Field Syngenta Polska Sp. z o.o. PLDSZF5052020 GEP Unpublished VV-941767	N	XXX

Appendix 2 Summary of data on trial sites and application details per use

Preliminary, minimum effective dose and efficacy trials in EPPO zone Maritime

Wheat

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
FDWH20RC-2020UN	SYNGENTA AGRO GmbH, Maintal - GERMANY	Nenndorf, Niedersachsen	Winter wheat (TRZAW)	PP 1/181(4)	10.05 m2, 1 plot	SPRAY 300	BICCAI	05-Jun-2020	BBCH 49 (39 - 51)
DEDSZF1372020	Germany	L.Kreis:WL 53.3725 / 9.92	AKTEUR 21-Oct-19 loamy silt	PP 1/152(4) PP 1/225(2) PP 1/135(4) Yes	4 RACOB INCLUDED field	SPRAY 300	BICCAI	05-Jun-2020	BBCH 49 (39 - 51)
FDWH20RC-2020UN	Syngenta Agro Germany	Barsinghausen, Niedersachsen	Winter wheat (TRZAW)	PP 1/181(4)	10.5 m2, 1 plot	SPRAY 300	BACSPR	20-May-2020	BBCH 39 (39 - 45)
DEDSZF2832020	Germany	Hannover 52.353894 / 9.444105	Akteur fine sandy loam	PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	4 RACOB INCLUDED field	SPRAY 300	BACSPR	20-May-2020	BBCH 39 (39 - 45)
FDWH20RC-2021UN	Bichem agrar Agroplan, Uedem, Germany	Weeze, Nordrhein-Westfalen	Winter wheat (TRZAW)	PP 1/181(4)	13.5 m2, 1 plot	SPRAY 300	BOSPHO	28-Apr-2021	BBCH 31 (31 - 31)
DEBCZF8662021	Germany 1d68f7c3a27	51.6137777 / 6.1644444	Akteur 19-Nov-20	PP 1/152(4) PP 1/26(4) PP 1/225(2)	4 RACOB INCLUDED	SPRAY 300	BOSPHO	28-May-2021	BBCH 49 (49 - 49)

			loamy sand	PP 1/135(4) Yes	field				
FDWH20RC-2021UN	BioChem Agrar, Gerichshain, Germany	Frensdorf, Bayern	Winter wheat (TRZAW)	PP 1/181(4)	22.5 m2, 1 plot	SPRAY 300	BOSPHO	06-May-2021	BBCH 32 (31 - 32)
DEBCZF8712021	Germany		Reform	PP 1/152(4)	4	SPRAY 300	BOSPHO	25-May-2021	BBCH 41 (41 - 43)
	1d68da64072	49.786566 / 10.845102	08-Nov-20	PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	RACOB L INCLUDED field				
FDWH20RC-2021UN	Acceres Field Research Germany GmbH	Christinenthal, Schleswig- Holstein	Winter wheat (TRZAW)	PP 1/181(4)	20 m2, 1 plot	SPRAY 200	BOSPHO	04-May-2021	BBCH 31 (31 - 32)
DESYZF7142021	Germany	DEU	Tobak	PP 1/152(4)	4	SPRAY 200	BOSPHO	27-May-2021	BBCH 39 (37 - 39)
	1234	54.051654 / 9.535722		PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	RACOB L field				
			loamy sand						

Barley

Protocol ID	Test Facility	Trial Location	Crop	Guidelines	Plot Size	Application Details			
Trial ID	Country GEP Acc. No.	Trial Region Trial GPS (Y/Xcoord.)	Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	GEP	No. of Reps Trial Design Untreat. Arrang. Site Type	Method	Equipment	Appl. Date	Crop GS
FDBA21RC-2020UN	Syngenta Agro GmbH	Straubing, Bayern	Winter barley (HORVW)	PP 1/181(4)	10.5 m2, 1 plot	SPRAY 300	SPRBIC	28-Apr-2020	BBCH 49 (45 - 49)
DEDSZF4072020	Germany	Bayern 48.80827 / 12.73279	Sandra loess	PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	4 RACOBL INCLUDED field	SPRAY 300	SPRBIC	28-Apr-2020	BBCH 49 (45 - 49)
FDBA21RC-2020UN	Syngenta Agro GmbH	Lichtenau- Benshurst, Baden-Württemberg	Winter barley (HORVW)	PP 1/135(4)	12 m2, 1 plot	SPRAY 300	SPRBIC	24-Apr-2020	BBCH 51 (39 - 51)
DEDSZF5252020	Germany	 48.707761 / 8.028046	California 08-Oct-19 sandy loam	PP 1/225(2) PP 1/26(4) PP 1/152(4) PP 1/181(4) Yes	4 RACOBL INCLUDED field	SPRAY 300	SPRBIC	24-Apr-2020	BBCH 51 (39 - 51)
FDBA21RC-2021UN	BioChem agrar Agroplan, Uedem, Germany	Weeze, Nordrhein-Westfalen	Winter barley (HORVW)	PP 1/135(4)	13.5 m2, 1 plot	SPRAY 300	BOSPHO	23-Apr-2021	BBCH 32 (32 - 32)
DEBCZF8512021	Germany		Orbit	PP 1/225(2)	4	SPRAY 300	BOSPHO	06-May-2021	BBCH 39 (39 - 39)
	1d68f7c3a27	51.6122222 / 6.1607778	22-Oct-20	PP 1/26(4) PP 1/152(4)	RACOBL INCLUDED				

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
			sandy loam	PP 1/181(4) Yes	field				
FDBA21RC-2021UN	BioChem Agrar, Gerichshain, Germany	Trossin, Sachsen	Winter barley (HORVW)	PP 1/135(4)	27.5 m2, 1 plot	SPRAY 300	BOSPHO	20-Apr-2021	BBCH 32 (31 - 33)
DEBCZF8532021	Germany		Lomerit	PP 1/225(2)	4	SPRAY 300	BOSPHO	06-May-2021	BBCH 41 (39 - 45)
	1d68da64072	51.629113 / 12.783976	30-Sep-20 sandy loam	PP 1/26(4) PP 1/152(4) PP 1/181(4) Yes	RACOB INCLUDED field				
FDBA21RC-2021UN	SynTech Research Germany GmbH,	Möckmühl-Ruchen, Baden-Württemberg	Spring barley (HORVS)	PP 1/181(4) PP 1/152(4)	21 m2, 1 plot 4	SPRAY 300	SPRAYE	21-May-2021	BBCH 31 (30 - 30)
DESYZF6352021	Christinenthal, Germany	49.3121794 / 9.3878036	AVALON 13-Apr-2021 sandy loam	PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	Randomized Complete Block (RCB) field	SPRAY 300	SPRAYE	14-Jun-2021	BBCH 49 (47 - 51)
FDBA21RC-2021UN	SynTech Research Germany GmbH,	Untergruppenbach, Baden-Württemberg	Spring barley (HORVS)	PP 1/181(4) PP 1/152(4)	19,5 m2, 1 plot 4	SPRAY 300	SPRAYE	21-May-2021	BBCH 31 (30 - 32)
DESYZF6402021	Christinenthal, Germany	49.3121794 / 9.3878036	RGT PLANET 10-Apr-2021 clay loam	PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	Randomized Complete Block (RCB) field	SPRAY 300	SPRAYE	14-Jun-2021	BBCH 49 (49 - 51)

Triticale

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
FDTT23RC-2021UN	Syngenta Agro GmbH	Dallmin, Brandenburg	Winter triticale (TTLWI)	PP 1/181(4)	12.45 m2, 1 plot	SPRAY 300	SPRAYE	01-Jun-2021	BBCH 51 (49 - 55)
DEDSZF9282021	Germany	Prignitz	Lombardo	PP 1/152(4)	4	SPRAY 300	SPRAYE	01-Jun-2021	BBCH 51 (49 - 55)
	not relevant	53.217339 / 11.782717		PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	RACOB INCLUDED field				
			loamy sand						
FDTT23RC-2021UN	Acceres Field Research Germany GmbH	Glückstadt, Schleswig-Holstein	Winter triticale (TTLWI)	PP 1/181(4)	20 m2, 1 plot	SPRAY 200	SPRBIC	02-Jun-2021	BBCH 55 (51 - 59)
DESYZF6852021	Germany		Lombardo	PP 1/152(4)	4	SPRAY 200	SPRBIC	02-Jun-2021	BBCH 55 (51 - 59)
	1234	53.81007 / 9.42		PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	RACOB field				
			loamy clay						

Preliminary, minimum effective dose and efficacy trials in EPPO zone North East**Wheat**

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
FDWH20RC-2020UN	Lithuanian Institute of Agriculture, Akademija, Lithuania	Kedainiai, Kauno Apskritis	Spring wheat (TRZAS)	PP 1/181(4)	25 m2, 1 plot	SPRAY 300	BICSPR	12-Jun-2020	BBCH 37 (37 - 41)
LTAZKF1092020	Lithuania		Vanek	PP 1/152(4)	4	SPRAY 300	BICSPR	12-Jun-2020	BBCH 37 (37 - 41)
	AS4-02 (2019)	55.3859 / 23.845	30-Apr-20 sandy loam	PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	RACOB field				
FDWH20RC-2020UN	Institute of Agriculture, LAMMC, Akademija, Lithuania	Kedainiai, Kauno Apskritis	Spring wheat (TRZAS)	PP 1/181(4)	25 m2, 1 plot	SPRAY 300	SPRBIC	19-Jun-2020	BBCH 45 (43 - 45)
LTAZKF1152020	Lithuania		Collada	PP 1/152(4)	4	SPRAY 300	SPRBIC	19-Jun-2020	BBCH 45 (43 - 45)
	AS4-02 (2019)	55.388 / 23.8449	26-Apr-20 loam	PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	RACOB field				

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
FDWH20RC-2020UN	Syngenta Polska Sp. z o.o	Nowojowice, Dolnoslaskie	Winter wheat (TRZAW)	PP 1/181(4)	17.5 m2, 1 plot	SPRAY 300	SPRAYE	11-May-2020	BBCH 37 (37 - 39)
PLDSZF7172020	Poland		Emil	PP 1/152(4)	4	SPRAY 300	SPRAYE	11-May-2020	BBCH 37 (37 - 39)
	4/2014	50.9091666 / 17.0484444	30-Sep-19 fine clay loam	PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	RACOB L INCLUDED field				
FDWH20RC-2020UN	Syngenta Polska Sp. z o.o	Domaniów, Dolnoslaskie	Winter wheat (TRZAW)	PP 1/181(4)	17.5 m2, 1 plot	SPRAY 300	SPRAYE	28-May-2020	BBCH 47 (45 - 47)
PLDSZF7592020	Poland		Ponticus	PP 1/152(4)	4	SPRAY 300	SPRAYE	28-May-2020	BBCH 47 (45 - 47)
	4/2014	50.890111 / 17.133919	06-Nov-19 fine silty clay	PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	RACOB L INCLUDED field				
FDWH20RC-2021UN	LAMMC	Valinava, Kauno Apskritis	Winter wheat (TRZAW)	PP 1/181(4)	25 m2, 1 plot	SPRAY 300	SPRBIC	19-May-2021	BBCH 32 (32 - 32)

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
LTAKZF7162021	Lithuania AS4-02(2019)	55.383399 / 23.858205	KWS Emil 25-Sep-20 loamy fine sand	PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	4 RACOB L INCLUDED field	SPRAY 300	SPRBIC	08-Jun-2021	BBCH 49 (49 - 52)
FDWH20RC-2021UN LVRIZF6952021	Latvian Plant Protection Research Centre, Riga, Latvia Latvia GEP_cert_No_20.PDF	VILCINI, Jelgavas novads 56.479404 / 23.506943	Winter wheat (TRZAW) BOSPORUS 22-Sep-20 calcareous loam	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	25 m2, 1 plot 4 RACOB L INCLUDED field	SPRAY 250 SPRAY 250	SPRBIC SPRBIC	09-May-2021 31-May-2021	BBCH 32 (31 - 32) BBCH 39 (37 - 41)
FDWH20RC-2021UN LVRIZF7132021	Latvian Plant Protection Research Centre, Riga, Latvia Latvia GEP_cert_No_20.PDF	DIZSTENDE, Talsu novads 57.18213 / 22.53843	Winter wheat (TRZAW) EDVINS 22-Sep-20	PP 1/181(4) PP 1/152(4) PP 1/26(4)	25 m2, 1 plot 4 RACOB	SPRAY 250 SPRAY 250	BICSPR BICSPR	02-May-2021 28-May-2021	BBCH 32 (31 - 32) BBCH 37 (37 - 39)

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
			loamy sand	PP 1/225(2) PP 1/135(4) Yes	INCLUDED field				
FDWH20RC-2021UN	BioChem agrar Polska Spolka z o.o.	Urbanowice, ul. Kozielska 48, Opolskie	Winter wheat (TRZAW)	PP 1/181(4)	18.75 m2, 1 plot	SPRAY 300	BOSPHO	06-May-2021	BBCH 31 (31 - 32)
PLBCZF8682021	Poland		Owacja	PP 1/152(4)	4	SPRAY 300	BOSPHO	31-May-2021	BBCH 45 (41 - 45)
	1d61cf2ed6d	50.294632 / 18.010253	18-Oct-20	PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	RACOB INCLUDED field				
FDWH20RC-2021UN	SynTech Research Poland	Żnin, Kujawsko-pomorskie	Winter wheat (TRZAW)	PP 1/181(4)	20 m2, 1 plot	SPRAY 300	BOSPHO	12-May-2021	BBCH 32 (31 - 32)
PLSYZF6992021	Poland		Arkadia	PP 1/152(4)	4	SPRAY 300	BOSPHO	02-Jun-2021	BBCH 43 (43 - 45)
	7/2020	52.851469 / 17.762015	06-Oct-20	PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	RACOB INCLUDED field				
			clayey sand						

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
FDWH20RC-2021UN	SynTech Research Poland	Osowka, Lubelskie	Winter wheat (TRZAW)	PP 1/181(4)	20 m2, 1 plot	SPRAY 200	BACCAI	28-Apr-2021	BBCH 31 (31 - 32)
PLSYZF7092021	Poland		Arkadia	PP 1/152(4)	4	SPRAY 200	BACCAI	26-May-2021	BBCH 39 (39 - 41)
	7/2020	51.373086 / 22.435319	25-Sep-20 sandy loam	PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	RACOB L INCLUDED field				
FDWH20RC-2021UN	SynTech Research Poland	Olszanka, Opolskie	Winter wheat (TRZAW)	PP 1/181(4)	24 m2, 1 plot	SPRAY 300	BOSPHO	08-May-2021	BBCH 32 (31 - 32)
PLSYZF7182021	Poland		Argument	PP 1/152(4)	4	SPRAY 300	BACCAI	26-May-2021	BBCH 43 (41 - 45)
	7/2020	50.751604 / 17.468341	22-Oct-20 sandy loam	PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	RACOB L INCLUDED field				
FDWH22RC-2021UN	LAMMC	Kedainiai, Kauno Apskritis	Spring wheat (TRZAS)	PP 1/181(4)	25 m2, 1 plot	SPRAY 300	SPRBIC	04-Jun-2021	BBCH 31 (31 - 32)

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
LTAKZF7222021	Lithuania	55.38696 / 23.85445	KWS JETSTREAM	PP 1/152(4)	4	SPRAY 300	SPRBIC	04-Jun-2021	BBCH 31 (31 - 32)
	AS4-02(2019)		03-May-21	PP 1/26(4)	RACOB	SPRAY 300	SPRBIC	25-Jun-2021	BBCH 51 (51 - 53)
				PP 1/225(2)	INCLUDED	SPRAY 300	SPRBIC	25-Jun-2021	BBCH 51 (51 - 53)
			loam	PP 1/135(4) Yes	field				

Barley

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
FDBA21RC-2020UN	Syngenta Polska Sp. z o.o.	Malbork, Pomorskie	Winter barley (HORVW)	PP 1/181(4)	15 m2, 1 plot	SPRAY 200	SPRBIC	10-May-2020	BBCH 51 (49 - 51)
PLDSZF5052020	Poland	pomerania	Baracuda	PP 1/152(4)	4	SPRAY 200	SPRBIC	10-May-2020	BBCH 51 (49 - 51)
	4/2014	54.078975 / 18.826997	05-Oct-19	PP 1/26(4) PP 1/225(2) PP 1/135(4) silt loam	RACOB INCLUDED field				
FDBA21RC-2020UN	Syngenta Polska Sp. z o.o.	Owczary, Dolnoslaskie	Winter barley (HORVW)	PP 1/181(4)	17.5 m2, 1 plot	SPRAY 300	SPRAYE	08-May-2020	BBCH 49 (49 - 51)
PLDSZF7242020	Poland		Wootan	PP 1/152(4)	4	SPRAY 300	SPRAYE	08-May-2020	BBCH 49 (49 - 51)
	4/2014	50.8264884 / 17.3034054	24-Sep-19 1 sandy clay loam	PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	RACOB INCLUDED field				
FDBA21RC-2020UN	Syngenta Polska Sp. z o.o.	Oława, Dolnoslaskie	Winter barley (HORVW)	PP 1/181(4)	17.5 m2, 1 plot	SPRAY 300	SPRAYE	13-May-2020	BBCH 51 (51 - 52)
PLDSZF7532020	Poland		Wootan	PP 1/152(4)	4	SPRAY 300	SPRAYE	13-May-2020	BBCH 51 (51 - 52)
	4/2014	50.828195 / 17.304032	04-Oct-19	PP 1/26(4) PP 1/225(2)	RACOB INCLUDED				

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
			loamy clay	PP 1/135(4) Yes	field				
FDBA21RC-2020UN PLSGZF1022020	SGS Polska Sp. z o.o., Warszawa, Poland Poland 6/2016	Olawa, Dolnoslaskie 50.837756 / 17.305585	Winter barley (HORVW) Kaylin silt loam	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	27 m2, 1 plot 4 RACOB L INCLUDED field	SPRAY 300 SPRAY 300	BACCAI BACCAI	27-Apr-2020 27-Apr-2020	BBCH 39 (37 - 39) BBCH 39 (37 - 39)
FDBA21RC-2020UN PLSOZF1062020	Institute Ochrony Roslin, Sosnowice, Poland Poland 1/2020	Sośnicowice, Slaskie 50.27381 / 18.52238	Winter barley (HORVW) Scarpia 30-Sep-19 sandy clay loam	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	14.98 m2, 1 plot 4 RACOB L INCLUDED field	SPRAY 200 SPRAY 200	BOSPHO BOSPHO	20-Apr-2020 20-Apr-2020	BBCH 33 (33 - 33) BBCH 33 (33 - 33)
FDBA21RC-2020UN PLUPZF1112020	Poznan University of Life Sciences Poland WO-505-47/2010	Przybroda, Wielkopolskie 52.30496 / 16.39054	Winter barley (HORVW) Zenek 26-Sep-19	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2)	24 m2, 1 plot 4 RACOB L INCLUDED	SPRAY 200 SPRAY 200	BICSPR BICSPR	08-May-2020 08-May-2020	BBCH 45 (43 - 47) BBCH 45 (43 - 47)

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
			loamy sand	PP 1/135(4) Yes	field				
FDBA21RC-2020UN PLUPZF1122020	Poznan University of Life Sciences Poland WO-505-47/2010	Przybroda, Wielkopolskie 52.30525 / 16.39007	Winter barley (HORVW) Rosita 26-Sep-19 loamy sand	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	24 m2, 1 plot 4 RACOB L INCLUDED field	SPRAY 200 SPRAY 200	BICSPR BICSPR	08-May-2020 08-May-2020	BBCH 45 (43 - 47) BBCH 45 (43 - 47)
FDBA21RC-2020UN PLUPZF1192020	Poznan University of Life Sciences Poland WO-505-47/2010	Brody, Wielkopolskie 52.25835 / 16.18315	Winter barley (HORVW) Kobuz 26-Sep-19 loamy sand	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	18 m2, 1 plot 4 RACOB L INCLUDED field	SPRAY 230 SPRAY 230	BICSPR BICSPR	20-May-2020 20-May-2020	BBCH 51 (49 - 55) BBCH 51 (49 - 55)
FDBA21RC-2020UN PLUPZF1202020	Poznan University of Life Sciences Poland WO-505-47/2010	Złotniki, Wielkopolskie 52.48777 / 16.81879	Winter barley (HORVW) Gloria 05-Oct-19	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2)	12.5 m2, 1 plot 4 RACOB L INCLUDED	SPRAY 200 SPRAY 200	BICSPR BICSPR	04-May-2020 04-May-2020	BBCH 43 (41 - 45) BBCH 43 (41 - 45)

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
			loamy sand	PP 1/135(4) Yes	field				
FDBA21RC-2021UN LVRIZF6112021	Latvian Plant Protection Research Centre, Riga, Latvia Latvia GEP_cert_No_20.PDF	DIZSTENDE, Talsu novads 57.184513 / 22.564296	Spring barley (HORVS) RASA 14-May-21 sandy loam	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	22.5 m2, 1 plot 4 RACOBL INCLUDED field	SPRAY 250 SPRAY 250	BICSPR BICSPR	13-Jun-2021 28-Jun-2021	BBCH 31 (31 - 31) BBCH 39 (39 - 43)
FDBA21RC-2021UN LVRIZF6162021	Latvian Plant Protection Research Centre, Riga, Latvia Latvia GEP_cert_No_20.PDF	DIZSTENDE, Talsu novads 57.186571 / 22.549751	Spring barley (HORVS) ANSIS 26-May-21 sandy loam	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	22.5 m2, 1 plot 4 RACOBL field	SPRAY 250 SPRAY 250	BICSPR BICSPR	11-Jun-2021 28-Jun-2021	BBCH 31 (31 - 31) BBCH 39 (39 - 43)
FDBA21RC-2021UN PLBCZF8552021	BioChem agrar Polska Spolka z o.o. Poland 1d61cf2ed6d	Urbanowice, ul. Kozielska 48, Opolskie 50.283045 / 18.065193	Winter barley (HORVW) Astaire 30-Sep-20	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2)	18 m2, 1 plot 4 RACOBL INCLUDED	SPRAY 300 SPRAY 300	BOSPHO BOSPHO	04-May-2021 16-May-2021	BBCH 32 (32 - 32) BBCH 49 (47 - 49)

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
			silt	PP 1/135(4) Yes	field				
FDBA21RC-2021UN PLBCZF8562021	BioChem agrar Polska Spolka z o.o. Poland 1d61cf2ed6d	Urbanowice, ul. Kozielska 48, Opolskie 50.302812 / 18.04022	Winter barley (HORVW) Kaylin 05-Oct-20 silt	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	15 m2, 1 plot 4 RACOB L INCLUDED field	SPRAY 300 SPRAY 300	BOSPHO BOSPHO	06-May-2021 15-May-2021	BBCH 32 (32 - 33) BBCH 49 (47 - 49)
FDBA21RC-2021UN PLDSZF7092021	Syngenta Polska Sp. z o.o. Poland 4/2014	Kucharzowice, Dolnoslaskie 50.8005434 / 17.2523094	Winter barley (HORVW) Wootan fine sandy loam	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	20 m2, 1 plot 4 RACOB L INCLUDED field	SPRAY 300 SPRAY 300	SPRAYE SPRAYE	28-Apr-2021 12-May-2021	BBCH 32 (32 - 33) BBCH 39 (39 - 43)
FDBA21RC-2021UN PLFPZF8542021	Field Research Support Kościan PL Poland 9/2013	Kościan, Wielkopolskie 52.056959 / 16.634619	Winter barley (HORVW) Gloria 05-Oct-20	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2)	15 m2, 1 plot 4 RACOB L INCLUDED	SPRAY 200 SPRAY 200	BOSPHO BOSPHO	19-Apr-2021 17-May-2021	BBCH 31 (31 - 32) BBCH 49 (49 - 51)

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
			loamy sand	PP 1/135(4) Yes	field				
FDBA21RC-2021UN PLSOZF1132021	Institute Ochrony Roslin, Sosnowice, Poland Poland 1/2020	Sośnicowice, Slaskie 50.26711 / 18.54544	Winter barley (HORVW) Bartosz 01-Oct-20 silt loam	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	14.98 m2, 1 plot 4 RACOB L INCLUDED field	SPRAY 300 SPRAY 300	BICSPR BICSPR	27-Apr-2021 11-May-2021	BBCH 31 (31 - 32) BBCH 43 (43 - 43)
FDBA21RC-2021UN PLSYZF6232021	SynTech Research Poland Poland 7/2020	Lesniewice, Lubelskie 50.965888 / 23.493004	Spring barley (HORVS) Pilote C1 23-Apr-21 sandy clay loam	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	20 m2, 1 plot 4 RACOB L INCLUDED field	SPRAY 250 SPRAY 250	BACCAI BACCAI	27-May-2021 14-Jun-2021	BBCH 31 (31 - 32) BBCH 49 (49 - 51)
FDBA21RC-2021UN PLSYZF6282021	SynTech Research Poland Poland 7/2020	Piła, Wielkopolskie 53.135703 / 16.623661	Winter barley (HORVW) SY Tepee 05-Oct-20	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2)	16 m2, 1 plot 4 RACOB L INCLUDED	SPRAY 200 SPRAY 200	BOSPHO BOSPHO	04-May-2021 18-May-2021	BBCH 32 (31 - 32) BBCH 47 (45 - 49)

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
			clay loam	PP 1/135(4) Yes	field				
FDBA21RC-2021UN PLSYZF6382021	SynTech Research Poland Poland 7/2020	Żnin, Kujawsko-pomorskie 52.850867 / 17.763152	Spring barley (HORVS) Argento 17-Apr-21 loamy sand	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	15 m2, 1 plot 4 RACOB L INCLUDED field	SPRAY 300 SPRAY 300	BACCAI BACCAI	31-May-2021 11-Jun-2021	BBCH 32 (32 - 33) BBCH 49 (49 - 51)
FDBA21RC-2021UN PLSYZF6392021	SynTech Research Poland Poland 7/2020	Barczewo, Warminko-mazurskie 53.81798 / 20.6482	Winter barley (HORVW) Gloria 09-Oct-20 sandy loam	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	18 m2, 1 plot 4 RACOB L INCLUDED field	SPRAY 200 SPRAY 200	BACCAI BACCAI	20-Apr-2021 11-May-2021	BBCH 31 (31 - 32) BBCH 39 (33 - 41)
FDBA21RC-2021UN PLSYZF6442021	SynTech Research Poland Poland 7/2020	Olszanka, Opolskie 50.758187 / 17.46998	Winter barley (HORVW) Kosmos 11-Oct-20	PP 1/181(4) PP 1/152(4) PP 1/26(4) PP 1/225(2)	24 m2, 1 plot 4 RACOB L INCLUDED	SPRAY 300 SPRAY 300	BOSPHO BACCAI	05-May-2021 26-May-2021	BBCH 32 (31 - 33) BBCH 47 (45 - 49)

Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
			sandy loam	PP 1/135(4) Yes	field				
FDBA26RC-2021UN LVRIZF7612021	Latvian Plant Protection Research Centre, Riga, Latvia Latvia GEP_cert_No_20.PDF	SESAVA, Jelgavas novads 56.394636 / 23.791295	Winter barley (HORVW) KWS Kosmos 25-Sep-20 calcareous sandy loam	PP 1/181(4) PP 1/152(4) PP 1/28(3) PP 1/225(2) PP 1/135(4) Yes	24 m2, 1 plot 4 RACOB INCLUDED field	SPRAY 250	SPRBIC	29-Apr-2021	BBCH 31 (31 - 32)
FDBA26RC-2021UN PLSOZF7672021	Institute of Plant Protection - National Research Institute, Sosnicowice Branch Poland 1/2020	Sośnicowice, Slaskie 50.27389 / 18.5224	Winter barley (HORVW) Gloria 30-Sep-20 sandy clay loam	PP 1/181(4) PP 1/152(4) PP 1/28(3) PP 1/225(2) PP 1/135(4) Yes	14.98 m2, 1 plot 4 RACOB INCLUDED field	SPRAY 300	BICSPR	27-Apr-2021	BBCH 31 (31 - 31)

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Protocol ID Trial ID	Test Facility Country GEP Acc. No.	Trial Location Trial Region Trial GPS (Y/Xcoord.)	Crop Cultivar Em. Date Perennial Age Plant/Prun S. Soil Type	Guidelines GEP	Plot Size No. of Reps Trial Design Untreat. Arrang. Site Type	Application Details			
						Method	Equipment	Appl. Date	Crop GS
FDTT23RC-2020UN	Syngenta Polska Sp. z o.o.	Zlobizna, Opolskie	Winter triticale (TTLWI)	PP 1/135(4)	17.5 m2, 1 plot	SPRAY 300	SPRAYE	18-May-2020	BBCH 51 (51 - 53)
PLDSZF7132020	Poland		Fredro	PP 1/225(2)	4	SPRAY 300	SPRAYE	18-May-2020	BBCH 51 (51 - 53)
	4/2014	50.8314262 / 17.4609316	26-Sep-19	PP 1/26(4) PP 1/152(4) PP 1/181(4) Yes	RACOB INCLUDED field				
			sandy loam						
FDTT23RC-2021UN	BioChem agrar Polska Spolka z o.o.	Urbanowice, ul. Kozielska 48, Opolskie	Winter triticale (TTLWI)	PP 1/135(4)	18.75 m2, 1 plot	SPRAY 300	BOSPHO	24-May-2021	BBCH 41 (39 - 41)
PLBCZF8642021	Poland		Meloman	PP 1/225(2)	4	SPRAY 300	BOSPHO	24-May-2021	BBCH 41 (39 - 41)
	1d61cf2ed6d	50.294076 / 18.011648	20-Oct-20	PP 1/26(4) PP 1/152(4) PP 1/181(4) Yes	RACOB INCLUDED field				
			silt						
FDTT23RC-2021UN	BioChem agrar Polska Spolka z o.o.	Kazmierz, Wielkopolskie	Winter triticale (TTLWI)	PP 1/135(4)	27.5 m2, 1 plot	SPRAY 300	BOSPHO	20-May-2021	BBCH 39 (37 - 39)
PLBCZF8652021	Poland		Belcanto	PP 1/225(2)	4	SPRAY 300	BOSPHO	20-May-2021	BBCH 39 (37 - 39)
	1d61cf2ed6d	52.5184 / 16.61001	05-Nov-20	PP 1/26(4)	RACOB				

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						Method	Equipment	Appl. Date	Crop GS
			loamy sand	PP 1/152(4) PP 1/181(4) Yes	INCLUDED field				
FDTT23RC-2021UN PLSYZF6762021	SynTech Research Poland Poland 7/2020	Żnin, Kujawsko-pomorskie 52.854052 / 17.777413	Winter triticale (TTLWI) Rotondo 05-Oct-20 clayey sand	PP 1/135(4) PP 1/225(2) PP 1/26(4) PP 1/152(4) PP 1/181(4) Yes	15 m2, 1 plot 4 RACOB INCLUDED field	SPRAY 300 SPRAY 300	BACCAI BACCAI	31-May-2021 31-May-2021	BBCH 49 (49 - 51) BBCH 49 (49 - 51)
FDTT23RC-2021UN PLSYZF6772021	SynTech Research Poland Poland 7/2020	Szydłowo, Wielkopolskie 53.169708 / 16.601671	Winter triticale (TTLWI) Dolindo 08-Oct-20 sandy loam	PP 1/135(4) PP 1/225(2) PP 1/26(4) PP 1/152(4) PP 1/181(4) Yes	14 m2, 1 plot 4 RACOB INCLUDED field	SPRAY 200 SPRAY 200	BOSPHO BOSPHO	13-May-2021 13-May-2021	BBCH 37 (37 - 37) BBCH 37 (37 - 37)
FDTT23RC-2021UN PLSYZF6782021	SynTech Research Poland Poland	Gietrzwałd, Warmińsko-mazurskie	Winter triticale (TTLWI) Tadeus	PP 1/181(4) PP 1/152(4)	18 m2, 1 plot 4	SPRAY 200 SPRAY 200	BACCAI BACCAI	14-May-2021 14-May-2021	BBCH 37 (37 - 39) BBCH 37 (37 - 39)

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						Method	Equipment	Appl. Date	Crop GS
	7/2020	53.7364528 / 20.2811872	14-Oct-20 sandy loam	PP 1/26(4) PP 1/225(2) PP 1/135(4) Yes	RACOB INCLUDED field				