

**FINAL** REGISTRATION REPORT

**Part B**

**Section 3**

**Efficacy Data and Information**

Concise summary

Product code: CHR/ZF/PROTI 100 FS

Product name(s): Gamelan 100 FS/ Doraltes 100 FS

Chemical active substance(s):

Active substance: prothioconazole 100 g/L

Zonal Rapporteur Member State: Poland

**CORE ASSESSMENT**

(authorization)

Applicant: Innvigo Sp. z o.o.

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**MS Finalisation date: 05/09/2022**

## Version history

When	What
October 2021	Dossier sent for evaluation
December 2021	Updated
January 2022	Updates based on feedback from zRMS Poland
June 2022	zRMS evaluation of dRR
September 2022	Final version prepared by zRMS after Commenting period

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

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

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

##### Abstract

The presented document is prepared in accordance with Regulation (EC) No1107/2009, article 33. This Report is based on proper documentation and contains comprehensive description of tested fungicide seed treatment CHR/ZF/PROTI 100 FS, marketing names Gamelan100FS/Doraltes100FS. Product CHR/ZF/PROTI 100 FS containing active substance prothioconazole is prepared for the use in agricultural practice in the form FS – Flowable concentrate for seed treatment. CHR/ZF/PROTI is intended for use at the rate of 100 ml/100 kg seed which is corresponding to 10.0 g a.s./100 kg seeds of prothioconazole per application for the control of most important diseases in winter wheat, winter triticale and winter rye. A total of 57 trials in winter cereals have been carried out in season 2020/21, (39 field trials and 18 laboratory experiments) in the North-East EPPO zone in Poland. Experiments confirmed the effectiveness of tested seed treatment. The CHR/ZF/PROTI 100 FS is intended for a single application during the season as a seed treatment at BBCH 00 in winter cereals. The CHR/ZF/PROTI 100 FS is effective in controlling a *Fusarium spp.*: in winter wheat 73% (72 % lab.) and triticale 79% (75% lab.)- medium level of control and rye 79% (81% lab.)-effective control, *Mysphaerella nivalis*/*Microdochium nivale* in winter wheat 83%, triticale 85%, rye 92%-effective control, *Tilletia caries* in winter wheat 100% and *Urocistis occulta* in rye 100 % full effective control. *Ustilago tritici* (3 trials) 100% full effective control. The presented number of studies for *Ustilago tritici* does not meet the registration requirements in Poland. It may be conditionally present on the label until the number of tests is completed. The results of the field experiments were confirmed by the results of laboratory experiments. The test product performed at a similar level of efficacy as the reference products. The data obtained in the experiments confirm the proposed uses. The effectiveness of the studied product obtained in the experiments confirms the correctness of the information in the label. The applicant has presented in the label appropriate elements of the anti-immune policy. CHR/ZF/PROTI 100 FS shows high selectivity towards cereals. No adverse plant symptoms or negative effects of the tested seed treatment on cereal yield were observed. The data obtained in the experiments confirm these features.

**The results obtained in the experiments justify the needed for registration of the studied agent for pathogens control in winter cereals in Poland. The data provided in dRR confirm the above applications and authorize the registration of CHR/ZF/PROTI 100 FS in Poland. The RR is drafted correctly and contains appropriate and sufficient data on the performance of the seed treatment tested. These data provide the basis for registration of the studied agent in Poland. It is justified to claim the registration of the tested seed treatment CHR/ZF/PROTI, marketing names: Gamelan 100 FS/ Doraltes 100 FS in Poland for pathogens control.**

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

PPP (product name/code)	CHR/ZF/PROTI 100 FS Gamelan 100 FS/ Doraltes 100 FS	Formulation type:	FS	GAP rev.	, date: 2021-07-29
Active substance 1:	prothioconazole	Conc. of as 1:	100,0 g/l		
Active substance 2:	n/a	Conc. of as 2:	n/a		
Active substance....:	n/a	Conc. of as ....:	n/a		
Safener:	-	Conc. of safener:	conc. <sup>(c)</sup>		
Synergist:	-	Conc. of synergist:	conc. <sup>(c)</sup>		
Applicant:	Innvigo Sp. z o.o.	Professional use:	<input checked="" type="checkbox"/>		
Zone(s):	interzonal	Non professional use:	<input type="checkbox"/>		
Verified by MS:	yes/ <del>no</del>				

Field of use: Seed treatment

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use- No. <sup>(e)</sup>	Member state(s)	Crop and/ or situation  (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I	Pests or Group of pests controlled  (additionally: develop- mental stages of the pest or pest group)	Application				Application rate per treatment			PHI (days)	Remarks:  e.g. g safener/synergist per ha <sup>(f)</sup>
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha  min / max		
Zonal uses (field or outdoor uses, certain types of protected crops)													
1													
2													
Interzonal uses (use as seed treatment, in greenhouses (or other closed places of plant production), as post-harvest treatment or for treatment of empty storage rooms)													
3	PL	Winter wheat (TRZAW)	F	<i>Tilletia caries</i> , <i>Fusarium sp.</i> , <i>Monographella nivalis (anam. Microdochium</i>	winter seed treat- ment	n/a	a)1 b)1	n/a	a) Max. 1.0 l /t seed b) Max. 1.0 l /t	a) 0.018-0.025 kg a.s/ha	max. 0.7 L/100 kg seed	n/a	Sowing rate: 180-250 kg/ha

				<i>nivale</i> ), <i>Ustilago tritici</i>					seed	b) 0.018-0.025 kg a.s/ha			A
4	PL	Winter triticale (TTLWI)	F	<i>Fusarium sp.</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium</i> <i>nivale</i> )	winter seed treat- ment	n/a	a)1 b)1	n/a	a) Max. 1.0 l /t seed b) Max. 1.0 l /t seed	a) 0.015-0.025 kg a.s/ha b) 0.015-0.025 kg a.s/ha	max. 0.7 L/100 kg seed	n/a	Sowing rate: 150-250 kg/ha  A
5	PL	Winter rye (SECCW)	F	<i>Fusarium sp.</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium</i> <i>nivale</i> ), <i>Urocystis occulta</i>	winter seed treat- ment	n/a	a)1 b)1	n/a	a) Max. 1.0 l /t seed b) Max. 1.0 l /t seed	a) 0.0095-0.025 kg a.s/ha b) 0.0095-0.025 kg a.s/ha	max. 0.7 L/100 kg seed	n/a	Sowing rate: 95-250 kg/ha  A
<b>Minor uses according to Article 51 (zonal uses)</b>													
6													
7													
<b>Minor uses according to Article 51 (interzonal uses)</b>													
8													
9													

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

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

Column 15: zRMS conclusion.

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

## 3.2 Efficacy data (KCP 6)

### Introduction

This document summarizes the information related to the efficacy of the product CHR/ZF/PROTI 100 FS containing active substance prothioconazole.

CHR/ZF/PROTI applies in the Interzonal for the registration of in winter cereals as a seed treatment/dressing:

- CHR/ZF/PROTI is to be applied at the rate of 100 ml/100 kg seed which corresponding 10.0 g a.s./100 kg seed prothioconazole per application for the control of most important fungal diseases in winter wheat, winter triticale and winter rye.

### Description of active substances

Marketing name:

**product submitted to registration under three two different marketing names: Gamelan 100 FS/ Doraltes 100 FS**

Formulants content:

The information concerning ingredients of product CHR/ZF/PROTI are included in the confidential part of the registration dossier: Registration Report – Part C.

Formulation of use:

FS – Flowable concentrate for seed treatment

General information on the plant protection product:

CHR/ZF/PROTI is to be applied once as a seed treatment/dressing in winter cereals, the suggested dose of the product CHR/ZF/PROTI 100 ml/ 100 kg seed.

CHR/ZF/PROTI containing prothioconazole as the active substances is prepared for the use in agricultural practice in the form FS – Flowable concentrate for seed treatment.

Information on the composition of product CHR/ZF/PROTI are included in the confidential part of the registration dossier: Registration Report – Part C.

### Description of active substances

Description of active substances

The descriptions of active substances will be provided in Section 1,2 4 to 8 and Part C.

### Mode of action

Active substance:

Prothioconazole 100 g/l

Chemical name (IUPAC): (R,S) 2-[2-(1-chlorocyclopropyl)-3-(2-chlorophenyl)-2-hydroxypropyl]-2,4-dihydro-3H-1,2,4-triazole-3-thione

CAS No.: 178928-70-6

*According to Prothioconazole DAR\_03\_Vol\_3\_B1-5\_public pdf*

DMI fungicides act by inhibiting the Cytochrome P450-dependent C-14 demethylase reaction in fungal sterol biosynthesis. Blockage of the sterol biosynthesis leads to a reduction in the normal sterol pathway end products and an accumulation of other abnormal sterols. It is unclear which of these effects is responsible for impairment of membrane function and limitation of fungal growth.



According to the Fungicide Resistance Action Committee (FRAC) classification prothioconazole is included MAO MOA Code G1. Prothioconazole target site is C14- demethylase in sterol, biosynthesis DMI-fungicides (DeMethylation Inhibitors).

SBI-fungicides that inhibit the C14 demethylation step within fungal sterol biosynthesis are now commonly characterised as DeMethylation-Inhibitors (Abbreviation: DMI's). Chemically, DMI's belong to different classes. Besides triazoles, numerous imidazoles, pyridines and pyrimidine all have been shown to act as demethylation inhibitors.

DMI fungicides are Sterol Biosynthesis Inhibitors (SBIs), but show no cross resistance to other SBI classes

**Table 3.2-1: Details of the active substances**

Active substance	Active substance 1	Active substance 2	Active substance 3
Concentration (Unit: g/kg or g/L...)	250 g/L	n/a	n/a
Chemical group	triazole	n/a	n/a
Mode of action	Inhibitor of fungal sterols biosynthesis (DMI)	n/a	n/a
Biological action	Prothioconazole is a systemic (loco and leaf) fungicide that interferes with fungal sterol biosynthesis resulting in the impairment of membrane function and limitation of fungal growth. Prothioconazole is recommended for the control of steam, leaf and ear diseases of cereals including <i>Pseudocercospora herpotrichoides</i> , <i>Oculimacula</i> spp., <i>Erysiphe graminis</i> , <i>Blumeria graminis</i> , <i>Puccinia striiformis</i> , <i>Puccinia recondita</i> , <i>Septoria tritici</i> , <i>Zymoseptoria tritici</i> , <i>Pyrenophora tritici-repentis</i> , <i>Leptosphaeria nodorum</i> , <i>Rhizoctonia cerealis</i> , <i>Monographella nivalis</i> , <i>Microdochium nivale</i> , <i>Fusarium</i> spp., <i>Rhynchosporium secalis</i> , <i>Pyrenophora teres</i> , <i>Puccinia hordei</i> , <i>Pseudocercospora herpotrichoides</i> and oilseed rape diseases including <i>Sclerotinia sclerotiorum</i> , <i>Leptosphaeria maculans</i> , <i>Pyrenopeziza brassicae</i> , <i>Cylindrosporium</i> spp., <i>Botrytis cinerea</i> , <i>Alternaria brassicae</i> .	n/a	n/a
...		n/a	n/a

### Description of the plant protection product

#### Formulation of use:

CHR/ZF/PROTI containing active substances 100 g/l prothioconazole as the active substance is prepared for the use in agricultural practice as a seed treatment in the form FS – flowable concentrate for seed treatment.

CHR/ZF/PROTI is to be applied once as a seed treatment/dreessing in winter cereals, the suggested dose of the product CHR/ZF/PROTI 100 ml/ 100 kg seed.

**Table 3.2-2: Simplified table of currently registered uses and requested uses for the product code.**

Uses		Member State	Currently registered rate(s)		Requested rate(s)		Comments / Other relevant details on GAPS
Crop(s)	Target(s)		max. rate per appl	max. total rate per crop/season	max. rate per appl	max. total rate per crop/season	
winter wheat (TRZAW)	<i>Fusarium spp.</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i> ), <i>Tilletia caries</i> , <i>Ustilago tritici</i>	PL, CZ	-	-	100 ml/100 kg seed	100 ml/100 kg seed	-
winter triticale (TTLWI)	<i>Fusarium spp.</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i> )	PL, CZ	-	-	100 ml/100 kg seed	100 ml/100 kg seed	-
winter rye (SECCW)	<i>Fusarium spp.</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i> ), <i>Urocystis oeculata-occulta</i>	PL, CZ	-	-	100 ml/100 kg seed	100 ml/100 kg seed	-

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

Comments of zRMS:	<p><b><u>This study (RR)</u></b> is based on proper documentation and contains a comprehensive description of the presented product. Product code: CHR/ZF/PROTI, marketing names: Gamelan 100 FS/ Doraltes 100 FS, to be applied at the rate of 100 ml/100 kg seed which corresponds to 10.0 g a.s./100 kg seeds of prothioconazole per application.</p> <p><u>Note:</u> Table 3.2-3 presents the outdated names of pathogens controlled by the tested agent.</p>
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### Description of the target pests

**Table 3.2-4: Glossary of pests mentioned in the dossier.**

EPPO code	Scientific name	Common name*
FUSASP	<i>Fusarium sp.</i>	-
MONGNI	<i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i> )	-
TILLCA	<i>Tilletia caries</i>	-
USTINT	<i>Ustilago tritici</i>	-
UROCOC	<i>Urocystis oeculata-occulta</i>	-

\* optional

**Table 3.2-5: Major / minor status of intended uses (for all cMS and zRMS).**

Crop and/or situation	Crop status		Pests or group of pests controlled	Pest status	
	Major	minor		Major	minor
winter wheat	PL, CZ	-	<i>Fusarium sp.</i>	PL, CZ	-

			<i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i> )	PL, CZ	-
			<i>Tilletia caries</i>	PL, CZ	-
			<i>Ustilago tritici</i>	-	PL, CZ
winter triticales	PL, CZ	-	<i>Fusarium sp.</i>	PL, CZ	-
			<i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i> )	PL, CZ	-
winter rye	PL, CZ	-	<i>Fusarium sp.</i>	PL, CZ	-
			<i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i> )	PL, CZ	-
			<i>Urocystis occulta</i>	no data	no data

Comments of zRMS:	<b>Target pests status:</b> The experiments evaluated the effectiveness of product code: CHR/ZF/PROTI, marketing names: Gamelan 100 FS/ Doraltis 100 FS against major pathogens in the major crops of cereals.  <b>Winter wheat, winter rye, winter triticales, have major status in the Poland</b>
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### Compliance with the Uniform Principles

The overall assessment was performed according to the uniform principles. There were no deviations from the EPPO guidelines with the trials conducted in North-East EPPO zone.

Comments of zRMS:	<b>Compliance with the Uniform Principles:</b> In the presented RR, the compliance of the presented data with the required rules was confirmed. All trials were conducted according to <b>appropriate EPPO guidelines, GEP requirements and Uniform Principles.</b>
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### Information on trials submitted (3.1 Efficacy data)

A total of 57 trials in winter cereals have been carried out in season 2020/21 in the North-East EPPO zone within the Central registration zone to evaluate the efficacy of applied at the proposed label rate of 100 ml/100 kg seed which corresponding prothioconazole 10.0 g a.s./100 kg seed for the control of most important fungal diseases in winter cereals (Table 3.2 6). Trials were conducted in the main winter cereals growing areas in the North-East EPPO zone in Poland.

**Table 3.2-6: Presentation of trials efficacy trials**

#### Winter wheat – field trials

Crop(s) *	Target(s)*	Country	Years	Type of trial**	Number of trials	GEP, non-GEP, official***	Comments (any other relevant information)	
					(number of valid trials)			
					North- East zone			
winter wheat	<i>Fusarium sp.</i>	Poland	2020-2021	E	6(6)	-	GEP	-
	<i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i> )	Poland	2020-2021	E	6(6)	-	GEP	-
	<i>Tilletia caries</i>	Poland	2020-2021	E	9(9)	-	GEP	-

	<i>Ustilago tritici</i>	Poland	2020-2021	E	3(3)	-	GEP	-
<b>TOTAL</b>			2020-2021	-	24(24)	-	-	-

\* According to the GAP table. Timing of the application(s) can be added if relevant (e.g. Pre-mergence vs post-emergence, spring vs autumn).  
 \*\* P = preliminary trial, MED = minimum effective dose, E = efficacy trial.  
 \*\*\* GEP: Good Experimental Practices. Official: carried out by a national official organisation.

### Winter wheat – laboratory trials

Crop(s) *	Target(s)*	Country	Years	Type of trial**	Number of trials		GEP, non-GEP, official***	Comments (any other relevant information)
					(number of valid trials)			
					North-East zone	-		
winter wheat	<i>Fusarium sp.</i>	Poland	2020-2021	E	3(3)	-	GEP	-
	<i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i> )	Poland	2020-2021	E	3(3)	-	GEP	-
TOTAL			2020-2021	-	6(6)	-	-	-

\* According to the GAP table. Timing of the application(s) can be added if relevant (e.g. Pre-mergence vs post-emergence, spring vs autumn).  
 \*\* P = preliminary trial, MED = minimum effective dose, E = efficacy trial.  
 \*\*\* GEP: Good Experimental Practices. Official: carried out by a national official organisation.

### Winter triticales field trials

Crop(s) *	Target(s)*	Country	Years	Type of trial**	Number of trials		GEP, non-GEP, official***	Comments (any other relevant information)
					(number of valid trials)			
					North-East zone	-		
winter tritiale	<i>Fusarium sp.</i>	Poland	2020-2021	E	6(6)	-	GEP	-
	<i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i> )	Poland	2020-2021	E	6(6)	-	GEP	-
TOTAL			2020-2021	-	12(12)	-	-	-

\* According to the GAP table. Timing of the application(s) can be added if relevant (e.g. Pre-mergence vs post-emergence, spring vs autumn).  
 \*\* P = preliminary trial, MED = minimum effective dose, E = efficacy trial.  
 \*\*\* GEP: Good Experimental Practices. Official: carried out by a national official organisation.

### Winter triticales laboratory trials

Crop(s) *	Target(s)*	Country	Years	Type of trial**	Number of trials		GEP, non-GEP, official***	Comments (any other relevant information)
					(number of valid trials)			
					North-East zone	-		
winter triticales	<i>Fusarium sp.</i>	Poland	2020-2021	E	3(3)	-	GEP	-

	<i>Monographella nivalis (anam. Microdochium nivale)</i>	Poland	2020-2021	E	3(3)	-	GEP	-
<b>TOTAL</b>			2020-2021	-	6(6)	-	-	-

\* According to the GAP table. Timing of the application(s) can be added if relevant (e.g. Pre-mergence vs post-emergence, spring vs autumn).

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

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

### Winter rye field trials

Crop(s) *	Target(s)*	Country	Years	Type of trial**	Number of trials		GEP, non-GEP, official***	Comments (any other relevant information)
					(number of valid trials)	North-East zone		
winter rye	<i>Fusarium sp.</i>	Poland	2020-2021	E	6(6)	-	GEP	-
	<i>Monographella nivalis (anam. Microdochium nivale)</i>	Poland	2020-2021	E	6(6)	-	GEP	-
	<i>Urocystis occulta</i>	Poland	2020-2021	E	9(9)	-	GEP	-
<b>TOTAL</b>			2020-2021	-	21(21)	-	-	-

\* According to the GAP table. Timing of the application(s) can be added if relevant (e.g. Pre-mergence vs post-emergence, spring vs autumn).

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

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

### Winter rye laboratory trials

Crop(s) *	Target(s)*	Country	Years	Type of trial**	Number of trials		GEP, non-GEP, official***	Comments (any other relevant information)
					(number of valid trials)	North-East zone		
winter rye	<i>Fusarium sp.</i>	Poland	2020-2021	E	3(3)	-	GEP	-
	<i>Monographella nivalis (anam. Microdochium nivale)</i>	Poland	2020-2021	E	3(3)	-	GEP	-
<b>TOTAL</b>			2020-2021	-	6(6)	-	-	-

\* According to the GAP table. Timing of the application(s) can be added if relevant (e.g. Pre-mergence vs post-emergence, spring vs autumn).

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

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

**Table 3.2-7: Presentation of reference standards used in trials efficacy trials**

Crop(s)	Reference standard	Country(ies) where the product is registered <sup>(1)</sup>	Authorization number	Active substance(s)	Formulation		Registered application	Application	Remark <sup>(4)</sup>
					Type <sup>(2)</sup>	Concentration of a.s.		rate in trials (per treatment)	
winter wheat	Premis 025 FS	Poland	R-223/2020b - 18.09.2020r.	triticonazole	FS - suspension concentrates	25 g/l	200 ml/100 kg	200 ml/100 kg	-

	Redigo 100 FS	Czech Republic	R-223/2020b - 18.09.2020r.	prothioconazole	FS - suspension concentrates	100 g/l	100 ml/100 kg	100 ml/100 kg	tested/reference
winter triticale	Premis 025 FS	Poland	R-223/2020b - 18.09.2020r.	triticonazole	FS - suspension concentrates	25 g/l	200 ml/100 kg	200 ml/100 kg	-
	Redigo 100 FS	Czech Republic	R-223/2020b - 18.09.2020r.	prothioconazole	FS - suspension concentrates	100 g/l	100 ml/100 kg	100 ml/100 kg	tested/reference
winter rye	Premis 025 FS	Poland	R-223/2020b - 18.09.2020r.	triticonazole	FS - suspension concentrates	25 g/l	200 ml/100 kg	200 ml/100 kg	-
	Redigo 100 FS	Czech Republic	R-223/2020b - 18.09.2020r.	prothioconazole	FS - suspension concentrates	100 g/l	100 ml/100 kg	100 ml/100 kg	tested/reference

- (1) only on use(s) applied for (with the test product).
- (2) e.g. WP (wetable powder), EC (emulsifiable concentrate), etc.
- (3) dose(s) / dose range authorized on that use in the country.
- (4) Other relevant information (e.g. uses, number of applications, spray volume, method of application, etc.).

Comments of zRMS:	<p><b>Methodology I</b></p> <p>Experiments included standard products which were appropriately selected from among the products registered in Poland and the Czech Republic. The presented RR presents the results of field and laboratory experiments. The laboratory experiments are a proper supplement to field studies.</p> <p><u>Note.</u></p> <p>The Applicant referred to EPPO PP1/19(4) while the new EPPO PP1/19(5) applies from 2020. However, the differences between these EPPOs do not affect the experiments carried out. It can be considered that the conducted experiments are methodologically correct.</p> <p><b>The methods of presenting the results of trials are appropriate.</b></p> <p><b>Experiments complied with GEP requirements, while the efficacy evaluation methods agreed with EPPO guidelines and uniform principles.</b></p>
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### 3.2.1 Preliminary tests (KCP 6.1)

Preliminary studies on product CHR/ZF/PROTI were not carried out because this seed treatment contains prothioconazole which is a well-known active substances that has been used for many years in agricultural practice.

No specific studies were conducted to fill this data point.

**Table 3.2-8: Efficacy of active substance components in test product – not applicable**

Not applicable

**Table 3.2-9: Percentage of control of the different ratios at timing of assessment (e.g. 10 to 14 days after application). – not applicable**

Not applicable

### Summary and conclusions on the preliminary trials

Not applicable

Comments of zRMS:	<p><b>Preliminary test</b></p> <p><b>Active substance prothioconazole</b> is well-known, registered and commercialised active substanc for the use as fungicide in agricultural crops. <b>Prothioconazole</b> a.s. is registered in Poland and EU in many products. In</p>
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	<p>Poland, most of the products containing prothioconazole a.s. are registered for applications during the growing season of the plants. The Applicant in the presented RR applies for the registration of <b>prothioconazole a.s. as a seed treatment</b> in winter wheat, winter rye and winter triticale.</p> <p>All the preliminary studies have been presented with the first registration documentation, for this reason further preliminary efficacy tests for <b>Prothioconazole a.s.</b> are not necessary. <b>This is comply with uniform principles</b></p> <p>The results of preliminary experiments indicate the usefulness of <b>Prothioconazole a.s. in use in winter wheat, rye and triticale as a seed treatment.</b></p>
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### 3.2.2 Minimum effective dose tests (KCP 6.2)

Minimum effective dose studies on product CHR/ZF/PROTI were not carried. On the basis of the information included in point 6.1.3 the assessment of efficacy ? of seed treatment CHR/ZF/PROTI, the minimum effective dose of product CHR/ZF/PROTI in usage in winter cereals is:  
 100 ml/100 kg seed corresponding to 10.0 g a.s./100 kg seed of prothioconazole.

Details of these studies are included in point IIIA1 6.1.3 Efficacy tests ?.

#### Crop(s) 1 AND/OR Target(s) 1

Not applicable

**Table 3.2-10 Minimum effective dose. Efficacy of product at proposed label rate, at X% and Y% dose rates on target 1 at assessment timing against “Crop(s) 1 AND/OR Target(s) 1”.**

No specific studies were conducted to fill this data point.

#### Crop(s) 2 AND/OR Target(s) 2

Not applicable

#### Summary and conclusions on the minimum effective dose

Not applicable

Comments of zRMS:	<p><b>Minimum effective dose</b></p> <p>The identification of the minimum effective dose of CHR/ZF/PROTI, marketing names: Gamelan 100 FS/ Doraltes 100 FS <b>chemical active substance: Prothioconazole</b> against pathogens of cereals carried out in 2020/21 in winter cereals (39 field trials and 18 laboratory experiments) in North-East EPPO zone in Poland. The Applicant presented the results of experiments on the effectiveness of the test agent, in these experiments the effectiveness of different doses was compared. The identification of the minimum effective dose of CHR/ZF/PROTI was assessed at various doses. The product CHR/ZF/PROTI has been tested in winter cereals at the following rates of:</p> <ul style="list-style-type: none"> <li>- 60 ml/100 kg/seed,</li> <li>- 80 ml/100 kg/seed,</li> <li>- 100 ml/100 kg/seed</li> </ul>
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	<p>It was found that the seed treatment CHR/ZF/PROTI at the rate of 100 ml/100 kg seeds which corresponds to 10.0 g a.s./100 kg seeds of prothioconazole per application was the most effective.</p> <p>The best, optimal effects of disease control in the winter wheat, winter rye, winter triticale were obtained after applying a dose 100 ml/100 kg/seeds.</p> <p><b>The minimum effective dose of the seed treatment CHR/ZF/PROTI amounting to 100 ml/100 kg seeds, the dose that corresponds to the content 10.0 g a.s./100 kg seeds, of prothioconazole per application, it is most effective in controlling diseases in winter cereals.</b></p> <p><b>The results indicate a dose appropriately selected for use, and this dose is consistent with the GAP table and proposed label.</b></p>
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### 3.2.3 Efficacy tests (KCP 6.2)

Substantiation 1 year efficacy trials with CHR/ZF/PROTI containing prothioconazole, use in winter wheat, winter triticale and winter rye.

1. EPPO PP 1/223 Introduction to the efficacy evaluation of plant protection products allow the situation in which one year efficacy evaluation is acceptable and other submitted supporting evidence, such as published papers and reports relating to the product, and cases for extrapolation of evidence from other relevant is accepted.

2. According to COMMISSION REGULATION (EU) No 545/2011 of 10 June 2011 – there is possibility to reduce efficacy evaluation to one year – “If to the opinion of the applicant the trials from the first season adequately confirm the validity of claims made on the basis of extrapolation of results from other crops, commodities or situations or from tests with closely similar preparations, a justification, which is acceptable to the competent authority for not carrying out a second season’s work must be provided.”

3. Plant Protection Product registered in Europe containing prothioconazole used in cereals.

No.	Country	Active subst.	Dose	no. appl.	Appl. time	crop	Pests
Fluoxonazol 080 FS	PL, CZ	prothioconazole 37,5 g	100 ml/100 kg seed	1	BBCH 00	winter wheat	<i>Fusarium sp.</i>
		tebuconazole 5 g				winter triticale	<i>Monographella nivalis (anam. Microdochium nivale)</i>
		fluoxastrobina - 37,5 g				winter rye	<i>Tilletia caries</i>
						spring wheat	<i>Tilletia laevis</i>
							<i>Zymoseptoria tritici</i>
							<i>Ustilago tritici</i>
							<i>Urocystis occulta</i>
Lamardor 400 FS	PL, CZ	prothioconazole 200 g	20 ml/100 kg seed	1	BBCH 00	winter wheat	<i>Fusarium sp.</i>
		tebuconazole 150 g				winter triticale	<i>Monographella nivalis (anam. Microdochium nivale)</i>
						winter rye	<i>Tilletia caries</i>
						winter barley	<i>Tilletia laevis</i>
						spring triticale	<i>Pyrenophora graminea</i>
						oat	<i>Pyrenophora teres</i>
Bariton Super 97,5 FS	PL, CZ	prothioconazole 50 g	100 ml/100 kg seed	1	BBCH 00	winter wheat	<i>Fusarium sp.</i>
		tebuconazole 10 g				winter triticale	<i>Monographella nivalis (anam. Microdochium nivale)</i>



		fludioxonil - 37,5 g				winter rye	Tilletia caries
						winter barley	Pyrenophora graminea
							Pyrenophora teres
							Ustilago nuda f.sp. hordei
Lamardor Pro FS	PL, CZ	prothioconazole 150 g	66,7 ml/100 kg seed	I	BBCH 00	winter wheat	Fusarium sp.
		tebuconazole 20 g				winter tritcale	Monographella nivalis (anam. Microdochium nivale)
						winter rye	Tilletia caries
						winter barley	Tilletia laevis
						spring tritcale	Pyrenophora graminea
						oat	Pyrenophora teres
							Ustilago nuda f.sp. hordei
							Ustilago tritici
Redigo Pro 170 FS	PL, CZ	prothioconazole 150 g	50 ml/100 kg seed	I	BBCH 00	winter wheat	Fusarium sp.
		tebuconazole 20 g				winter tritcale	Monographella nivalis (anam. Microdochium nivale)
						winter rye	Ustilago nuda f.sp. hordei
						winter and spring barley	Ustilago tritici
						spring tritcale	Tilletia caries
						oat	Urocystis occulta
						spring wheat	Pyrenophora graminea
							Pyrenophora teres
Retro 170 FS	PL, CZ	prothioconazole 150 g	66,7 ml/100 kg seed	I	BBCH 00	winter wheat	Fusarium sp.
		tebuconazole 20 g				winter tritcale	Monographella nivalis (anam. Microdochium nivale)
						winter rye	Ustilago nuda f.sp. hordei
						winter and spring barley	Urocystis occulta
						spring tritcale	
						spring wheat	
						oat	
Scenic 080 FS	PL, CZ	prothioconazole 37,5 g	100 ml/100 kg seed	I	BBCH 00	winter wheat	Fusarium sp.
		tebuconazole 5 g				winter tritcale	Monographella nivalis (anam. Microdochium nivale)
		fluoxastrobina - 37,5 g				winter rye	Tilletia caries
						spring wheat	Tilletia laevis
							Zymoseptoria tritici
							Ustilago tritici
							Urocystis occulta
Redigo 100 FS	CZ	prothioconazole 100 g	100 ml/100 kg seed	I	BBCH 00	winter wheat	Tilletia caries
						barley	Phaeosphaeria nodorum
						winter rye	Fusarium sp
						winter tritcale	Monographella nivalis
							Ustilago tritici
							Fusarium sp
							Monographella nivalis
							Pyrenophora graminea
							Fusarium sp

							<i>Monographella nivalis</i>
							<i>Urocystis occulta</i>
							<i>Fusarium sp</i>
							<i>Monographella nivalis</i>

A lot of data confirm that prothioconazole used in winter wheat, winter triticale and winter rye against the most important diseases so why applicant submitted only 1 year efficacy evaluation.

## Materials and methods

The applicant submitted 57 reports ( in total) showing the results in research into product efficacy carried out in 2020/21 in winter cereals (39 field trials and 18 laboratory experiments). List of these reports is contained in Appendix 1

## Site

Trials were conducted in different regions in Poland where winter cereals are grown commercially. Laboratory experiments were carried out on three winter crops against *Fusarium sp.* and *Monographella nivalis* (anam. *Microdochium nivale*). The experiment was established on a set of complete randomized blocks in 4 replications.

Details on trial sites, applications and data on effectiveness are included in Appendix 4 and 5

## Testing units

Efficacy studies on fungicide/ seed treatment CHR/ZF/PROTI were performed in 2020/21 by:

- Staphyt Sp. z o.o., ul. Poznańska 62/53, 60-853 Poznań, Poland
- Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department, ul. Gliwicka 29, 44-153 Sońnicowice, Poland
- Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department ul. Wojska Polskiego 28, 60-637 Poznań, Poland

## Experimental details

The efficacy trials were designed, conducted and reported according to the following EPPO guidelines:

- PP 1/135 (4) Phytotoxicity assessment
- PP 1/152 (4) Design and analysis of efficacy evaluation trials
- PP 1/181 (4) Conduct and reporting of efficacy evaluation trials including good experimental practice

They were carried out on the field in the conditions of natural agrofag infestation. The efficacy trials were concluded according to the EPPO standards:

- ~~PP 1/19(4)~~ Seed-borne cereal fungi, PP 1/19(5)

## Assessment methods

## Statistical Analysis

In case of statistical analysis, data were analysed using a two way analysis of variance (ANOVA). The probability of no significant differences occurring between treatment means is calculated as the F probability value (Prob(F)). Student-Newman-Keuls test was then applied to separate any treatment differences that may be implied by the ANOVA TEST (Prob(F)<0.05) and these are indicated by the LSD-value and by a letter-test.

## Assessment of efficacy

The assessment of efficacy in the treated plots was made in relation to the untreated plot on an overall plot basis (scale 0-100 %, 0 % =no efficacy). The assessment date was determined by the speed of action and period of efficacy of the test items.

The assessment of efficacy in the treated plots was made in relation to the average value on untreated plots (according to Abbott; scale 0-100 %, 0 % =no efficacy). The assessment date was determined by the crop development stage.

### Assessment of phytotoxicity

Phytotoxicity (chlorosis and necrosis), stunting and thinning were assessed by visual estimation of the intensity on an overall plot basis on a percentage scale 0-100 % (0=no damage). The assessment date was determined by the speed of action and period of efficacy of the test substances.

Phytotoxicity (chlorosis and necrosis), stunting and thinning were assessed by visual estimation of the intensity on an overall plot basis on a percentage scale 0-100 % (0=no damage). Visual emergence uniformity was assessed by visual estimation in relation to untreated check on an overall plot basis on a percentage scale 0-100 % (100=untreated check) The assessment date was determined by the crop development stage

### Assessment of fungal diseases

Efficacy was recorded by estimation and/or counting of severity of disease. The assessment date was determined by the speed of action and period of efficacy of the test substances.

Efficacy was recorded by estimation and/or counting of incidence or severity of disease. The assessment date was determined by the crop development stage.

### Harvest

A plot combine for intermixing-free grain-harvest in field trials was used for harvesting the centre of the plot. The total yield is given in unit/ha adjusted to a fixed moisture content. If quality indices are made, they will be recorded.

### Applications methods and rates

The applications were carried out by Hege-11, SETRDR (do potwierdzenia) Hege 11 - SEEDDR

The suggested dose of the seed treatment CHR/ZF/PROTI:

100 ml/100 kg seed in winter and spring cereals are corresponding to 10.0 g a.s./100 kg seed of prothioconazole.

The product CHR/ZF/PROTI has been used:  
in winter cereals at the following rates of:

- 60 ml/100 kg/seed,
- 80 ml/100 kg/seed,
- 100 ml/100 kg/seed

Premis 025 FS was used as a reference product in winter and spring cereals

Redigo 100 FS was used as a test product/reference product in winter cereals

The experiment was established on a set of complete randomized blocks in 4 replications.

Experiment pattern:

### Winter cereals

No.	Name	rate ml/100 kg seed	other rate a.s./100 kg seed [g]	rate a.s. [g/ha] (max)	Appl code	Growth Stage
1	Untreated Check					
2	CHR/ZF/PROTI 100 FS	60	6	10,8	A	BBCH 00
3	CHR/ZF/PROTI 100 FS	80	8	14,4	A	BBCH 00
4	CHR/ZF/PROTI 100 FS	100	10	18,0	A	BBCH 00
5	Premis 025 FS	200	5	9,0	A	BBCH 00
6	Redigo 100 FS	100	10	18,0	A	BBCH 00

## Details of experiments

### Winter wheat season 2020/21 field trials

Report code	8 F/2021	9 F/2021	10 F/2021	11 F/2021	12 F/2021	22 F/2021	23 F/2021
Location	Sośnicowice / Poland	Sośnicowice / Poland	Sośnicowice / Poland	Sośnicowice / Poland	Sośnicowice / Poland	Sośnicowice / Poland	Lany Wielkie / Poland
Plant /cultivar	winter wheat / Jubilar	winter wheat / Turnia	winter wheat / Nadobna	winter wheat / Tobak	winter wheat / Zyta	winter wheat / Zyta	winter wheat / Fidelius
Seeding date	06.10.2020	06.10.2020	06.10.2020	06.10.2020	08.10.2020	06.10.2020	08.10.2020
Seeding rate	200 kg/ha	200 kg/ha	200 kg/ha	200 kg/ha	200 kg/ha	188 kg/ha	188 kg/ha
Forecrop	winter rye	winter triticale	winter rape	winter rye	winter rape	winter rye	potato
Type of sprayer	HEGE 11	HEGE 11	HEGE 11	HEGE 11	HEGE 11	HEGE 11	HEGE 11
Date of treatment	25.09.2020	25.09.2020	25.09.2020	25.09.2020	25.09.2020	25.09.2020	25.09.2020
Plant development phase	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00
Soil type	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam
Soil pH	6,2	6,6	6,4	6,2	6,4	6,2	6,1
Water volume (ml/100 kg)	700	700	700	700	700	700	700

### Winter wheat season 2020/21 field trials

Report code	APK-20-47775-PL01	APK-20-47775-PL02	APK-20-47775-PL03	APK-20-47891-PL01	APK-20-47891-PL02	APK-20-47891-PL03
Location	Kajkowo / Poland	Jasiona / Poland	Łobez / Poland	Kajkowo / Poland	Jasiona / Poland	Łobez / Poland
Plant /cultivar	winter wheat / Bilanz	winter wheat / Mewa	winter wheat / Julius	winter wheat / Julius	winter wheat / Bilanz	winter wheat / Julius
Seeding date	09.10.2020	08.10.2020	09.10.2020	09.10.2020	08.10.2020	09.10.2020
Seeding rate	180 kg/ha	180 kg/ha	450 S/m2	180 kg/ha	180 kg/ha	450 P/m2
Forecrop	winter rape	winter rape	maize	winter rape	winter rape	maize
Type of sprayer	HEGE 11	HEGE 11	HEGE 11	HEGE 11	HEGE 11	HEGE 11
Date of treatment	29.09.2020	30.09.2020	29.09.2020	30.09.2020	01.10.2020	29.09.2020
Plant development phase	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00
Soil type	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam
Soil pH	5,6	7,2	5,6	5,6	7,2	5,6
Water volume (ml/100 kg)	700	700	700	700	700	700

### Winter wheat season 2020/21 field trials

Report code	AF/20/PO/32/Br/01	AF/20/PO/32/Pr/02	AF/20/PO/32/Gr/03	AF/20/PO/32/Zł/04	AF/20/PO/32/Br/05
Location	Brody / Poland	Przybroda / Poland	Gorzyń / Poland	Złotniki / Poland	Brody / Poland
Plant /cultivar	winter wheat / Potencjal	winter wheat / Tonacja	winter wheat / Princeps	winter wheat / Bogatka	winter wheat / Princeps
Seeding date	30.09.2020	30.09.2020	30.09.2020	01.10.2020	30.09.2020
Seeding rate	230 kg/ha	180 kg/ha	182 kg/ha	180 kg/ha	185 kg/ha
Forecrop	spring barley	spring wheat	white lupin	winter rape	spring barley
Type of sprayer	SETRDR	SETRDR	SETRDR	SETRDR	SETRDR
Date of treatment	30.09.2020	30.09.2020	30.09.2020	01.10.2020	30.09.2020
Plant development phase	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00
Soil type	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam
Soil pH	5,8	6	6,4	5,6	5,8
Water volume (ml/100 kg)	700	700	700	700	700

### Winter wheat season 2020/21 laboratory trials

Report code	AF/20/PO/32/Pn/01	AF/20/PO/32/Pn/02	AF/20/PO/32/Pn/03	AF/20/PO/32/Pn/04	AF/20/PO/32/Pn/05	AF/20/PO/32/Pn/06
Location	Poznań-Biocentrum / Poland	Poznań-Biocentrum / Poland	Poznań-Biocentrum / Poland	Poznań-Biocentrum / Poland	Poznań-Biocentrum / Poland	Poznań-Biocentrum / Poland
Plant /cultivar	winter wheat / Arkadia	winter wheat / Potencjal	winter wheat / Opal	winter wheat / Opal	winter wheat / Princeps	winter wheat / Tonacja
Seeding date	16.11.2020	16.11.2020	16.11.2020	11.01.2021	11.01.2021	11.01.2021
Seeding rate	50 S/POT	50 S/POT	50 S/POT	50 S/POT	50 S/POT	50 S/POT
Type of sprayer	SEDRLA	SEDRLA	SEDRLA	SEDRLA	SEDRLA	SEDRLA
Date of treatment	16.11.2020	16.11.2020	16.11.2020	11.01.2021	11.01.2021	11.01.2021
Plant development phase	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00
Soil type	peat	peat	peat	peat	peat	peat
Soil pH	5,2-6,3	5,2-6,3	5,2-6,3	5,2-6,3	5,2-6,3	5,2-6,3
Water volume (ml/100 kg)	700	700	700	700	700	700

### winter triticale – season 2020/21 field trials

Report code	15 F/2021	16 F/2021	APK-20-47891-PL04	APK-20-47891-PL05	APK-20-47891-PL06	AF/20/PszO/32/Pr/06
Location	Sośnicowice / Poland	Sierakowice / Poland	Kajkowo / Poland	Wilkowyja / Poland	Łaźniki / Poland	Przybroda / Poland
Plant /cultivar	winter triticale / Trismart	winter triticale / Rotondo	winter triticale / Porto	winter triticale / Borowik	winter triticale / Borowik	winter triticale / Twingo
Seeding date	24.09.2020	09.10.2020	09.10.2020	30.09.2020	07.10.2020	30.09.2020
Seeding rate	180 kg/ha	150 kg/ha	180 kg/ha	180 kg/ha	180 kg/ha	180 kg/ha
Forecrop	winter wheat	winter rye	winter rape	potato	maize	spring wheat
Type of sprayer	HEGE 11	HEGE 11	HEGE 11	HEGE 11	HEGE 11	SETRDR
Date of treatment	21.09.2020	21.09.2020	29.09.2020	30.09.2020	29.09.2020	30.09.2020
Plant development phase	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00
Soil type	sandy clay loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam
Soil pH	6,07	6,3	5,6	5,4	7,4	6
Water volume (ml/100 kg)	700	700	700	700	700	700

### winter triticale – season 2020/21 laboratory trials

Report code	AF/20/PszO/32/Pn/07	AF/20/PszO/32/Pn/08	AF/20/PszO/32/Pn/09	AF/20/PszO/32/Pn/10	AF/20/PszO/32/Pn/11	AF/20/PszO/32/Pn/12
Location	Poznań-Biocentrum / Poland	Poznań-Biocentrum / Poland	Poznań-Biocentrum / Poland	Poznań-Biocentrum / Poland	Poznań-Biocentrum / Poland	Poznań-Biocentrum / Poland
Plant /cultivar	winter triticale / Twingo	winter triticale / Salto	winter triticale / Grenado	winter triticale / Wilton	winter triticale / Salto	winter triticale / Magnat
Seeding date	01.02.2021	01.02.2021	01.02.2021	23.02.2021	23.02.2021	23.02.2021
Seeding rate	50 S/POT	50 S/POT	50 S/POT	50 S/POT	50 S/POT	50 S/POT
Type of sprayer	SEDRLA	SEDRLA	SEDRLA	SEDRLA	SEDRLA	SEDRLA
Date of treatment	01.02.2021	01.02.2021	01.02.2021	23.02.2021	23.02.2021	23.02.2021
Plant development phase	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00
Soil type	peat	peat	peat	peat	peat	peat
Soil pH	5,2-6,3	5,2-6,3	5,2-6,3	5,2-6,3	5,2-6,3	5,2-6,3
Water volume (ml/100 kg)	700	700	700	700	700	700

### Winter rye – season 2020/21 field trials

Report code	17 F/2021	18 F/2021	19 F/2021	26 F/2021	27 F/2021
Location	Sośnicowice / Poland	Sośnicowice / Poland	Sośnicowice / Poland	Sośnicowice / Poland	Sośnicowice / Poland
Plant /cultivar	winter rye / Dańkowskie Rubin	winter rye / Dukato	winter rye / Su Forsetti	winter rye / Dukato	winter rye / Dańkowskie Rubin
Seeding date	07.10.2020	07.10.2020	09.10.2020	07.10.2020	07.10.2020
Seeding rate	140 kg/ha	118 kg/ha	113 kg/ha	118 kg/ha	140 kg/ha
Forecrop	winter triticale	winter rape	winter triticale	winter rape	winter triticale
Type of sprayer	HEGE 11	HEGE 11	HEGE 11	HEGE 11	HEGE 11
Date of treatment	01.10.2020	01.10.2020	01.10.2020	01.10.2020	01.10.2020
Plant development phase	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00
Soil type	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam
Soil pH	6,6	6	5,9	6	6,6
Water volume (ml/100 kg)	700	700	700	700	700

### Winter rye – season 2020/21 field trials

Report code	28 F/2021	29 F/2021	30 F/2021	APK-20-47891-PL07	APK-20-47891-PL08
Location	Sierakowice / Poland	Sośnicowice / Poland	Sośnicowice / Poland	Kajkowo / Poland	Wilkowyja / Poland
Plant /cultivar	winter rye / Su Forsetti	winter rye / Dańkowskie Granat	winter rye / Dańkowskie Diament	winter rye / Agat	winter rye / Dańkowskie Turkus
Seeding date	09.10.2020	07.10.2020	07.10.2020	09.10.2020	30.09.2020
Seeding rate	113 kg/ha	95 kg/ha	116 kg/ha	180 kg/ha	180 kg/ha
Forecrop	winter triticale	winter rape	winter rape	winter rape	potato
Type of sprayer	HEGE 11	HEGE 11	HEGE 11	HEGE 11	HEGE 11
Date of treatment	01.10.2020	01.10.2020	01.10.2020	29.09.2020	29.09.2020
Plant development phase	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00
Soil type	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam
Soil pH	5,9	6	6	5,6	5,4
Water volume (ml/100 kg)	700	700	700	700	700

### Winter rye – season 2020/21 field trials

Report code	APK-20-47891-PL09	AF/20/ŽO/32/Br/07	AF/20/ŽO/32/Pr/08	AF/20/ŽO/32/Gr/09	AF/20/ŽO/32/Zi/10
Location	Wólka Krosnowska / Poland	Brody / Poland	Przybroda / Poland	Gorzyń / Poland	Złotniki / Poland
Plant /cultivar	winter rye / Dańkowskie Amber	winter rye / Daniello	winter rye / Poznańskie	winter rye / Palazzo	winter rye / Dańkowskie Diamenty
Seeding date	05.10.2020	30.09.2020	30.09.2020	30.09.2020	01.10.2020
Seeding rate	180 kg/ha	125 kg/ha	150 kg/ha	102 kg/ha	150 kg/ha
Forecrop	winter wheat	spring barley	spring wheat	white lupin	winter rape
Type of sprayer	HEGE 11	SETRDR	SETRDR	SETRDR	SETRDR
Date of treatment	30.09.2020	30.09.2020	30.09.2020	30.09.2020	01.10.2020
Plant development phase	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00
Soil type	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam
Soil pH	7,2	5,8	6	6,4	5,6
Water volume (ml/100 kg)	700	700	700	700	700

### Winter rye – season 2020/21 laboratory trials

Report code	AF/20/ŽO/32/Pn/13	AF/20/ŽO/32/Pn/14	AF/20/ŽO/32/Pn/15	AF/20/ŽO/32/Pn/16	AF/20/ŽO/32/Pn/17	AF/20/ŽO/32/Pn/18
Location	Poznań-Biocentrum / Poland	Poznań-Biocentrum / Poland	Poznań-Biocentrum / Poland	Poznań-Biocentrum / Poland	Poznań-Biocentrum / Poland	Poznań-Biocentrum / Poland
Plant /cultivar	winter rye / Poznańskie	winter rye / Diament	winter rye / Daniello	winter rye / Palazzo	winter rye / Diament	winter rye / Poznańskie
Seeding date	16.11.2020	16.11.2020	16.11.2020	11.01.2021	11.01.2021	11.01.2021
Seeding rate	50 S/POT	50 S/POT	50 S/POT	50 S/POT	50 S/POT	50 S/POT
Type of sprayer	SEDRLA	SEDRLA	SEDRLA	SEDRLA	SEDRLA	SEDRLA
Date of treatment	16.11.2020	16.11.2020	16.11.2020	11.01.2021	11.01.2021	11.01.2021
Plant development phase	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00
Soil type	peat	peat	peat	peat	peat	peat
Soil pH	5,2-6,3	5,2-6,3	5,2-6,3	5,2-6,3	5,2-6,3	5,2-6,3
Water volume (ml/100 kg)	700	700	700	700	700	700



#### Efficacy tests

The 57 trials ( including 18 laboratory experiments against *Fusarium sp.* and *Monographella nivalis* (anam. *Microdochium nivale*) in total were carried out in 2020/21 in Poland. The seed treatment CHR/ZF/PROTI has been used at the following rates:

- 60 ml/100 kg/ seed,
- 80 ml/100 kg/seed,
- 100 ml/100 kg/seed

**Table 3.2-11: Details on trial methodology**

<b>Guidelines</b>	General guidelines	PP 1/152 (3) Design and analysis of efficacy evaluation trials
		PP 1/181 (3) Conduct and reporting of efficacy evaluation trials including good experimental practice
		PP 1/135 (3) Phytotoxicity assessment
	Specific guidelines	PP 1/19(4) Seed-borne cereal fungi
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB) – (57)
	Plot size	Winter wheat: 10,0 – 18 m <sup>2</sup> ; laboratory trials (pot) 0,125 m <sup>2</sup> Winter triticale: 10,5 – 18 m <sup>2</sup> , laboratory trials (pot) 0,125 m <sup>2</sup> Winter rye: 10,0 – 18 m <sup>2</sup> , laboratory trials (pot) 0,125 m <sup>2</sup>
	Number of replications	4 (57)
<b>Crop</b>	Trials per crop	Winter wheat (18 field trials, 6 laboratory trials) Winter triticale (6 field trials, 6 laboratory trials) Winter rye (15 field trials, 6 laboratory trials)
	Varieties per crop	Winter wheat (field trials): Jubilar, Turnia, Nadobna, Tobak, Zyta, Fidelius, Bilanz, Mewa, Julius, Potenzial, Tonacja, Princeps, Bogatka Winter wheat (laboratory trials): Arkadia, Potenzial, Opal, Princeps, Tonacja  Winter triticale (field trials): Trismart, Rotondo, Porto, Borowik, Twingo Winter triticale (laboratory trials): Twingo, Salto, Grenado, Wilton, Salto, Magnat  Winter rye (field trials): Dańkowskie Rubin, Dukato, Su Forsetti, Dańkowskie Rubin, Dańkowskie Granat, Dańkowskie Diament, Agat, Dańkowskie Turkus, Dańkowskie Amber, Daniello, Poznańskie, Palazzo, Dańkowskie Diamenty Winter rye (laboratory trials): Poznańskie, Diament, Daniello, Palazzo
	Sowing period	Winter wheat field trials: 30.09.2020 – 09.10.2020 Winter wheat laboratory trials: 16.11.2020 and 11.01.2021 Winter triticale field trials: 24.09.2020-09.10.2020 Winter triticale laboratory trials: 01.02.2021 and 23.02.2021 Winter rye field trials: 30.09.2020-09.10.2020 Winter rye laboratory trials: 16.11.2020 and 11.01.2021
<b>Application</b>	Crop stage (BBCH)* at application	Winter wheat: BBCH 00 – seed treatment Winter triticale: BBCH 00 – seed treatment Winter rye: BBCH 00 – seed treatment
	Timing Pest stage at application	The data available in Appendix 4

	(1)	
	Number of applications Intervals between applications	1 (57 trials), interval – n/a
	Spray volumes	0.7 L
<b>Assessment</b>	Assessment types	Assessment of efficacy Assessment of phytotoxicity
	Assessment dates	Assessment dates deatalis is available in Appendix 4
<b>Other re-levant infor-mation</b>	e.g. Soil type, pH (in case of soil active substance ...)	Winter wheat field trials: pH: 5,6 – 7,2 Winter wheat laboratory trials: pH: 5,2-6,3 Winter tritcale field trials: pH: 5,4 – 7,4 Winter tritcale laboratory trials: pH: 5,2-6,3 Winter rye field trials: pH: 5,4 – 7,2 Winter rye laboratory trials: pH: 5,2-6,3
	e.g. Natural / artificial inoculation...	n/a
	e.g. Field / Greenhouse...	n/a
	...	n/a

\* BBCH for weeds, pre-emergence, preventive / curative application, insect stage...

Comments of zRMS:	<p><b><u>Methodology II</u></b></p> <p>The Applicant presents 57 trials carried out in accordance with the reports. Total of 57 trials (39 field trials and 18 laboratory experiments) investigating the effectiveness of product CHR/ZF/PROTI, marketing names: Gamelan 100 FS/ Doraltis 100 FS <b>chemical active substance: Prothioconazole</b> against pathogens of cereals. Trials were carried out in 2020/21 in winter cereals in Poland, North-East EPPO zone.</p> <p>The more than required number of experiments on winter cereals were carried out, but only in one vegetation season 2020/2021. The list of experiments is presented in the table 3.2-1.</p> <p>The seed treatment CHR/ZF/PROTI was applied at the following rates of 60; 80; 100 ml/100 kg seed. Pathogens were tested.</p> <p><b>Winter wheat:</b>  24 trials, (including 18 field and 6 laboratory experiments) against <i>Fusarium sp. and Monographella nivalis (anam. Microdochium nivale)</i>,  <b>FUSASP <i>Fusarium sp.</i></b>  The efficiency of CHR/ZF/PROTI in control of <i>Fusarium spp.</i> were investigated in 9 trials (6 field trials and 3 laboratory trials),  <b>MONGNI <i>Monographella nivalis (anam. Microdochium nivale)</i></b>/The efficiency of CHR/ZF/PROTI in control of <i>Monographella nivalis (anam. Microdochium nivale)</i> were investigated in 9 trials (6 field trials and 3 laboratory trials).  <b>TILLCA <i>Tilletia caries</i></b>  The efficiency of CHR/ZF/PROTI in control of <i>Tilletia caries</i> were investigated in 9 trials.  <b>USTINT <i>Ustilago tritici</i></b> were investigated in 3 field trials.</p> <p><b>Winter tritcale</b>  12 trials (including 6 field and 6 laboratory experiments) against <i>Fusarium sp. and Monographella nivalis (anam. Microdochium nivale)</i>)</p>
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**FUSASP *Fusarium sp.*** The efficiency of CHR/ZF/PROTI in control of *Fusarium spp.* were investigated in 9 trials (6 field trials and 3 laboratory trials),

**MONGNI *Monographella nivalis* (anam. *Microdochium nivale*)** The efficiency of CHR/ZF/PROTI in control of *Monographella nivalis* (anam. *Microdochium nivale*) were investigated in 9 trials (6 field trials and 3 laboratory trials).

**Winter rye**  
 The 21 trials (including 15 field 6 laboratory experiments) against *Fusarium sp.* and *Monographella nivalis* (anam. *Microdochium nivale*)) were carried out in winter rye in season 2020/21,

**FUSASP *Fusarium sp.***  
 The efficiency of CHR/ZF/PROTI in control of *Fusarium spp.* were investigated in 9 trials (6 field trials and 3 laboratory trials),

**MONGNI *Monographella nivalis* (anam. *Microdochium nivale*)**  
 The efficiency of CHR/ZF/PROTI in control of *Monographella nivalis* (anam. *Microdochium nivale*) were investigated in 9 trials (6 field trials and 3 laboratory trials).

**UROCOC *Urocystis occulta*** , efficiency of CHR/ZF/PROTI in control of *Urocystis occulta* were investigated in 9 trials

Most of the trials were conducted in the field conditions that took into account a variety of environmental and agrotechnical conditions. The crop safety and efficacy of seed treatment CHR/ZF/PROTI, marketing names: Gamelan 100 FS/ Doraltes 100 FS **chemical active substance: Prothioconazole** against pathogens of cereals were carried out. The localization of the experiments were appropriate and produced representative results. Experiments on the effectiveness of combating *Microdochium nivale* and *Fusarium spp.* were tested in laboratory conditions.

The required number of experiments on winter wheat, winter triticale, winter rye were carried out to evaluate the effectiveness of seed treatment CHR/ZF/PROTI, against tested pathogens of cereals. Experiments in winter cereals were performed in the one vegetation seasons. Prothioconazole is a known and widely used a.s. which gives a wide knowledge of its activity. Consequently, the results obtained in the one-year studies are confirmed in practice and sufficiently representative. The number of trials is sufficient and justified.

However, *Ustilago tritici* was only tested in 3 experiments in one season. It should be recognized that in the case of this disease there is too little data to be included in the label and registered in Poland.

**The sufficient number of experiments on winter wheat, winter triticale, winter rye were carried out to evaluate the effectiveness of product:** CHR/ZF/PROTI, marketing names: Gamelan 100 FS/ Doraltes 100 FS at the rate of 100 ml/100 kg seeds which corresponds to 10.0 g a.s./100 kg seeds of prothioconazole per application.

**Prothioconazole is proposed for use as a seed treatment in cereals to protect against diseases.**

**The methods used in the trials were appropriate and trials submitted for evaluation are sufficiently representative. Experiments complied with GEP requirements, while the efficacy evaluation methods agreed with EPPO guidelines, GAP and Uniform Principles.**

## Crop(s) 1 AND/OR Target(s) 1

A total of 57 trials were carried out to evaluate the efficacy of product CHR/ZF/PROTI for the control of most important fungal diseases in winter cereals.

Efficacy data for fungal diseases are presented from 57 efficacy trials assessed.

### Winter wheat

The 24 trials (including 6 laboratory experiments against *Fusarium sp.* and *Monographella nivalis* (anam. *Microdochium nivale*)) were carried out in winter wheat in season 2020/21. The seed treatment CHR/ZF/PROTI was applied at the following rates of 60; 80; 100 ml/100 kg seed.

### Winter triticale

The 12 trials (including 6 laboratory experiments against *Fusarium sp.* and *Monographella nivalis* (anam. *Microdochium nivale*)) were carried out in winter triticale in season 2020/21. The seed treatment CHR/ZF/PROTI was applied at the following rates of 60; 80; 100 ml/100 kg seed.

### Winter rye

The 21 trials (including 6 laboratory experiments against *Fusarium sp.* and *Monographella nivalis* (anam. *Microdochium nivale*)) were carried out in winter rye in season 2020/21. The seed treatment CHR/ZF/PROTI was applied at the following rates of 60; 80; 100 ml/100 kg seed.

### Winter wheat

#### 3.2.3-1.1 The efficacy of CHR/ZF/PROTI in control of *FUSASP Fusarium sp.*

The efficiency of CHR/ZF/PROTI in control of *Fusarium spp.* were investigated in 9 trials (6 field trials and 3 laboratory trials), for the field trials assessment were conducted in autumn and spring.

##### Assessment of efficacy in autumn 16 - 52 days after application

The efficiency of CHR/ZF/PROTI in control of *Fusarium spp.* were investigated in 3 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the low to medium level of efficacy. The effectiveness fluctuated at rate 60 ml from 14,5% (49 DA-A) to 38,0 % (16 DA-A), at rate 80 ml from 35,5 % (52 DA-A) to 72,2 % (16 DA-A), at rate 100 ml from 50,8 % (49 DA-A) to 95,7 % (16 DA-A). The efficacy of the tested seed treatment was slightly higher than the standard product Premis 025 FS and comparable to the product Redigo 100 FS. In the trials efficacy amounted to 67 % during the assessment. (Appendix 5 tab. 1).

##### Assessment of efficacy in spring 169-183 days after application

The efficiency of CHR/ZF/PROTI in control of *Fusarium spp.* were investigated in 3 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the low to medium level of efficacy. The effectiveness fluctuated at rate 60 ml from 33,4 % (183 DA-A) to 79,5 % (181 DA-A), at rate 80 ml from 39,1 % (183 DA-A) to 100,0 % (181 DA-A), at rate 100 ml from 50,2 % (183 DA-A) to 100,0 % (181 DA-A). The efficacy of the tested seed treatment was slightly higher than the standard product Premis 025 FS and the product Redigo 100 FS. In the trials efficacy amounted above 79 % during the assessment. (Appendix 5 tab. 2).

##### Assessment of efficacy in laboratory experiments 8 - 18 days after application

The efficiency of CHR/ZF/PROTI in control of *Fusarium spp.* were investigated in 3 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the low to medium level of efficacy. The effectiveness fluctuated at rate 60 ml from 36,0 % ( 8 DA-A) to 54,2 % (18 DA-A), at rate 80 ml from 57,1 % ( 8 DA-A) to 69,7 % (18 DA-A), at rate 100 ml from 62,5 % ( 18 DA-A) to 81,8 % (18 DA-A). The efficacy of the tested seed treatment was slightly higher than the standard product Premis 025 FS and the product Redigo 100 FS. In the trials efficacy amounted above 72 % during the assessment. (Appendix 5 tab. 3).

#### **3.2.3-1.2 The efficacy of CHR/ZF/PROTI in control of MONGNI *Monographella nivalis* (anam. *Microdochium nivale*)**

The efficiency of CHR/ZF/PROTI in control of *Monographella nivalis* (anam. *Microdochium nivale*) were investigated in 9 trials (6 field trials and 3 laboratory trials).

##### **Assessment of efficacy in field trials 153-188 days after application**

The efficiency of CHR/ZF/PROTI in control of *Monographella nivalis* (anam. *Microdochium nivale*) were investigated in 6 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the low to high level of efficacy. The effectiveness fluctuated at rate 60 ml from 32,6 % ( 188 DA-A) to 91,4 % (181 DA-A), at rate 80 ml from 54,8 % ( 153 DA-A) to 100 % (169, 181 DA-A), at rate 100 ml from 61,3 % ( 153 DA-A) to 100,0 % (169, 181 DA-A). The efficacy of the tested seed treatment was slightly higher than the standard product Premis 025 FS and the product Redigo 100 FS. In the trials efficacy amounted above 83 % during the assessment. (Appendix 5 tab. 4).

##### **Assessment of efficacy in laboratory experiments 8 - 16 days after application**

The efficiency of CHR/ZF/PROTI in control of *Monographella nivalis* (anam. *Microdochium nivale*) were investigated in 3 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the low to medium level of efficacy. The effectiveness fluctuated at rate 60 ml from 13,8 % ( 8 DA-A) to 39,4 % (16 DA-A), at rate 80 ml from 29,4 % ( 16 DA-A) to 69,7 % (16 DA-A), at rate 100 ml from 52,0 % ( 8 DA-A) to 77,8 % (16 DA-A). The efficacy of the tested seed treatment was slightly higher than the standard product Premis 025 FS and the product Redigo 100 FS. In the trials efficacy amounted above 65 % during the assessment. (Appendix 5 tab. 5).

#### **3.2.3-1.3 The efficacy of CHR/ZF/PROTI in control of TILLCA *Tilletia caries***

The efficiency of CHR/ZF/PROTI in control of *Tilletia caries* were investigated in 9 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the high level of efficacy. The effectiveness fluctuated at rate 60 ml from 77,0 % ( 251 DA-A) to 100,0 % (284 DA-A), at rate 80 ml from 91,0 % (251 DA-A) to 100,0 % (281, 284, 293 DA-A), at rate 100 ml up to 100,0 % ( 247 DA-A- 302 DA-A). The efficacy of the tested seed treatment was slightly higher than the standard product Premis 025 FS and the product Redigo 100 FS. In the trials efficacy amounted up to 100,0 % during the assessment. (Appendix 5 tab. 6).

#### **3.2.3-1.4 The efficacy of CHR/ZF/PROTI in control of USTINT *Ustilago tritici***

The efficiency of CHR/ZF/PROTI in control of *Ustilago tritici* were investigated in 3 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the high level of efficacy. The effectiveness fluctuated at rate 60 ml from 93,6 % ( 266 DA-A) to 95,5 % (266 DA-A), at rate 80 ml up to 100,0 % ( 266 DA-A), at rate 100 ml up to 100,0 % ( 266 DA-A). The efficacy of the tested seed treatment

was comparable to the standard product Premis 025 FS and the product Redigo 100 FS. In the trials efficacy amounted up to 100,0 % during the assessment. (Appendix 5 tab. 7).

### Winter triticale

#### 3.2.3-1.5 The efficacy of CHR/ZF/PROTI in control of FUSASP *Fusarium sp.*

The efficiency of CHR/ZF/PROTI in control of *Fusarium spp.* were investigated in 9 trials (6 field trials and 3 laboratory trials), assessment were conducted in autumn and spring.

##### Assessment of efficacy in autumn 20 - 49 days after application

The efficiency of CHR/ZF/PROTI in control of *Fusarium spp.* were investigated in 3 trials. The efficiency of CHR/ZF/PROTI in control of *Fusarium spp.* were investigated in 3 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the low to high level of efficacy. The effectiveness fluctuated at rate 60 ml from 27,2 % ( 49 DA-A) to 34,6 % (29 DA-A), at rate 80 ml from 60,6 % ( 29 DA-A) to 66,7 % (49 DA-A), at rate 100 ml from 66,3 % ( 29 DA-A) to 80,2 % (49 DA-A). The efficacy of the tested seed treatment was slightly lower than the standard product Premis 025 FS and higher than the product Redigo 100 FS. In the trials efficacy amounted above 80 % during the assessment. (Appendix 5 tab. 8).

##### Assessment of efficacy in spring 175-184 days after application

The efficiency of CHR/ZF/PROTI in control of *Fusarium spp.* were investigated in 3 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the low to high level of efficacy. The effectiveness fluctuated at rate 60 ml from 26,1 % ( 184 DA-A) to 58,4 % (183 DA-A), at rate 80 ml from 43,4 % ( 184 DA-A) to 81,2 % (183 DA-A), at rate 100 ml from 64,2 % ( 184 DA-A) to 88,9 % (183 DA-A). The efficacy of the tested seed treatment was slightly higher than the standard product Premis 025 FS and product Redigo 100 FS. In the trials efficacy amounted above 79 % during the assessment. (Appendix 5 tab. 9).

##### Assessment of efficacy in laboratory experiments 9 - 21 days after application

The efficiency of CHR/ZF/PROTI in control of *Fusarium spp.* were investigated in 3 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the low to medium level of efficacy. The effectiveness fluctuated at rate 60 ml from 45,0 % ( 9 DA-A) to 60,0 % (21 DA-A), at rate 80 ml from 55,0 % ( 9 DA-A) to 71,4 % (9 DA-A), at rate 100 ml from 64,0 % ( 21 DA-A) to 88,9 % (21 DA-A). The efficacy of the tested seed treatment was slightly higher than the standard product Premis 025 FS and the product Redigo 100 FS. In the trials efficacy amounted above 75 % during the assessment. (Appendix 5 tab. 10).

#### 3.2.3-1.6 The efficacy of CHR/ZF/PROTI in control of MONGNI *Monographella nivalis* (anam. *Microdochium nivale*)

The efficiency of CHR/ZF/PROTI in control of *Monographella nivalis* (anam. *Microdochium nivale*) were investigated in 9 trials (6 field trials and 3 laboratory trials).

##### Assessment of efficacy in field trials 157-184 days after application

The efficiency of CHR/ZF/PROTI in control of *Monographella nivalis* (anam. *Microdochium nivale*) were investigated in 6 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the low to high level of efficacy. The effectiveness fluctuated at rate 60 ml from 19,0 % ( 184 DA-A) to 86,7 % (183 DA-A), at rate 80 ml from 53,0 % ( 184 DA-A) to 100 % (175, 183 DA-A), at rate 100 ml from 66,7 % ( 157 DA-A) to 100,0 % (175, 183 DA-A). The efficacy of the tested seed treatment was

slightly higher than the standard product Premis 025 FS and slightly lower than the product Redigo 100 FS. In the trials efficacy amounted above 85 % during the assessment. (Appendix 5 tab. 11).

#### Assessment of efficacy in laboratory experiments 7 - 15 days after application

The efficiency of CHR/ZF/PROTI in control of *Monographella nivalis* (anam. *Microdochium nivale*) were investigated in 3 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the low to high level of efficacy. The effectiveness fluctuated at rate 60 ml from 30,4 % ( 15 DA-A) to 40,0 % (7 DA-A), at rate 80 ml from 65,8 % ( 7 DA-A) to 80,0 % (7 DA-A), at rate 100 ml from 71,1 % ( 7 DA-A) to 90,0 % (7 DA-A). The efficacy of the tested seed treatment was higher than the standard product Premis 025 FS and slightly the product Redigo 100 FS. In the trials efficacy amounted above 81 % during the assessment. (Appendix 5 tab. 12).

#### Winter rye

##### 3.2.3-1.7 The efficacy of CHR/ZF/PROTI in control of FUSASP *Fusarium* sp.

The efficiency of CHR/ZF/PROTI in control of *Fusarium* spp. were investigated in 9 trials (6 field trials and 3 laboratory trials), assessment were conducted in autumn and spring.

#### Assessment of efficacy in autumn 35-39 days after application

The efficiency of CHR/ZF/PROTI in control of *Fusarium* spp. were investigated in 3 trials. The efficiency of CHR/ZF/PROTI in control of *Fusarium* spp. were investigated in 3 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the medium to high level of efficacy. The effectiveness fluctuated at rate 60 ml from 57,9 % ( 39 DA-A) to 75,0 % (35 DA-A), at rate 80 ml from 75,7 % ( 35 DA-A) to 100,0 % (35 DA-A), at rate 100 ml from 86,5 % ( 35 DA-A) to 100,0 % (35, 39 DA-A). The efficacy of the tested seed treatment was higher than the standard product Premis 025 FS and the product Redigo 100 FS. In the trials efficacy amounted above 95,0 % during the assessment. (Appendix 5 tab. 13).

#### Assessment of efficacy in spring 167-184 days after application

The efficiency of CHR/ZF/PROTI in control of *Fusarium* spp. were investigated in 3 trials. The efficiency of CHR/ZF/PROTI in control of *Fusarium* spp. were investigated in 3 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the low to medium level of efficacy. The effectiveness fluctuated at rate 60 ml from 33,9 % ( 184 DA-A) to 42,9 % (167 DA-A), at rate 80 ml from 41,2 % ( 182 DA-A) to 71,6 % (167 DA-A), at rate 100 ml from 53,6 % ( 35 DA-A) to 82,8 % (167 DA-A). The efficacy of the tested seed treatment was higher than the standard product Premis 025 FS and the product Redigo 100 FS. In the trials efficacy amounted above 63,0 % during the assessment. (Appendix 5 tab. 14).

#### Assessment of efficacy in laboratory experiments 8-18 days after application

The efficiency of CHR/ZF/PROTI in control of *Fusarium* spp. were investigated in 3 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the low to medium level of efficacy. The effectiveness fluctuated at rate 60 ml from 25,0 % ( 8 DA-A) to 64,3 % (18 DA-A), at rate 80 ml from 45,0 % ( 8 DA-A) to 75,0 % (8 DA-A), at rate 100 ml from 74,1 % (18 DA-A) to 85,7 % (18 DA-A). The efficacy of the tested seed treatment was higher than the standard product Premis 025 FS and the product Redigo 100 FS. In the trials efficacy amounted above 81 % during the assessment. (Appendix 5 tab. 15).

##### 3.2.3-1.8 The efficacy of CHR/ZF/PROTI in control of MONGNI *Monographella nivalis* (anam. *Microdochium nivale*)



The efficiency of CHR/ZF/PROTI in control of *Monographella nivalis* (anam. *Microdochium nivale*) were investigated in 9 trials (6 field trials and 3 laboratory trials).

#### Assessment of efficacy in field trials 147-184 days after application

The efficiency of CHR/ZF/PROTI in control of *Monographella nivalis* (anam. *Microdochium nivale*) were investigated in 6 trials. The te-sted product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the medium to high level of efficacy. The effectiveness fluctuated at rate 60 ml from 26,9 % ( 184 DA-A) to 79,5 % (167 DA-A), at rate 80 ml from 64,2 % ( 184 DA-A) to 100 % (167 DA-A), at rate 100 ml from 77,2 % ( 157 DA-A) to 100,0 % (147, 167 DA-A). The efficacy of the tested seed treatment was slightly higher than the standard product Premis 025 FS and the product Redigo 100 FS. In the trials efficacy amounted above 92 % during the assessment. (Appendix 5 tab. 16).

#### Assessment of efficacy in laboratory experiments 8 - 16 days after application

The efficiency of CHR/ZF/PROTI in control of *Monographella nivalis* (anam. *Microdochium nivale*) were investigated in 3 trials. The te-sted product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the low to medium level of efficacy. The effectiveness fluctuated at rate 60 ml from 36,4 % ( 8 DA-A) to 63,2 % (8 DA-A), at rate 80 ml from 66,7 % ( 16 DA-A) to 82,1 % (16 DA-A), at rate 100 ml from 70,4 % ( 16 DA-A) to 85,7 % (16 DA-A). The efficacy of the tested seed treatment was higher than the standard product Premis 025 FS and the product Redigo 100 FS. In the trials efficacy amounted above 75 % during the assessment. (Appendix 5 tab. 17).

### 3.2.3-1.9 The efficacy of CHR/ZF/PROTI in control of UROCOC *Urocystis occulata*

The efficiency of CHR/ZF/PROTI in control of *Urocystis occulata* were investigated in 9 trials. The tested product at rates 60; 80; 100 ml/100 kg seed controlled this species of fungal at the high level of efficacy. The effectiveness fluctuated at rate 60 ml from 89,0 % ( 251, 254, 257 DA-A) to 100,0 % (242 DA-A), at rate 80 ml from 97,0 % (251, 254 DA-A) to 100 % (242 DA-A), at rate 100 ml up to 100,0 % (242-257 DA-A). The efficacy of the tested seed treatment was comparable the standard product Premis 025 FS and the product Redigo 100 FS. In the trials efficacy amounted up to 100,0 % during the assessment. (Appendix 5 tab. 18).

#### Conclusions on the biological efficacy

The obtained data in performed trials show that CHR/ZF/PROTI provides benefits against the most important fungal in winter cereals.

On the basis of submitted research, it is possible to state that the CHR/ZF/PROTI:

#### **Used CHR/ZF/PROTI in winter wheat:**

**at rate 60 ml/100 kg seed:**

**Was effective:** *Tilletia caries* (TILLCA), *Ustilago tritici* (USTINT)

**Resistant/Reduction of diseases:** *Fusarium* spp. (FUSASP), *Monographella nivalis* (anam. *Microdochium nivale*) (MONGNI)

**at rate 80 ml/100 kg seed:**

**Was effective:** *Tilletia caries* (TILLCA), *Ustilago tritici* (USTINT)

**Medium sensitive:** *Fusarium* spp. (FUSASP)

**Resistant/Reduction of diseases:** *Monographella nivalis* (anam. *Microdochium nivale*) (MONGNI)

**at rate 100 ml/100 kg seed:**

**Was effective:** *Tilletia caries* (TILLCA), *Ustilago tritici* (USTINT)

**Medium sensitive:** *Fusarium* spp. (FUSASP), *Monographella nivalis* (anam. *Microdochium nivale*) (MONGNI)



**Used CHR/ZF/PROTI in winter triticale:**

**at rate 60 ml/100 kg seed:**

**Resistant/Reduction of diseases:** *Fusarium* spp. (FUSASP), *Monographella nivalis* (anam. *Microdochium nivale*) (MONGNI)

**at rate 80 ml/100 kg seed:**

**Medium sensitive:** *Fusarium* spp. (FUSASP), *Monographella nivalis* (anam. *Microdochium nivale*) (MONGNI)

**at rate 100 ml/100 kg seed:**

**Was effective:** *Monographella nivalis* (anam. *Microdochium nivale*) (MONGNI)

**Medium sensitive:** *Fusarium* spp. (FUSASP)

**Used CHR/ZF/PROTI in winter rye:**

**at rate 60 ml/100 kg seed:**

**Was effective:** *Urocystis occulata* (UROCOC)

**Resistant/Reduction of diseases:** *Fusarium* spp. (FUSASP), *Monographella nivalis* (anam. *Microdochium nivale*) (MONGNI)

**at rate 80 ml/100 kg seed:**

**Was effective:** *Urocystis occulata* (UROCOC)

**Medium sensitive:** *Fusarium* spp. (FUSASP), *Monographella nivalis* (anam. *Microdochium nivale*) (MONGNI)

**at rate 100 ml/100 kg seed:**

**Was effective:** *Fusarium* spp. (FUSASP), *Monographella nivalis* (anam. *Microdochium nivale*) (MONGNI), *Urocystis occulata* (UROCOC)

**Table 3.2-1: Efficacy of product CHR/ZF/PROTI at the timing of assessment.**

**Winter wheat field trials**

Target	CHR/ZF/PROTI 100 FS  at rate	Number  of trials	Infestation in the untreated control (% leaf area/stems/ears)		% control								No of trials where Product is >, <, = compared to standard(s)**
					CHR/ZF/PROTI 100 FS			Premis 025 FS		Redigo 100 FS			
					Mean	Min & Max	Mean	Min	Max	Mean	Min & Max	Mean	Min & Max
<i>Fusarium</i> sp. summary (autumn and spring)	60 ml/100 kg	6	42,15	15,3 & 62,8	42,67	14,50	79,5	67,32	23,9 & 100	69,40	29,9 & 100		
	80 ml/100 kg				61,35	35,50	100						
	100 ml/100 kg				73,28	50,20	100						
<i>Fusarium</i> sp. autumn assessment	60 ml/100 kg	3	50,97	35,9 & 62	25,37	14,50	38	65,77	48,4 & 98	68,00	50,8 & 95		
	80 ml/100 kg				50,40	35,50	72,2						
	100 ml/100 kg				67,00	50,80	95,7						
<i>Fusarium</i> sp. spring assessment	60 ml/100 kg	3	33,33	15,3 & 62,8	59,97	33,40	79,5	68,87	23,9 & 100	70,80	29,9 & 100		
	80 ml/100 kg				72,30	39,10	100						
	100 ml/100 kg				79,57	50,20	100						
<i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i> )	60 ml/100 kg	6	11,92	5 & 31,4	57,92	32,60	91,4	82,37	53,5 & 100	73,55	38,1 & 100		
	80 ml/100 kg				76,13	54,80	100						
	100 ml/100 kg				83,35	61,30	100						

<i>Tilletia caries</i>	60 ml/100 kg	9	233,37	29,04 & 432,8	89,99	77,00	100	99,76	99 & 100	99,97	99,7 & 100	
	80 ml/100 kg				96,36	91,00	100					
	100 ml/100 kg				100,00	100,00	100					
<i>Ustilago tritici</i>	60 ml/100 kg	3	6,7	5,49 & 7,86	94,70	93,60	95,5	100,00	100 & 100	100,00	100 & 100	
	80 ml/100 kg				100,00	100,00	100					
	100 ml/100 kg				100,00	100,00	100					

- \* A, B, C can be a “trial group” (as defined in page 10, e.g. EPPO climatic zone A) or a specific target (e.g. weed A, weed B...).
- In order to adapt the table to the data presented, it is possible:
- to add lines or columns,
  - to duplicate the table (e.g. one table for “trial group 1”, one table for “trial group 2”, one table for “all”).

\*\* Optional

### Winter wheat laboratory trials

Target	CHR/ZF/PROTI 100 FS          at rate	Number          of trials	Infestation in the untreated control (% leaf ar- ea/stems/ears)		% control								No of trials where Prod- uct is >, <, = compared to standard(s)**
					CHR/ZF/PROTI 100 FS			Premis 025 FS		Redigo 100 FS			
					Mean	Min & Max	Mean	Min	Max	Mean	Min & Max	Mean	Min & Max
<i>Fusarium sp.</i>	60 ml/100 kg	3	6,82	5,3 & 8,3	42,83	36,00	54,2	58,47	47,6 & 68,8	70,20	66,7 & 71,9		
	80 ml/100 kg				62,05	57,10	69,7						
	100 ml/100 kg				72,77	62,50	81,8						
<i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i> )	60 ml/100 kg	3	7,7	6,3 \$ 9,0	26,22	13,80	39,4	61,15	48,0 & 75,0	53,50	44,0 & 69,7		
	80 ml/100 kg				41,88	29,40	69,7						
	100 ml/100 kg				65,97	52,00	77,8						

- \* A, B, C can be a “trial group” (as defined in page 10, e.g. EPPO climatic zone A) or a specific target (e.g. weed A, weed B...).
- In order to adapt the table to the data presented, it is possible:
- to add lines or columns,
  - to duplicate the table (e.g. one table for “trial group 1”, one table for “trial group 2”, one table for “all”).
- \*\* Optional

## Winter triticale field trials

Target	CHR/ZF/PROTI 100 FS  <
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- \* A, B, C can be a “trial group” (as defined in page 10, e.g. EPPO climatic zone A) or a specific target (e.g. weed A, weed B...).
- In order to adapt the table to the data presented, it is possible:
- to add lines or columns,
  - to duplicate the table (e.g. one table for “trial group 1”, one table for “trial group 2”, one table for “all”).

\*\* Optional

## Winter triticale laboratory trials

Target	CHR/ZF/PROTI 100 FS	Number	Infestation in the untreated control (% leaf area/stems/ears)		% control								No of trials where Product is >, <, = compared to standard(s)**
					CHR/ZF/PROTI 100 FS			Premis 025 FS		Redigo 100 FS			
					Mean	Min & Max	Mean	Min	Max	Mean	Min & Max	Mean	Min & Max
Fusarium sp.	60 ml/100 kg	3	6,5	5 & 9,3	52,05	45,00	60	55,75	30 & 91,9	59,52	35 & 81,1		
	80 ml/100 kg				64,17	55,00	71,4						
	100 ml/100 kg				75,27	64,00	88,9						
Monographella nivalis (anam. Microdochium nivale)	60 ml/100 kg	3	6,17	5 & 8,3	35,85	30,40	40	73,23	56 & 85	70,23	44 & 81,8		
	80 ml/100 kg				73,25	65,80	80						
	100 ml/100 kg				81,75	71,10	90						

- \* A, B, C can be a “trial group” (as defined in page 10, e.g. EPPO climatic zone A) or a specific target (e.g. weed A, weed B...).
- In order to adapt the table to the data presented, it is possible:
- to add lines or columns,
  - to duplicate the table (e.g. one table for “trial group 1”, one table for “trial group 2”, one table for “all”).

\*\* Optional

## Winter rye field trials

Target	CHR/ZF/PROTI 100 FS	Number	Infestation in the untreated control (% leaf ar- ea/stems/ears)		% control								No of trials where Prod- uct is >, <, = compared to standard(s)**		
					CHR/ZF/PROTI 100 FS			Premis 025 FS		Redigo 100 FS					
					at rate	of trials	Mean	Min & Max	Mean	Min	Max	Mean	Min & Max	Mean	Min & Max
									Mean	Min	Max	Mean	Min & Max	Mean	Min & Max
Fusarium sp. summary ( autumn and spring)	60 ml/100 kg	6	26,62	9,5 & 51,8	50,78	33,90	75	73,4	50,1 & 94,7	73,52	52,2 & 89,2				
	80 ml/100 kg				71,40	41,20	100								
	100 ml/100 kg				79,72	53,60	100								
Fusarium sp. autumn as- sessment	60 ml/100 kg	3	13,33	9,5 & 18,5	64,13	57,90	75	87,27	83,3 & 94,7	85,57	83,3 & 89,2				
	80 ml/100 kg				90,13	75,70	100								
	100 ml/100 kg				95,50	86,50	100								
Fusarium sp. spring assess- ment	60 ml/100 kg	3	39,9	21 & 51,8	37,43	33,90	42,9	59,53	50,1 & 77,8	61,47	52,2 & 76,7				
	80 ml/100 kg				52,67	41,20	71,6								
	100 ml/100 kg				63,93	53,60	82,8								
Monographella nivalis (anam. Microdochium nivale)	60 ml/100 kg	6	9,01	5,25 & 13,5	61,15	26,90	79,5	88,42	78,6 & 100	85,45	76 & 100				
	80 ml/100 kg				86,32	64,20	100								
	100 ml/100 kg				92,75	77,20	100								
Urocystis occulta	60 ml/100 kg	9	249,79	5,01 & 623,3	94,90	89,00	100	100,00	100 & 100	100,00	100 & 100				
	80 ml/100 kg				99,00	97,00	100								
	100 ml/100 kg				100,00	100,00	100								

\* A, B, C can be a “trial group” (as defined in page 10, e.g. EPPO climatic zone A) or a specific target (e.g. weed A, weed B...).

In order to adapt the table to the data presented, it is possible:

- to add lines or columns,

- to duplicate the table (e.g. one table for “trial group 1”, one table for “trial group 2”, one table for “all”).

\*\* Optional

## Winter rye laboratory trials

Target	CHR/ZF/PROTI 100 FS   at rate	Number   of trials	Infestation in the untreated control (% leaf area/stems/ears)		% control								No of trials where Product is >, <, = compared to standard(s)**
					CHR/ZF/PROTI 100 FS			Premis 025 FS		Redigo 100 FS			
					Mean	Min & Max	Mean	Min	Max	Mean	Min & Max	Mean	Min & Max
Fusarium sp.	60 ml/100 kg	3	6,23	5 & 7	44,32	25,00	64,3	65,25	50 & 71,4	62,98	55 & 69,6		
	80 ml/100 kg				62,52	45,00	75						
	100 ml/100 kg				81,97	74,10	85,7						
Monographella nivalis (anam. Microdochium nivale)	60 ml/100 kg	3	6,32	5,5 & 7,3	53,60	36,40	63,2	66,33	58,6 & 75	61,27	51,7 & 78,6		
	80 ml/100 kg				71,38	66,70	82,1						
	100 ml/100 kg				75,53	70,40	85,7						

\* A, B, C can be a “trial group” (as defined in page 10, e.g. EPPO climatic zone A) or a specific target (e.g. weed A, weed B...).

In order to adapt the table to the data presented, it is possible:

- to add lines or columns,

- to duplicate the table (e.g. one table for “trial group 1”, one table for “trial group 2”, one table for “all”).

\*\* Optional

<p>Comments of zRMS:</p>	<p><b>Efficacy effects</b></p> <p>The Applicant provided a total of <b>57</b> experiments on winter wheat, winter triticale and winter rye, carried out in the <b>one growing seasons 2020/2021</b> in the North-eastern EPPO zone, in Poland.</p> <p><b>18 experiments</b> were carried out in the laboratory conditions.</p> <p><b>Number of trials:</b></p> <p><b>Winter wheat</b> (18 + 6 laboratory trials): <i>M.nivale</i> ( 6 +3 lab.), <i>F.spp</i> (6+3 lab.), <i>T.caries</i> (6), <i>U.tritici</i> (3),</p> <p><b>Winter triticale</b> (6 + 6 lab.): <i>M.nivale</i> (6+3 lab.), <i>F.spp</i> (6+3 lab.),</p> <p><b>Winter rye</b> (15 + 6 lab. ): <i>M.nivale</i> (6+ 3lab.), <i>F.spp</i> (6+3lab.), <i>U.occulta</i>(9).</p> <p>The presented agent CHR/ZF/PROTI at rate 100 ml/100 kg seeds showed effectiveness in the control of MONGNI <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>) at the level of 83% in wheat, 85 % in triticale and 92 % in rye. The efficacy obtained was a few percent lower than after the use of comparative agents, Premis 025FS 82 -88% and Redigo 100FS 73-88% (higher in rye and triticale).</p> <p><b>Laboratory experiments</b> confirmed the better effectiveness of the tested agent , amounting to 65 % (wheat), 75 % (rye), 81% (triticale), compared to the comparative agents showing the effectiveness at the level of 53-73% in control of <i>M.nivale</i>.</p> <p>The application of the test agent influenced the control of <i>Fusarium spp.</i> at the level of 67-79% in wheat, 80-79% in triticale and 95-63%(81 % lab.) in rye. The effectiveness of both the tested product and standards in the spring evaluation of the control of <i>Fusarium spp.</i> was clearly lower in rye cultivation.</p> <p>In laboratory conditions, 72 %, in wheat 75%in triticale and 81% in rye effectiveness was obtained for <i>Fusarium spp</i> control.</p> <p>The reference products Premis 025 FS and Redigo 100 FS acted at the level of the test product or by a few percent less. Laboratory tests confirmed the same effects.</p> <p>The tested agent showed a high efficiency of 100% in the control of <i>Urocistis occulta</i> in rye and <i>Tilletia caries</i> in wheat. The reference products also worked at a high level of effectiveness of 99-100% in the control of these pathogens.</p> <p>In the three presented experiments, 100% effectiveness in controlling <i>Ustilago tritici</i> by CHR/ZF/PROTI at rate 100 ml/100 kg seeds was achieved.</p> <p>The tested product showed an appropriate effectiveness of 83-92 % in the control of <i>M.nivale</i> in each of the tested crops. However, incomplete efficacy against <i>Fusarium spp</i> in wheat 67-79% and triticale 80-79% and better efficacy in rye 95-63%, 81 % lab.</p> <p><i>Urocistis occulta</i> in rye and <i>Tilletia caries</i> in wheat were 100 % controlled. The tested measure worked at a similar or several percent higher level than the reference measures.</p> <p>In several experiments on the control of <i>M.nivalis</i>, the effectiveness of CHR/ZF/PROTI was statistically significantly better than that of the reference products.</p>
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	<p>The number of trials for tested measure is compatible to required for registration in Poland (avoid <i>Ustilago tritici</i>). The Applicant should complete the tests (for <i>Ustilago tritici</i>) to the number of trials required in Poland for registration.</p> <p><b>It is justified to claim the registration of the tested seed treatment CHR/ZF/PROTI, marketing names: Gamelan 100 FS/ Doraltes 100 FS at the rate of 100 ml/100 kg seeds which corresponds to 10.0 g a.s./100 kg seeds of prothioconazole per application.</b></p> <p><b>CHR/ZF/PROTI in dose 100 ml/100 kg seeds in winter wheat, winter triticale and winter rye, applied at BBCH 00 growth stage is order to control pathogens: <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>), <i>Fusarium spp.</i>, <i>Tilletia caries</i> (wheat), <i>Urocistis occulta</i> (rye).</b></p> <p><b>The presented results of the effectiveness of CHR/ZF/PROTI, marketing names: Gamelan 100 FS/ Doraltes 100 FS in winter cereals in order to control the pathogens of the crop indicate compliance with the GAP table and with label of the measures tested and Uniform principles.</b></p>
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#### Crop(s) 2 / Target(s) 2

Not applicable

#### Minor use

Not applicable

#### Yield (and relevant quality indicators), from efficacy trials (in the presence of challenging pest populations)

Not applicable

#### Table 3.2-2: Yield (quality) effect of product CHR/ZF/PROTI in efficacy trials on crop \* target 1

Not applicable

#### Summary and conclusion

Not applicable

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

The mode of action of prothioconazole is stated to be demethylation inhibition (DMI). Resistance to DMI fungicides has been found for several pathogens including *Erysiphe graminis tritici*. The applicant considers the risk of resistance developing is high for powdery mildew, moderate for leaf spots (*Septoria tritici*, *Pyrenophora teres*, *Rhynchosporium secalis*) and eyespot (*Pseudocerospora herpotrichoides*) for DMI fungicides including prothioconazole. A series of sensitivity studies has been carried out throughout Europe to establish the baseline sensitivity of cereal mildew, net blotch, leaf spot and eyespot. In addition a study was conducted to demonstrate crossresistance between prothioconazole and a DMI fungicide tebuconazole for a range of cereal diseases. Prothioconazole could be applied as a seed treatment and as a foliar spray to the

same crop. However, the dose of prothioconazole applied in the seed treatment is low and would not be expected to produce significant selection of less sensitive strains of leaf, stem and ear diseases of cereals proposed for the spray formulation. *Fusarium* is the only pathogen targeted by both the foliar spray and seed treatment. There is no evidence of resistance developing in the target organism. In addition, *Fusarium* species are considered to be low risk pathogens. This is because they affect crops late in the season and they are unlikely to be the target of more than one spray of a DMI fungicide.

Comments of zRMS:	<p><b><u>Resistance</u></b></p> <p>The active substance Prothioconazole is registered in Poland in many agents intended for application to plants during the vegetation season ( on stems, leaves and ears). The use of prothioconazole as a seed treatment will result in contact with group of pathogens that are present in the complex causing of <i>Fusarium seedling blight</i>, <i>Monographella nivalis</i> as well as with <i>Tilletia caries</i>, <i>Urocistis occulta</i> and <i>Ustilago tritici</i>.</p> <p><i>Fusarium</i> fungi are pathogens that occur on seedlings and during the growing season. Some species of the genus <i>Fusarium</i> that occur in the seedling disease complex are also responsible for the stem base, leaf and spike diseases in cereals. According to scientific reports and According to FACs information, fungus of the genus <i>Fusarium</i> indicate a low probability of developing immunity. Ref 1, 2, table 3.</p> <p>Due to the withdrawal of tebuconazole and epoxiconazole, in practice a.s. prothioconazole replaces these a.s. and is approved for use in all cereals protection terms. Currently, there is no risk of pathogens resistance to prothioconazole, but with such frequent use this phenomenon may occur (Tab.3). Adequate policy should be followed and prothioconazole should not be applied more than twice per season on one crop:  e.g. seed treatment and one foliar (ear) application.</p> <p><b><u>Information from the FRAC</u></b></p> <p>FRAC,PATHOGEN RISK LIST (September 2019)</p> <p>Purpose  Information is provided about the risk of pathogens to develop resistance to fungicides under specific agronomic conditions.</p> <p>Introduction  Because no scientific criteria are available to accurately determine the risk of a pathogen to develop resistance, our classification is based on experience and reported resistance claims over the last 50 years.</p> <p>Generally, the risk increases when a pathogen undergoes many and short disease cycles per season, the dispersal through spores over time and space is high, sexual recombination is mandatory in the disease cycle and the competitive ability of resistant individual is at least as high as that of the wild type (in the absence of selection pressure).</p> <p>Furthermore, the risk is considered as high when resistance evolved already after few years of product use.</p> <p>Therefore, we consider the pathogen risk as medium to high only if resistance was reported in commercial situations for more than one fungicide class.</p> <p>Wheat powdery mildew is considered as high risk pathogen because resistance evolved to six different chemical classes within 2 to 5 years, whereas wheat brown rust is a low risk pathogen because no resistance evolved to the major fungicide classes (DMIs, QoIs, SDHIs, amines) used against this pathogen, even not after 30 years (DMIs). Eyespot in wheat bears a medium risk, resistance evolved to MBCs and prochloraz (DMIs) only after 10 to 15 years.</p> <p>Table 3: Plant pathogens with low risk of development of resistance to fungicides or of minor commercial importance. The Pathogen Risk List in 2019.</p>
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	<p><u>Pathogen, Crop, Disease</u>                  Fusarium spp., various, Fusarioses                  Tilletia spp., cereals, bunts                  Uromyces spp., various, rusts                  Ustilago spp., cereals, smuts</p> <p><b>The Applicant</b> in section 3.3 has provided current data on pathogen resistance to Prothioconazole.</p> <p>An appropriate EPPO PP 1/213 guidelines (4)-compatible prothioconazole resistance policy should be in place.</p> <p><b>The Applicant included</b> the appropriate indications on the label for the use of an anti-immune strategy for Prothioconazole.</p> <p>There should also be a wide information campaign among the producers of cereals.</p> <p>References:</p> <ol style="list-style-type: none"> <li>1. Emil Rekanović, Milica Mihajlović and Ivana Potočnik In vitro Sensitivity of <i>Fusarium graminearum</i> (Schwabe) to Difenconazole, Prothioconazole and Thiophanate-Methyl Pestic. Phytomed. (Belgrade), 25(4), 2010, 325–333 UDC: 632.4:632.952</li> <li>2. Holger Klink 1, Joseph-Alexander Verreet, Mario Hasler, Tim Birr, Will Triazoles Still Be of Importance in Disease Control of Zymoseptoria tritici in the Future?, Department of Plant Diseases and Crop Protection, Institute of Phytopathology. Article</li> </ol>
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### 3.4 Adverse effects on treated crops (KCP 6.4)

57 efficacy trials in total (winter wheat ( 18 field trials, 6 laboratory trials), winter triticale ( 6 field trials, 6 laboratory trials), winter rye ( 15 field trials, 6 laboratory trials) and 18 selectivity trials ( winter wheat 6 field trials, winter triticale 6 field trials, winter rye 6 field trials) were carried out in Poland in season 2020/2021 on a wide range of commercially grown varieties. There were not observed any phytotoxicity symptoms on tested product and standard. In the course of studies carried out in Poland in the season of 2020/2021 on product CHR/ZF/PROTI seed treatment has not been observed to have any significant influence on yield. The product may be used in seed crops of winter cereals.



Table 3.4-1: Presentation of trials selectivity trials

Crop*	Country	Type of trial**	Number of trials	Years	GEP, non-GEP, official***	Comments (any other relevant information)
			North-East Zone			
winter wheat	Poland	S + Y + Q	6	2020	GEP	
winter tritiale	Poland	S + Y + Q	6	2020	GEP	
winter rye	Poland	S + Y + Q	6	2020	GEP	
<b>TOTAL</b>	-	-	<b>18</b>	-	-	

\* According to the GAP table

\*\* S = selectivity trial, Y = trial with yield assessment, Q = trial with quality assessment, T = trial on the basis of the study of impact on transformation process (TP: Physical transformation, TF: transformation involving microbial fermentation), P = trial with assessment of impact on propagation

\*\*\* Official: carried out by a national official organisation

Table 3.4-2: Presentation of reference standards used in selectivity trials

Crop(s)	Reference standard	Country(ies) where the product is registered <sup>(1)</sup>	Authorization number	Active substance(s)	Formulation		Registered application	Application	Remark <sup>(4)</sup>
					Type <sup>(2)</sup>	Concentration of a.s.		rate <sup>(3)</sup>	rate in trials (per treatment)
winter wheat	Premis 025 FS	Poland	R-223/2020b - 18.09.2020r.	triticonazole	FS - suspension concentrates	25 g/l	200 ml/100 kg	200 ml/100 kg 300 ml/100 kg	-
	Redigo 100 FS	Czech Republic	R-223/2020b - 18.09.2020r.	prothioconazole	FS - suspension concentrates	100 g/l	100 ml/100 kg	100 ml/100 kg 150 ml/100 kg	tested/ reference product
winter tritiale	Premis 025 FS	Poland	R-223/2020b - 18.09.2020r.	triticonazole	FS - suspension concentrates	25 g/l	200 ml/100 kg	200 ml/100 kg 300 ml/100 kg	-
	Redigo 100 FS	Czech Republic	R-223/2020b - 18.09.2020r.	prothioconazole	FS - suspension concentrates	100 g/l	100 ml/100 kg	100 ml/100 kg 150 ml/100 kg	tested/ reference product
winter rye	Premis 025 FS	Poland	R-223/2020b - 18.09.2020r.	triticonazole	FS - suspension concentrates	25 g/l	200 ml/100 kg	200 ml/100 kg 300 ml/100 kg	-
	Redigo 100 FS	Czech Republic	R-223/2020b - 18.09.2020r.	prothioconazole	FS - suspension concentrates	100 g/l	100 ml/100 kg	100 ml/100 kg 150 ml/100 kg	tested/ reference product

(1) only on use(s) applied for (with the test product)

(2) e.g. WP (wetable powder), EC (emulsifiable concentrate), etc.

(3) Dose / dose range authorized in the country

(4) Other relevant information (e.g. uses, number of applications, spray volume, method of application...)

### 3.4.1 Phytotoxicity to host crop (KCP 6.4.1)

#### Materials and methods

The applicant submitted 18 reports (in total) showing the results in research into product selectivity carried out in season 2020/2021 in winter wheat (6 trials), winter tritiale (6 trials), winter rye (6 trials). List of these reports is contained in Appendix 1

#### Site

Trials were conducted in different regions in Poland where winter cereals are grown commercially. The experiment was established on a set of complete randomized blocks in 4 replications. Details on trial sites, applications and data on effectiveness are included in Appendix 4 and 5

#### Testing units

Efficacy studies on fungicide CHR/ZF/PROTI were performed in 2020/2021 by:

1. Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department  
ul. Wojska Polskiego 28, 60-637 Poznań, Poland

2. Staphyt Sp. z o. o., ul. Poznańska 62/53, 60-853 Poznań

Poland

3. Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department, ul. Gliwicka 29, 44-153 Sońnicowice, Poland

#### Experimental details

The efficacy trials were designed, conducted and reported according to the following EPPO guidelines:

- PP 1/135 (4) Phytotoxicity assessment

- PP 1/152 (4) Design and analysis of efficacy evaluation trials

- PP 1/181 (4) Conduct and reporting of efficacy evaluation trials including good experimental practice

They were carried out on the field in the conditions of natural agrofag infestation. The efficacy trials were concluded according to the EPPO standards:

#### Assessment methods

#### Statistical Analysis

In case of statistical analysis, data were analysed using a two way analysis of variance (ANOVA). The probability of no significant differences occurring between treatment means is calculated as the F probability value (Prob(F)). Student-Newman-Keuls test was then applied to separate any treatment differences that may be implied by the ANOVA TEST (Prob(F)<0.05) and these are indicated by the LSD-value and by a letter-test.

In case of statistical analysis, data were analysed using a two way analysis of variance (ANOVA). The probability of no significant differences occurring between treatment means is calculated as the F probability value (Prob(F)). Duncan New MRT test was then applied to separate any treatment differences that may be implied by the ANOVA TEST (Prob(F)<0.05) and these are indicated by the LSD-value and by a letter-test.

#### Assessment of phytotoxicity

Phytotoxicity (chlorosis and necrosis), stunting and thinning were assessed by visual estimation of the intensity on an overall plot basis on a percentage scale 0-100 % (0=no damage). The assessment date was determined by the speed of action and period of efficacy of the test substances.

Phytotoxicity (chlorosis and necrosis), stunting and thinning were assessed by visual estimation of the intensity on an overall plot basis on a percentage scale 0-100 % (0=no damage). Visual emergence uniformity was assessed by visual estimation in relation to untreated check on an overall plot basis on a percentage scale 0-100 % (100=untreated check) The assessment date was determined by the crop development stage

#### Harvest

A plot combine for intermixing-free grain-harvest in field trials was used for harvesting the centre of the plot. The total yield is given in unit/ha adjusted to a fixed moisture content. If quality indices are made, they will be recorded.

#### Applications methods and rates

The applications were carried out by a laboratory seed treatment Hege 11, SETRDR.

The product CHR/ZF/PROTI has been used:

in winter barley and spring barley wheat, winter triticale, winter rye at the following rates of:

- 100 ml/100 kg/ seed,
- 150 ml/100 kg/seed

Premis 025 FS was used as a reference product in winter cereals.

Redigo 100 FS was used as a tested/reference product in winter cereals.

The experiment was established on a set of complete randomized blocks in 4 replications.

Experiment pattern:

Winter cereals

No.	Name	rate ml/100 kg seed	other rate a.s./100 kg seed [g]	rate a.s. [g/ha] (max)	Appl code	Growth Stage
1	Untreated Check					
2	CHR/ZF/PROTI 100 FS	100	10	18,0	1N	BBCH 00
3	CHR/ZF/PROTI 100 FS	150	15	27,0	1.5 N	BBCH 00
4	Premis 025 FS	200	5	9,0	1N	BBCH 00
5	Premis 025 FS	300	7,5	13,5	1.5 N	BBCH 00
6	Redigo 100 FS	100	10	18,0	1N	BBCH 00
7	Redigo 100 FS	150	15	27,0	1.5 N	BBCH 00

## Details of experiments

### winter wheat

Report code	AH/20/PO/32/Zl/b/01	AF/20/PO/32/Gr/b/02	20 F/2021	21 F/2021	APK-20-47776-PL01	APK-20-47776-PL02
Location	Złotniki / Poland	Gorzyń / Poland	Sośnicowice / Poland	Łany Wielkie / Poland	Kajkowo / Poland	Jasiona / Poland
Plant /cultivar	winter wheat / Bogatka	winter wheat / Opal	winter wheat / Opoka	winter wheat / Pokusa	winter wheat / Bilanz	winter wheat / Mewa
Seeding date	01.10.2020	30.09.2020	06.10.2020	08.10.2020	09.10.2020	08.10.2020
Seeding rate	180 kg/ha	176 kg/ha	233 kg/ha	233 kg/ha	180 kg/ha	180 kg/ha
Forecrop	winter rape	FFFLE	winter rye	potato	winter rape	winter rape
Type of sprayer	SEDRLA	SEDRLA	HEGE 11	HEGE 11	HEGE 11	HEGE 11
Date of treatment	01.10.2020	30.09.2020	25.09.2020	25.09.2020	30.09.2020	01.10.2020
Plant development phase	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00
Soil type	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam
Soil pH	5,8	6,4	6,2	6,1	5,6	7,2
Water volume (ml/100 kg)	700	700	700	700	700	700

## winter triticale

Report code	AF/20/PszO/32/Zl/b/03	AF/20/PszO/32/Gr/b/04	13 F/2021	14 F/2021	APK-20-47776-PL03	APK-20-47776-PL04
Location	Złotniki / Poland	Gorzyń / Poland	Sierakowice / Poland	Sośnicowice / Poland	Kajkowo / Poland	Łaźniki / Poland
Plant /cultivar	winter triticale / Alik	winter triticale / Twingo	winter triticale / Trismart	winter triticale / Rotondo	winter triticale / Bereniko	winter triticale / Boro- wik
Seeding date	01.10.2020	30.09.2020	09.10.2020	24.09.2020	09.10.2020	07.10.2020
Seeding rate	180 kg/ha	164 kg/ha	180 kg/ha	150 kg/ha	180 kg/ha	180 kg/ha
Forecrop	winter rape	FFFL	winter rye	winter wheat	winter rape	maize
Type of sprayer	SEDRLA	SEDRLA	HEGE 11	HEGE 11	HEGE 11	HEGE 11
Date of treatment	01.10.2020	30.09.2020	24.09.2020	24.09.2020	30.09.2020	29.09.2020
Plant development phase	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00
Soil type	sandy loam	sandy loam	sandy loam	sandy clay loam	sandy loam	sandy loam
Soil pH	5,8	6,4	6,3	6,07	5,6	7,4
Water volume (ml/100 kg)	700	700	700	700	700	700

## winter rye

Report code	AF/20/ŻO/32/Zl/b/05	AF/20/ŻO/32/Gr/b/06	APK-20-47776-PL05	APK-20-47776-PL06	24 F/2021	25 F/2021
Location	Złotniki / Poland	Gorzyń / Poland	Wilkowija / Poland	Wólka Krosnowska / Poland	Sośnicowice / Poland	Sierakowice / Poland
Plant /cultivar	winter rye / Diament	winter rye / Poznańskie	winter rye / Dańkowskie Turkus	winter rye / Dańkowskie Amber	winter rye / Dukato	winter rye / Su Forsetti
Seeding date	01.10.2020	30.09.2020	30.09.2020	05.10.2020	07.10.2020	09.10.2020
Seeding rate	150 kg/ha	108 kg/ha	180 kg/ha	180 kg/ha	118 kg/ha	113 kg/ha
Forecrop	winter rape	FFFL	potato	winter wheat	winter rape	winter triticale
Type of sprayer	SEDRLA	SEDRLA	HEGE 11	HEGE 11	HEGE 11	HEGE 11
Date of treatment	01.10.2020	30.09.2020	29.09.2020	30.09.2020	01.10.2020	01.10.2020
Plant development phase	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00	BBCH 00
Soil type	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam
Soil pH	5,8	6,4	5,4	7,2	6	5,9
Water volume (ml/100 kg)	700	700	700	700	700	700



Comments of zRMS:	<p>The Applicant presented the results of 18 trials in season 2020/2021 in Poland.</p> <p>In these studies, both the tested and standard product were used in a dose of 1N and in a higher dose.</p> <p>The methods used in the presented trials were appropriate and trials submitted for evaluation are satisfactorily representative for winter wheat (6 trials), winter triticale (6 trials) and winter rye (6 trials).</p> <p>In addition, phytotoxicity was assessed in all 57 efficacy studies.</p> <p>The number of tests and their location was sufficient to conduct an evaluation.</p> <p>There were not observed any phytotoxicity symptoms on tested product in all trials carried out in Poland.</p> <p><b>In this situation, it can be concluded that the results presented for evaluation were considered satisfactory, stating that CHR/ZF/PROTI 100 FS (Gamelan 100 FS/ Doraltes 100 FS ) was selective for winter wheat, winter triticale and winter rye.</b></p>
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### 3.4.2 Effect on the yield of treated plants or plant product (KCP 6.4.2)

Influence of CHR/ZF/PROTI on the yield of grains was evaluated in selectivity research. The yield was evaluated on the basis of harvested grains quantity from one hectare (t/ha). The influence of the tested product on quantity of grain was evaluated in 18 field experiments in Poland in 2020/21. There weren't difference between the treatment objects and standard.

#### Winter wheat

table 3.4.2.1-1 The influence of the CHR/ZF/PROTI on yield quantity [t/ha]

crop code			winter wheat Yield (t/ha)								
report code			AH/20/PO/32/Zl/b/01	AF/20/PO/32/Gr/b/02	20 F/2021	21 F/2021	APK-20-47776-PL01	APK-20-47776-PL02			
BBCH crop			298 DA-A	295 DA-A	321 DA-A	321 DA-A	318 DA-A	316 DA-A			
date			26.07.2021	22.07.2021	12.08.2021	12.08.2021	14.08.2021	13.08.2021	Average	min.	max.
No.	Name	Rate (ml/100 kg)									
1	Untreated Check		9,30	6,80	8,60	8,60	6,81	5,66	7,628	5,66	9,30
2	CHR/ZF/PROTI 100 FS	100,00	9,10	6,30	8,60	8,70	6,70	6,51	7,652	6,30	9,10
3	CHR/ZF/PROTI 100 FS	150,00	9,20	7,00	8,80	8,80	6,44	7,04	7,880	6,44	9,20
4	Premis 025 FS	200,00	9,10	7,10	8,90	8,70	6,60	6,98	7,897	6,60	9,10
5	Premis 025 FS	300,00	9,10	7,00	8,80	8,70	6,51	7,30	7,902	6,51	9,10
6	Redigo 100 FS	100,00	9,30	6,80	8,70	9,10	6,44	6,94	7,880	6,44	9,30
7	Redigo 100 FS	150,00	9,20	6,70	8,80	9,00	6,35	7,07	7,853	6,35	9,20
LSD (P=.05)			0,43	0,92	0,54	0,46	0,359	0,374			

## Winter triticale

table 3.4.2.1-2 The influence of the CHR/ZF/PROTI on yield quantity [t/ha]

crop code			winter triticale Yield (t/ha)								
report code			AF/20/PszO/32/Zl/b/03	AF/20/PszO/32/Gr/b/04	13 F/2021	14 F/2021	APK-20-47776-PL03	APK-20-47776-PL04			
BBCH crop			298 DA-A	294 DA-A	327 DA-A	326 DA-A	318 DA-A	316 DA-A			
date			26.07.2021	21.07.2021	14.08.2021	13.08.2021	14.08.2021	11.08.2021	Average	min.	max.
No.	Name	Rate (ml/100 kg)									
1	Untreated Check		5,10	6,70	4,38	4,40	6,01	5,12	5,285	4,380	6,700
2	CHR/ZF/PROTI 100 FS	100,00	5,30	6,50	4,49	4,10	6,04	5,55	5,330	4,100	6,500
3	CHR/ZF/PROTI 100 FS	150,00	5,70	6,40	4,46	4,10	5,99	5,53	5,363	4,100	6,400
4	Premis 025 FS	200,00	5,30	6,10	4,58	4,40	6,21	5,5	5,348	4,400	6,210
5	Premis 025 FS	300,00	5,30	6,10	4,55	4,10	6,18	5,42	5,275	4,100	6,180
6	Redigo 100 FS	100,00	6,10	6,70	4,93	4,20	5,97	5,38	5,547	4,200	6,700
7	Redigo 100 FS	150,00	5,70	6,20	4,57	4,10	5,95	5,04	5,260	4,100	6,200
LSD (P=.05)			1,73	1,1	0,349	0,63	0,424	0,848			

## Winter rye

table 3.4.2.1-3 The influence of the CHR/ZF/PROTI on yield quantity [t/ha]

crop code			winter rye Yield (t/ha)								
report code			AF/20/ŽO/32/Zl/b/05	AF/20/ŽO/32/Gr/b/06	24 F/2021	25 F/2021	APK-20-47776-PL05	APK-20-47776-PL06			
BBCH crop			298 DA-A	307 DA-A	317 DA-A	317 DA-A	309 DA-A	318 DA-A			
date			26.07.2021	03.08.2021	14.08.2021	14.08.2021	04.08.2021	14.08.2021	Average	min.	max.
No.	Name	Rate (ml/100 kg)									
1	Untreated Check		5,40	6,30	4,51	7,52	5,81	6,13	5,945	4,510	7,520
2	CHR/ZF/PROTI 100 FS	100,00	5,30	6,30	4,58	7,55	5,90	6,68	6,052	4,580	7,550
3	CHR/ZF/PROTI 100 FS	150,00	5,50	6,40	5,04	7,62	5,86	6,00	6,070	5,040	7,620
4	Premis 025 FS	200,00	5,00	6,00	4,66	7,55	5,79	6,53	5,922	4,660	7,550
5	Premis 025 FS	300,00	5,00	5,90	4,85	7,69	5,66	6,18	5,880	4,850	7,690
6	Redigo 100 FS	100,00	5,20	6,00	4,47	7,55	5,73	7,53	6,080	4,470	7,550
7	Redigo 100 FS	150,00	5,20	6,00	4,49	7,70	5,82	7,21	6,070	4,490	7,700
LSD (P=.05)			1,22	0,95	0,671	0,971	0,695	1,33			



Comments of zRMS:	The lack of a negative effect on the yield in all 18 experiments proved that the product CHR/ZF/PROTI 100 FS (Gamelan 100 FS/ Doraltes 100 FS ) is a safety for winter wheat.
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**Table 3.4-4: Relationship between phytotoxicity and yield.**

Not applicable.

There were not observed any phytotoxicity symptoms on tested product and standard in trials. This effects didn't have any negative effect on the yield of winter wheat, winter triticale and winter rye.

Comments of zRMS:	No negative impact on the yield combined with no phytotoxicity symptoms confirms that the product CHR/ZF/PROTI 100 FS (Gamelan 100 FS/ Doraltes 100 FS) is safe for winter cereals.
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### **3.4.3 Effects on the quality of plants or plant products (KCP 6.4.3)**

18 studies conducted in 2020/21 in Poland on winter cereals had no negative impact of CHR/ZF/PROTI on quality of plants. Influence of CHR/ZF/PROTI on the yield of grains was evaluated in selectivity research. The yield was evaluated on the basis of harvested grains quantity from one hectare (t/ha). The influence of the tested product on quantity of grain was evaluated in 18 field experiments in Poland in 2020/21. There weren't difference between the treatment objects and standard. Details of the data shows tables below

table 3.4.3.1-1 The influence of the CHR/ZF/PROTI on quality of yield  
winter wheat (HLW = weight 100 Ltr (hl))

crop code			winter wheat/HLW = weight 100 Ltr (hl)								
report code			AH/20/PO/32/Zl/b/01	AF/20/PO/32/Gr/b/02	20 F/2021	21 F/2021	APK-20-47776-PL01	APK-20-47776-PL02			
BBCH crop			305 DA-A	302 DA-A	332 DA-A	360 DA-A	318 DA-A	320 DA-A			
date			02.08.2021	29.07.2021	23.08.2021	20.09.2021	14.08.2021	17.08.2021	Average	min.	max.
No.	Name	Rate ml/100 kg seed)									
1	Untreated Check		81,28	78,28	70,43	69,10	74,18	69,23	73,75	69,10	81,28
2	CHR/ZF/PROTI 100 FS	100,00	80,08	79,00	70,65	70,03	71,81	68,51	73,35	68,51	80,08
3	CHR/ZF/PROTI 100 FS	150,00	80,43	78,38	70,85	71,03	72,28	69,36	73,72	69,36	80,43
4	Premis 025 FS	200,00	80,50	78,65	70,18	70,13	72,22	68,83	73,42	68,83	80,50
5	Premis 025 FS	300,00	81,18	78,78	70,5	70,45	71,82	69,07	73,63	69,07	81,18
6	Redigo 100 FS	100,00	81,28	79,55	69,93	70,88	73,66	69,72	74,17	69,72	81,28
7	Redigo 100 FS	150,00	74,85	79,33	70,35	70,45	72,63	69,60	72,87	69,60	79,33
LSD (P=.05)			4,576	2,483	1,396	1,4	3,087	2,48			

table 3.4.3.1-2 The influence of the CHR/ZF/PROTI on quality of yield  
winter triticale (HLW = weight 100 Ltr (hl))

crop code			winter triticale/HLW = weight 100 Ltr (hl)								
report code			AF/20/PszO/32/Zl/b/03	AF/20/PszO/32/Gr/b/04	13 F/2021	14 F/2021	APK-20-47776-PL03	APK-20-47776-PL04			
BBCH crop			306 DA-A	301 DA-A	344 DA-A	343 DA-A	318 DA-A	316 DA-A			
date			03.08.2021	28.07.2021	31.08.2021	30.08.2021	14.08.2021	11.08.2021	Average	min.	max.
No.	Name	Rate ml/100 kg seed)									
1	Untreated Check		62,568	55,70	55,725	69,160	65,81	59,49	61,41	55,70	69,16
2	CHR/ZF/PROTI 100 FS	100,00	58,725	56,08	55,863	68,980	68,24	59,91	61,30	55,86	68,98
3	CHR/ZF/PROTI 100 FS	150,00	59,675	55,78	54,938	69,230	68,24	58,80	61,11	54,94	69,23
4	Premis 025 FS	200,00	56,950	55,30	54,900	70,245	65,63	59,00	60,34	54,90	70,25
5	Premis 025 FS	300,00	59,225	55,50	55,363	69,410	67,69	59,00	61,03	55,36	69,41
6	Redigo 100 FS	100,00	59,700	56,25	56,163	68,220	68,28	59,29	61,32	56,16	68,28
7	Redigo 100 FS	150,00	59,733	55,40	56,350	68,530	69,09	58,25	61,23	55,40	69,09
LSD (P=.05)			3,4317	2,065	1,4865	1,0266	1,975	1,79			

table 3.4.3.1-3 The influence of the CHR/ZF/PROTI on quality of yield  
winter rye (HLW = weight 100 Ltr (hl))

crop code			winter rye/HLW = weight 100 Ltr (hl)								
report code			AF/20/ZO/32/ZI/b/05	AF/20/ZO/32/Gr/b/06	24 F/2021	25 F/2021	APK-20-47776-PL05	APK-20-47776-PL06			
BBCH crop			313 DA-A	314 DA-A	344 DA-A	344 DA-A	309 DA-A	318 DA-A			
date			10.08.2021	10.08.2021	10.09.2021	10.08.2021	04.08.2021	14.08.2021	Average	min.	max.
No.	Name	Rate ml/100 kg seed)									
1	Untreated Check		74,55	69,93	70,225	69,750	60,15	70,68	69,21	60,15	74,55
2	CHR/ZF/PROTI 100 FS	100,00	74,28	70,63	70,600	70,738	61,80	69,48	69,59	61,80	74,28
3	CHR/ZF/PROTI 100 FS	150,00	73,30	70,38	70,713	70,525	60,55	70,05	69,25	60,55	73,30
4	Premis 025 FS	200,00	74,38	70,93	70,263	70,425	61,40	70,69	69,68	61,40	74,38
5	Premis 025 FS	300,00	71,00	70,95	70,300	70,288	60,30	69,50	68,72	60,30	71,00
6	Redigo 100 FS	100,00	73,55	70,53	70,625	70,075	61,20	70,00	69,33	61,20	73,55
7	Redigo 100 FS	150,00	73,88	69,93	71,013	70,175	62,68	70,05	69,62	62,68	73,88
LSD (P=.05)			3,673	1,646	1,0368	0,609	2,376	1,84			

table 3.4.3.1-4 The influence of the CHR/ZF/PROTI on quality of yield  
winter wheat moisture content

crop code			winter wheat MOICON - moisture content (%)								
report code			AH/20/PO/32/ZI/b/01	AF/20/PO/32/Gr/b/02	20 F/2021	21 F/2021	APK-20-47776-PL01	APK-20-47776-PL02			
BBCH crop			305 DA-A	295 DA-A	321 DA-A	321 DA-A	318 DA-A	316 DA-A			
date			02.08.2021	22.07.2021	12.08.2021	12.08.2021	14.08.2021	13.08.2021	Average	min.	max.
No.	Name	Rate ml/100 kg seed)									
1	Untreated Check		11,60	15,25	13,08	14,48	13,12	14,01	13,59	11,60	15,25
2	CHR/ZF/PROTI 100 FS	100,00	11,75	15,35	12,95	14,33	13,18	14,19	13,63	11,75	15,35
3	CHR/ZF/PROTI 100 FS	150,00	11,70	15,30	13,85	14,50	13,18	14,29	13,80	11,70	15,30
4	Premis 025 FS	200,00	11,63	15,33	13,10	14,23	13,36	14,32	13,66	11,63	15,33
5	Premis 025 FS	300,00	11,60	15,38	12,98	14,35	13,18	14,28	13,63	11,60	15,38
6	Redigo 100 FS	100,00	11,55	15,33	13,25	13,98	13,43	14,12	13,61	11,55	15,33
7	Redigo 100 FS	150,00	11,68	15,33	13,40	14,15	13,07	14,11	13,62	11,68	15,33
LSD (P=.05)			0,239	0,331	0,699	0,54	0,204	0,267			

table 3.4.3.1-5 The influence of the CHR/ZF/PROTI on quality of yield  
winter triticale moisture content

crop code			winter triticale MOICON - moisture content (%)								
report code			AF/20/PszO/32/Zl/b/03	AF/20/PszO/32/Gr/b/04	13 F/2021	14 F/2021	APK-20-47776-PL03	APK-20-47776-PL04			
BBCH crop			298 DA-A	294 DA-A	327 DA-A	326 DA-A	318 DA-A	316 DA-A			
date			26.07.2021	21.07.2021	14.08.2021	13.08.2021	14.08.2021	11.08.2021	Average	min.	max.
No.	Name	Rate ml/100 kg seed)									
1	Untreated Check		9,968	7,00	13,13	11,33	12,90	15,14	11,58	7,00	15,14
2	CHR/ZF/PROTI 100 FS	100,00	9,825	7,00	12,80	10,88	13,35	15,18	11,51	7,00	15,18
3	CHR/ZF/PROTI 100 FS	150,00	9,850	7,00	13,25	10,90	13,03	14,90	11,49	7,00	14,90
4	Premis 025 FS	200,00	9,875	7,00	13,03	11,93	12,98	14,95	11,63	7,00	14,95
5	Premis 025 FS	300,00	10,025	7,00	12,30	11,28	13,45	14,97	11,50	7,00	14,97
6	Redigo 100 FS	100,00	10,075	7,05	13,00	10,80	13,10	15,15	11,53	7,05	15,15
7	Redigo 100 FS	150,00	10,125	7,00	13,08	11,28	13,13	14,98	11,60	7,00	14,98
LSD (P=.05)			0,2947	0,056	0,778	0,997	0,435	0,27			

table 3.4.3.1-6 The influence of the CHR/ZF/PROTI on quality of yield  
winter rye moisture content

crop code			winter rye MOICON - moisture content (%)								
report code			AF/20/ZO/32/Zl/b/05	AF/20/ZO/32/Gr/b/06	24 F/2021	25 F/2021	APK-20-47776-PL05	APK-20-47776-PL06			
BBCH crop			298 DA-A	307 DA-A	317 DA-A	317 DA-A	309 DA-A	318 DA-A			
date			26.07.2021	03.08.2021	14.08.2021	14.08.2021	04.08.2021	14.08.2021	Average	min.	max.
No.	Name	Rate ml/100 kg seed)									
1	Untreated Check		11,53	13,58	13,25	14,25	11,99	13,09	12,95	11,53	14,25
2	CHR/ZF/PROTI 100 FS	100,00	11,68	13,90	12,65	13,80	12,13	12,96	12,85	11,68	13,90
3	CHR/ZF/PROTI 100 FS	150,00	11,40	13,68	12,63	14,33	12,43	13,28	12,96	11,40	14,33
4	Premis 025 FS	200,00	11,88	13,75	12,85	13,78	12,59	13,53	13,06	11,88	13,78
5	Premis 025 FS	300,00	10,93	13,55	13,48	14,03	12,56	13,08	12,94	10,93	14,03
6	Redigo 100 FS	100,00	11,48	13,55	12,65	13,68	12,58	13,57	12,92	11,48	13,68
7	Redigo 100 FS	150,00	11,75	13,68	13,08	14,38	12,50	13,09	13,08	11,75	14,38
LSD (P=.05)			0,68	0,412	0,732	1,129	1,029	0,616			

table 3.4.3.1-7 The influence of the CHR/ZF/PROTI on quality of yield  
winter wheat protein content

crop code			winter wheat PROCON - protein content %								
report code			AH/20/PO/32/ZI/b/01	AF/20/PO/32/Gr/b/02	20 F/2021	21 F/2021	APK-20-47776-PL01	APK-20-47776-PL02			
BBCH crop			326 DA-A	327 DA-A	343 DA-A	346 DA-A	334 DA-A	333 DA-A			
date			23.08.2021	23.08.2021	03.09.2021	06.09.2021	30.08.2021	30.08.2021	Average	min.	max.
No.	Name	Rate ml/100 kg seed)									
1	Untreated Check		15,80	12,60	10,05	10,31	11,97	13,75	12,41	10,05	15,80
2	CHR/ZF/PROTI 100 FS	100,00	14,90	12,20	9,76	11,000	12,3	13,73	12,32	9,76	14,90
3	CHR/ZF/PROTI 100 FS	150,00	15,40	12,60	10,32	11,000	12,17	13,83	12,55	10,32	15,40
4	Premis 025 FS	200,00	14,90	12,80	10,03	10,73	12,05	14,00	12,42	10,03	14,90
5	Premis 025 FS	300,00	14,50	12,60	9,80	11,07	12,39	13,85	12,37	9,80	14,50
6	Redigo 100 FS	100,00	14,20	12,40	10,35	10,13	12,57	13,78	12,24	10,13	14,20
7	Redigo 100 FS	150,00	14,20	12,80	10,20	10,69	12,47	13,85	12,37	10,20	14,20
LSD (P=.05)					0,768	0,728	0,613-0,614	0,306			

table 3.4.3.1-8 The influence of the CHR/ZF/PROTI on quality of yield  
winter triticale protein content

crop code			winter triticale PROCON - protein content %								
report code			AF/20/PszO/32/ZI/b/03	AF/20/PszO/32/Gr/b/04	13 F/2021	14 F/2021	APK-20-47776-PL03	APK-20-47776-PL04			
BBCH crop			326 DA-A	327 DA-A	332 DA-A	332 DA-A	333 DA-A	335 DA-A			
date			23.08.2021	23.08.2021	19.08.2021	19.08.2021	29.08.2021	30.08.2021	Average	min.	max.
No.	Name	Rate ml/100 kg seed)									
1	Untreated Check		13,00	11,60	12,293	11,105	11,33	12,70	12,00	11,11	13,00
2	CHR/ZF/PROTI 100 FS	100,00	13,20	11,40	12,998	10,813	11,10	12,80	12,05	10,81	13,20
3	CHR/ZF/PROTI 100 FS	150,00	12,30	11,70	12,688	10,953	10,90	12,93	11,91	10,90	12,93
4	Premis 025 FS	200,00	13,10	11,60	11,788	10,688	11,23	12,75	11,86	10,69	13,10
5	Premis 025 FS	300,00	12,60	11,40	12,495	10,825	11,35	12,80	11,91	10,83	12,80
6	Redigo 100 FS	100,00	12,90	11,70	12,430	10,608	10,80	12,85	11,88	10,61	12,90
7	Redigo 100 FS	150,00	13,20	11,60	12,670	11,085	11,05	13,28	12,15	11,05	13,28
LSD (P=.05)					0,9098	0,6448	0,881	0,37			

table 3.4.3.1-9 The influence of the CHR/ZF/PROTI on quality of yield  
winter rye protein content

crop code			winter rye PROCON - protein content %								
report code			AF/20/ZO/32/ZI/b/05	AF/20/ZO/32/Gr/b/06	24 F/2021	25 F/2021	APK-20-47776-PL05	APK-20-47776-PL06			
BBCH crop			326 DA-A	327 DA-A	340 DA-A	340 DA-A	322 DA-A	333 DA-A			
date			23.08.2021	23.08.2021	06.09.2021	06.09.2021	17.08.2021	29.08.2021	Average	min.	max.
No.	Name	Rate ml/100 kg seed)									
1	Untreated Check		12,40	11,10	8,690	7,438	9,08	12,98	10,28	7,44	12,98
2	CHR/ZF/PROTI 100 FS	100,00	13,00	11,40	8,780	7,543	9,18	12,95	10,48	7,54	13,00
3	CHR/ZF/PROTI 100 FS	150,00	13,20	11,20	8,710	7,500	9,18	12,78	10,43	7,50	13,20
4	Premis 025 FS	200,00	13,70	11,10	9,093	7,453	9,13	12,80	10,55	7,45	13,70
5	Premis 025 FS	300,00	13,00	10,90	9,170	7,468	9,23	12,78	10,42	7,47	13,00
6	Redigo 100 FS	100,00	13,50	11,10	8,810	7,445	8,98	13,00	10,47	7,45	13,50
7	Redigo 100 FS	150,00	13,00	11,00	8,678	7,52	9,13	12,83	10,36	7,52	13,00
LSD (P=.05)					0,5149	0,3738	0,327	0,465			

table 3.4.3.1-10 The influence of the CHR/ZF/PROTI on quality of yield  
winter wheat thousand weight grain

crop code			winter wheat TGW (g)								
report code			AH/20/PO/32/ZI/b/01	AF/20/PO/32/Gr/b/02	20 F/2021	21 F/2021	APK-20-47776-PL01	APK-20-47776-PL02			
BBCH crop			305 DA-A	302 DA-A	334 DA-A	348 DA-A	318 DA-A	320 DA-A			
date			02.08.2021	29.07.2021	25.08.2021	08.09.2021	14.08.2021	17.08.2021	Average	min.	max.
No.	Name	Rate ml/100 kg seed)									
1	Untreated Check		40,91	45,90	39,89	36,47	40,10	37,55	40,14	36,47	45,90
2	CHR/ZF/PROTI 100 FS	100,00	41,64	45,55	39,91	35,90	40,95	38,26	40,37	35,90	45,55
3	CHR/ZF/PROTI 100 FS	150,00	40,425	45,83	39,82	36,88	41,52	39,52	40,67	36,88	45,83
4	Premis 025 FS	200,00	40,62	45,08	39,72	36,58	42,19	39,05	40,54	36,58	45,08
5	Premis 025 FS	300,00	40,665	46,40	40,48	36,24	42,03	39,34	40,86	36,24	46,40
6	Redigo 100 FS	100,00	41,61	46,43	39,92	37,88	41,83	38,51	41,03	37,88	46,43
7	Redigo 100 FS	150,00	41,095	46,50	40,00	38,49	40,82	39,22	41,02	38,49	46,50
LSD (P=.05)			1,859	2,798	1,535	1,981	0,681	1,195			

table 3.4.3.1-11 The influence of the CHR/ZF/PROTI on quality of yield  
winter triticale thousand weight grain

crop code			winter triticale TGW (g)								
report code			AF/20/PszO/32/Zt/b/03	AF/20/PszO/32/Gr/b/04	13 F/2021	14 F/2021	APK-20-47776-PL03	APK-20-47776-PL04			
BBCH crop			306 DA-A	301 DA-A	337 DA-A	339 DA-A	318 DA-A	344 DA-A			
date			03.08.2021	28.07.2021	24.08.2021	26.08.2021	14.08.2021	08.09.2021	Average	min.	max.
No.	Name	Rate ml/100 kg seed)									
1	Untreated Check		29,748	37,18	25,510	36,565	35,15	38,92	33,85	25,51	38,92
2	CHR/ZF/PROTI 100 FS	100,00	28,855	37,13	25,135	36,915	36,07	39,39	33,92	25,14	39,39
3	CHR/ZF/PROTI 100 FS	150,00	29,890	37,10	26,930	37,270	36,36	40,75	34,72	26,93	40,75
4	Premis 025 FS	200,00	29,155	36,93	26,895	37,770	37,21	40,24	34,70	26,90	40,24
5	Premis 025 FS	300,00	30,810	36,53	25,550	36,835	35,81	39,34	34,15	25,55	39,34
6	Redigo 100 FS	100,00	30,940	38,03	26,425	36,765	36,84	40,15	34,86	26,43	40,15
7	Redigo 100 FS	150,00	30,520	36,20	24,725	36,345	36,53	40,20	34,09	24,73	40,20
LSD (P=.05)			2,0028	2,254	1,5504	1,4946	1,175	0,782			

table 3.4.3.1-12 The influence of the CHR/ZF/PROTI on quality of yield  
winter rye thousand weight grain

crop code			winter rye TGW (g)								
report code			AF/20/ZO/32/Zt/b/05	AF/20/ZO/32/Gr/b/06	24 F/2021	25 F/2021	APK-20-47776-PL05	APK-20-47776-PL06			
BBCH crop			306 DA-A	314 DA-A	336 DA-A	342 DA-A	322 DA-A	335 DA-A			
date			03.08.2021	10.08.2021	02.09.2021	08.09.2021	17.08.2021	31.08.2021	Average	min.	max.
No.	Name	Rate ml/100 kg seed)									
1	Untreated Check		27,690	32,80	30,500	31,445	30,38	39,31	32,02	27,69	39,31
2	CHR/ZF/PROTI 100 FS	100,00	28,030	32,60	30,965	32,205	30,88	40,80	32,58	28,03	40,80
3	CHR/ZF/PROTI 100 FS	150,00	26,870	32,35	31,330	31,605	29,93	40,83	32,15	26,87	40,83
4	Premis 025 FS	200,00	28,020	33,63	30,725	32,415	31,20	40,60	32,77	28,02	40,60
5	Premis 025 FS	300,00	28,555	33,43	31,825	31,700	30,00	40,63	32,69	28,56	40,63
6	Redigo 100 FS	100,00	26,275	32,23	31,425	31,545	30,73	40,40	32,10	26,28	40,40
7	Redigo 100 FS	150,00	28,950	33,38	31,965	32,605	30,30	40,04	32,87	28,95	40,04
LSD (P=.05)			2,6404	2,4	2,0979	1,8754	1,769	1,202			

table 3.4.3.1-13 The influence of the CHR/ZF/PROTI on quality of yield  
winter wheat germination energy/ability

Selectivity trials  
winter wheat - germination energy/ability after 4 and 8 days

Crop code			winter wheat germination energy/ability					
study code			20 F/2021	20 F/2021	21 F/2021	21 F/2021	AH/20/PO/32/Zi/b/01	AH/20/PO/32/Zi/b/01
after days			4	8	4	8	4	8
date			23.10.2020	27.10.2020	23.10.2020	27.10.2020	23.08.2021	27.08.2021
No.	Name	rate ml/100 kg seed						
1	Untreated Check		100,00	100,00	75,00	92,50	83,80	93,30
2	CHR/ZF/PROTI 100 FS	100	99,00	100,00	71,50	92,50	93,00	97,00
3	CHR/ZF/PROTI 100 FS	150	96,50	98,00	71,00	91,00	91,50	96,30
4	Premis 025 FS	200	100,00	100,00	70,00	92,50	92,00	96,50
5	Premis 025 FS	300	99,50	99,50	74,50	91,00	91,00	96,50
6	Redigo 100 FS	100	99,50	99,50	80,50	91,00	90,80	96,50
7	Redigo 100 FS	150	99,50	99,50	75,50	91,50	90,00	96,50
LSD P=.05			2,73	1,52	10,33	5,08	2,64	1,99

Selectivity trials  
winter wheat - germination energy/ability after 4 and 8 days

Crop code			winter wheat germination energy/ability					
study code			AF/20/PO/32/Gr/b/02	AF/20/PO/32/Gr/b/02	APK-20-47776-PL01	APK-20-47776-PL01	APK-20-47776-PL02	APK-20-47776-PL02
after days			4	8	4	8	4	8
date			23.08.2021	27.08.2021	04.10.2020	08.10.2020	05.10.2020	09.10.2020
No.	Name	rate ml/100 kg seed						
1	Untreated Check		91,80	94,80	65,80	97,30	71,00	100,00
2	CHR/ZF/PROTI 100 FS	100	89,30	96,80	66,30	98,80	68,00	100,00
3	CHR/ZF/PROTI 100 FS	150	91,00	97,00	64,80	99,30	65,00	98,00
4	Premis 025 FS	200	91,00	98,00	66,80	96,80	69,00	95,00
5	Premis 025 FS	300	89,50	98,00	65,80	98,00	70,00	99,00
6	Redigo 100 FS	100	90,00	98,30	63,50	96,80	68,00	97,00
7	Redigo 100 FS	150	89,50	97,80	66,30	99,00	67,00	98,00
LSD P=.05			2,73	1,31	4,22	2,56	-	-



table 3.4.3.1-14 The influence of the CHR/ZF/PROTI on quality of yield  
winter triticale germination energy/ability

Selectivity trials  
winter triticale - germination energy/ability after 4 and 8 days

Crop code			winter triticale germination energy/ability					
study code			13 F/2021	13 F/2021	14 F/2021	14 F/2021	AF/20/PszO/32/ZI/b/03	AF/20/PszO/32/ZI/b/03
after days			4	8	4	8	4	8
date			19.10.2020	23.10.2020	19.10.2020	23.10.2020	23.08.2021	27.08.2021
No.	Name	rate ml/100 kg seed						
1	Untreated Check		85,50	88,50	89,00	91,50	91,80	94,80
2	CHR/ZF/PROTI 100 FS	100	90,00	92,00	90,00	91,00	89,30	96,80
3	CHR/ZF/PROTI 100 FS	150	88,00	91,00	93,00	95,00	91,00	97,00
4	Premis 025 FS	200	89,50	91,50	92,50	92,50	91,00	98,00
5	Premis 025 FS	300	85,00	88,50	90,50	96,00	89,50	98,00
6	Redigo 100 FS	100	88,00	91,50	92,50	94,00	90,00	98,30
7	Redigo 100 FS	150	89,00	92,00	93,50	94,00	89,50	97,80
LSD P=.05			6,137	6,053	6,024	5,606	2,73	1,31

Selectivity trials  
winter triticale - germination energy/ability after 4 and 8 days

Crop code			winter triticale germination energy/ability					
study code			AF/20/PszO/32/Gr/b/04	AF/20/PszO/32/Gr/b/04	APK-20-47776-PL03	APK-20-47776-PL03	APK-20-47776-PL04	APK-20-47776-PL04
after days			4	8	4	8	4	8
date			23.08.2021	27.08.2021	04.10.2020	08.10.2020	03.10.2020	07.10.2020
No.	Name	rate ml/100 kg seed						
1	Untreated Check		90,30	97,80	65,80	96,80	82,00	99,00
2	CHR/ZF/PROTI 100 FS	100	90,50	97,00	65,80	98,30	74,00	100,00
3	CHR/ZF/PROTI 100 FS	150	91,00	96,50	64,80	98,50	79,00	98,00
4	Premis 025 FS	200	90,30	97,50	64,30	99,30	81,00	100,00
5	Premis 025 FS	300	90,50	96,80	67,00	97,50	69,00	99,00
6	Redigo 100 FS	100	91,00	97,00	65,50	97,00	75,00	97,00
7	Redigo 100 FS	150	91,80	96,80	64,30	99,00	76,00	98,00
LSD P=.05			1,68	1,08	4,29	2,62		

table 3.4.3.1-15 The influence of the CHR/ZF/PROTI on quality of yield  
winter rye germination energy/ability

Selectivity trials  
winter rye - germination energy/ability after 4 and 7 , 8 days

Crop code			winter rye germination energy/ability					
study code			24 F/2021	24 F/2021	25 F/2021	25 F/2021	AF/20/ŽO/32/Zl/b/05	AF/20/ŽO/32/Zl/b/05
after days			4	7	4	7	4	7
date			20.10.2020	23.10.2020	19.10.2020	22.10.2020	23.08.2021	26.08.2021
No.	Name	rate ml/100 kg seed						
1	Untreated Check		94,00	96,00	89,00	90,00	87,00	94,00
2	CHR/ZF/PROTI 100 FS	100	94,00	96,50	90,00	93,00	95,30	97,50
3	CHR/ZF/PROTI 100 FS	150	96,50	98,50	89,00	94,00	96,00	97,80
4	Premis 025 FS	200	93,50	96,00	84,50	89,50	95,00	97,30
5	Premis 025 FS	300	97,00	99,00	89,00	91,50	93,50	96,80
6	Redigo 100 FS	100	96,50	97,50	90,50	93,50	93,30	97,30
7	Redigo 100 FS	150	95,50	96,50	92,00	94,50	93,80	97,30
LSD P=,05			5,571	3,762	7,285	6,353	2,55	1,17

## Selectivity trials

### winter rye - germination energy/ability after 4 and 7 , 8 days

Crop code			winter rye germination energy/ability					
study code			AF/20/ŽO/32/Gr/b/06	AF/20/ŽO/32/Gr/b/06	APK-20-47776-PL05	APK-20-47776-PL05	APK-20-47776-PL06	APK-20-47776-PL06
after days			4	7	4	8	4	8
date			23.08.2021	26.08.2021	03.10.2020	07.10.2020	04.10.2020	08.10.2020
No.	Name	rate ml/100 kg seed						
1	Untreated Check		90,80	95,80	76,50	99,00	67,00	97,50
2	CHR/ZF/PROTI 100 FS	100	89,00	97,30	73,30	99,80	67,00	98,80
3	CHR/ZF/PROTI 100 FS	150	90,30	97,30	74,30	98,50	66,30	97,00
4	Premis 025 FS	200	91,30	97,30	73,00	98,80	68,00	96,80
5	Premis 025 FS	300	88,80	97,30	71,80	98,50	67,30	98,80
6	Redigo 100 FS	100	91,00	97,30	72,30	99,30	64,80	97,30
7	Redigo 100 FS	150	89,30	97,30	72,50	99,30	66,30	98,50
LSD P=05			2,82	1,13	3,41	1,62	4,21	2,48

table 3.4.3.1-16 The influence of the CHR/ZF/PROTI on quality of yield  
winter wheat germination energy/ability

## Selectivity trials

### winter wheat - germination energy/ability after 12 months

Crop code			winter wheat germination energy/ability - after 12 months			
study code			20 F/2021	20 F/2021	21 F/2021	21 F/2021
after days			4	8	4	8
date			11.10.2021	15.10.2021	11.10.2021	15.10.2021
No.	Name	rate ml/100 kg seed				
1	Untreated Check		96,00	98,50	94,00	97,50
2	CHR/ZF/PROTI 100 FS	100	96,00	100,00	96,00	98,00
3	CHR/ZF/PROTI 100 FS	150	97,00	100,00	96,50	98,50
4	Premis 025 FS	200	97,00	99,50	96,50	99,00
5	Premis 025 FS	300	96,50	99,50	95,50	98,00
6	Redigo 100 FS	100	97,00	99,00	95,50	98,00
7	Redigo 100 FS	150	97,00	99,50	94,00	97,50
LSD P=05			3,913	1,350	2,292	1,184

table 3.4.3.1-17 The influence of the CHR/ZF/PROTI on quality of yield  
winter triticale germination energy/ability

Selectivity trials

winter triticale - germination energy/ability after 12 months

Crop code			winter triticale germination energy/ability - after 12 months			
study code			13 F/2021	13 F/2021	14 F/2021	14 F/2021
after days			4	8	4	8
date			08.10.2021	12.10.2021	11.10.2021	15.10.2021
No.	Name	rate ml/100 kg seed				
1	Untreated Check		89,00	91,00	89,00	90,00
2	CHR/ZF/PROTI 100 FS	100	83,00	86,00	95,50	96,00
3	CHR/ZF/PROTI 100 FS	150	82,50	85,50	95,50	97,50
4	Premis 025 FS	200	84,50	87,00	88,50	89,00
5	Premis 025 FS	300	84,50	89,00	87,50	94,00
6	Redigo 100 FS	100	87,00	89,50	93,50	94,00
7	Redigo 100 FS	150	85,00	89,50	89,00	95,00
LSD P=.05			9,249	8,755	7,697	6,593

table 3.4.3.1-18 The influence of the CHR/ZF/PROTI on quality of yield  
winter rye germination energy/ability

Selectivity trials

winter rye - germination energy/ability after 12 months

Crop code			winter rye germination energy/ability - after 12 months			
study code			24 F/2021	24 F/2021	25 F/2021	25 F/2021
after days			4	7	4	7
date			08.10.2021	11.10.2021	08.10.2021	11.10.2021
No.	Name	rate ml/100 kg seed				
1	Untreated Check		97,00	97,00	94,00	94,50
2	CHR/ZF/PROTI 100 FS	100	93,50	96,50	95,00	95,50
3	CHR/ZF/PROTI 100 FS	150	93,50	96,00	94,50	96,00
4	Premis 025 FS	200	88,50	95,00	92,50	94,00
5	Premis 025 FS	300	94,50	96,50	93,00	94,00
6	Redigo 100 FS	100	92,50	94,50	93,50	95,50
7	Redigo 100 FS	150	94,00	97,50	94,50	95,50
LSD P=.05			6,519	4,218	3,743	3,431

table 3.4.3.1-19 The influence of the CHR/ZF/PROTI on quality of yield  
winter wheat germination energy/ability

Efficacy trials  
winter wheat - germination energy/ability after 4, 8 days

Crop code			winter wheat germination energy/ability							
study code			APK-20-47775-PL01	APK-20-47775-PL01	APK-20-47775-PL02	APK-20-47775-PL02	APK-20-47775-PL03	APK-20-47775-PL03	APK-20-47891-PL01	APK-20-47891-PL01
after days			4	8	4	8	4	8	4	8
date			03.10.2020	07.10.2020	04.10.2020	08.10.2020	03.10.2020	07.10.2020	04.10.2020	08.10.2020
No.	Name	rate ml/100 kg seed								
1	Untreated Check		63,30	97,80	64,30	99,30	66,00	99,50	73,80	99,30
2	CHR/ZF/PROTI 100 FS	60	64,00	97,00	64,50	97,30	64,50	98,00	73,30	97,30
3	CHR/ZF/PROTI 100 FS	80	65,80	97,50	64,50	96,30	64,80	96,50	75,50	98,30
4	CHR/ZF/PROTI 100 FS	100	65,30	96,80	63,50	97,00	64,00	97,50	72,30	95,50
5	Premis 025 FS	200	61,80	96,30	63,80	96,80	65,30	96,80	75,50	96,50
6	Redigo 100 FS	100	64,00	97,80	63,50	98,30	66,80	99,00	75,00	97,30
LSD P=.05			3,18	2,26	3,95	1,57	3,25	2,28	4,57	2,08

Efficacy trials  
winter wheat - germination energy/ability after 4, 8 days

Crop code			winter wheat germination energy/ability							
study code			APK-20-47891-PL02	APK-20-47891-PL02	APK-20-47891-PL03	APK-20-47891-PL03	AF/20/PO/32/Br/01	AF/20/PO/32/Br/01	AF/20/PO/32/Pr/02	AF/20/PO/32/Pr/02
after days			4	8	4	8	4	8	4	8
date			05.10.2020	09.10.2020	03.10.2020	07.10.2020	02.08.2021	06.08.2021	04.08.2021	08.08.2021
No.	Name	rate ml/100 kg seed								
1	Untreated Check		67,00	100,00	66,00	99,50	59,80	98,80	74,00	99,40
2	CHR/ZF/PROTI 100 FS	60	65,00	95,00	64,50	98,00	58,50	98,50	74,30	99,90
3	CHR/ZF/PROTI 100 FS	80	69,00	94,00	64,80	96,50	59,80	98,30	73,50	99,90
4	CHR/ZF/PROTI 100 FS	100	71,00	98,00	64,00	97,50	59,00	98,00	71,80	98,90
5	Premis 025 FS	200	68,00	100,00	65,30	96,80	60,80	97,80	73,00	99,90
6	Redigo 100 FS	100	73,00	100,00	66,80	99,00	58,80	98,50	72,30	99,90
LSD P=.05					3,25	2,28	7,37	2,48	5,12	1,07-1,4

## Efficacy trials

### winter wheat - germination energy/ability after 4, 8 days

Crop code			winter wheat germination energy/ability					
study code			AF/20/PO/32/Gr/03	AF/20/PO/32/Gr/03	AF/20/PO/32/ZI/04	AF/20/PO/32/ZI/04	AF/20/PO/32/Br/05	AF/20/PO/32/Br/05
after days			4	8	4	8	4	8
date			02.08.2021	02.06.2021	04.08.2021	08.08.2021	10.08.2021	14.08.2021
No.	Name	rate ml/100 kg seed						
1	Untreated Check		69,50	97,80	47,50	95,80	61,30	98,30
2	CHR/ZF/PROTI 100 FS	60	68,80	98,50	49,80	97,80	62,30	99,00
3	CHR/ZF/PROTI 100 FS	80	69,00	98,00	45,80	96,50	61,30	96,50
4	CHR/ZF/PROTI 100 FS	100	67,00	97,50	51,30	97,50	61,00	97,00
5	Premis 025 FS	200	66,80	97,30	48,00	96,50	61,50	98,50
6	Redigo 100 FS	100	67,50	98,80	45,00	96,00	62,30	97,50
LSD P=,05			3,98	1,39	4,87	1,86	4,54	2,02

table 3.4.3.1-20 The influence of the CHR/ZF/PROTI on quality of yield  
winter tritcale germination energy/ability

## Efficacy trials

### winter tritcale - germination energy/ability after 4, 7 or 8 days

Crop code			winter tritcale germination energy/ability							
study code			APK-20-47891-PL04	APK-20-47891-PL04	APK-20-47891-PL05	APK-20-47891-PL05	APK-20-47891-PL06	APK-20-47891-PL06	AF/20/PszO/32/Pr/06	AF/20/PszO/32/Pr/06
after days			4	8	4	8	4	8	4	8
date			03.10.2020	07.10.2020	04.10.2020	08.10.2020	03.10.2020	07.10.2020	17.08.2021	21.08.2021
No.	Name	rate ml/100 kg seed								
1	Untreated Check		63,30	97,50	70,80	98,50	79,00	100,00	54,50	97,00
2	CHR/ZF/PROTI 100 FS	60	65,00	99,50	67,80	99,30	78,00	98,00	55,00	96,80
3	CHR/ZF/PROTI 100 FS	80	65,00	97,50	70,30	98,30	71,00	95,00	55,80	96,50
4	CHR/ZF/PROTI 100 FS	100	65,50	98,50	68,80	99,30	69,00	98,00	54,30	96,30
5	Premis 025 FS	200	64,80	97,00	67,50	98,50	68,00	95,00	54,80	95,50
6	Redigo 100 FS	100	65,80	99,00	68,50	98,80	69,00	100,00	53,50	95,30
LSD P=,05			2,85	2,93	5,52	2,36			4,52	1,86

table 3.4.3.1-21 The influence of the CHR/ZF/PROTI on quality of yield  
winter rye germination energy/ability

Efficacy trials

winter rye - germination energy/ability after 4, 7 or 8 days

Crop code			winter rye germination energy/ability						
study code			APK-20-47891-PL07	APK-20-47891-PL07	APK-20-47891-PL08	APK-20-47891-PL08	APK-20-47891-PL09	APK-20-47891-PL09	AF/20/ŽO/32/Br/07
after days			4	8	4	8	4	8	4
date			03.10.2020	07.10.2020	03.10.2020	07.10.2020	04.10.2020	08.10.2020	13.08.2021
No.	Name	rate ml/100 kg seed							
1	Untreated Check		72,30	97,50	74,80	99,80	70,80	97,80	57,80
2	CHR/ZF/PROTI 100 FS	60	70,50	98,00	68,80	99,50	70,50	97,80	59,00
3	CHR/ZF/PROTI 100 FS	80	68,80	98,00	69,00	99,50	69,80	99,50	57,00
4	CHR/ZF/PROTI 100 FS	100	70,30	98,50	69,00	99,00	70,50	98,50	58,30
5	Premis 025 FS	200	69,80	97,30	70,00	98,30	73,50	98,50	59,00
6	Redigo 100 FS	100	70,80	97,00	68,80	99,00	72,00	98,00	58,30
LSD P=.05			4,21	2,79	4,02-4,1	1,61	4,00	2,15	5,04

Efficacy trials

winter rye - germination energy/ability after 4, 7 or 8 days

Crop code			winter rye germination energy/ability						
study code			AF/20/ŽO/32/Br/07	AF/20/ŽO/32/Pr/08	AF/20/ŽO/32/Pr/08	AF/20/ŽO/32/Gr/09	AF/20/ŽO/32/Gr/09	AF/20/ŽO/32/Zl/10	AF/20/ŽO/32/Zl/10
after days			7	4	7	4	7	4	7
date			16.08.2021	13.08.2021	16.08.2021	12.08.2021	15.08.2021	11.08.2021	14.08.2021
No.	Name	rate ml/100 kg seed							
1	Untreated Check		99,30	64,00	100,00	65,00	98,80	56,00	98,50
2	CHR/ZF/PROTI 100 FS	60	98,80	64,30	99,00	63,30	98,00	53,30	97,80
3	CHR/ZF/PROTI 100 FS	80	98,80	61,50	99,50	61,80	98,80	54,50	98,30
4	CHR/ZF/PROTI 100 FS	100	98,80	62,30	99,30	64,00	98,30	57,50	97,50
5	Premis 025 FS	200	97,80	61,00	99,00	64,00	99,50	54,80	99,30
6	Redigo 100 FS	100	98,30	63,00	98,80	63,50	98,50	55,30	98,50
LSD P=.05			1,54	5,53	1,23	4,35	1,09	6,51	1,86

Comments of zRMS:	The lack of negative impact on the TGW, HLW = weight 100 Ltr (hl), moisture content, protein content and emergence and germination (both shortly after the seed dressing and after a 12-month storage period) confirms that the product CHR/ZF/PROTI 100 FS (Gamelan 100 FS/ Doraltes 100 FS) is safe for winter cereals.
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#### 3.4.4 Effects on transformation processes (KCP 6.4.4)

Fungicides are usually considered with regards to their potential effect on transformation processes if applied close to harvest EPPO PP 1/243 (1) Effects of plant protection products on transformation processes. The residue data Part B, Section 7 demonstrate that at the proposed application rates of CHR/ZF/PROTI residues above the LOQ are found in winter cereals.

According to Commission Regulation (EU) No 284/2013 the study is required while using fungicide close to the harvest, when occurrence of adverse effect on yeast or lactic bacteria is possible.

The product CHR/ZF/PROTI is applied as a fungicide seed treatment at the BBCH 00 ( long time to the harvest) therefore not expected that the active substance are transferred to the grains.

#### 3.4.5 Impact on treated plants or plant products to be used for propagation (KCP 6.4.5)

There is no information available pointing to presence of any limitations to using of approved prothioconazole in crops of winter cereals.

In the course of studies carried out in Poland in the season of 2020/2021 on product CHR/ZF/PROTI the seed treatment has not been observed to have any significant influence on yield, grain density, 1000 grains weight, protein content and emergence. Except the fact of influence of seed treatment for all rates in comparison to untreated check. What is more, there have been no phytotoxicity symptoms accounted for in various cultivars of winter cereals.

The seed treatments products used in the trial had no adverse effect on germination parameters (both shortly after the mortar and after a 12-month storage period). The product may be used in crops of winter cereals.

Comments of zRMS:	<p>The Applicant did not submit additional studies aimed at transformation processes and determining the impact on treated plants or plant products to be used for propagation.</p> <p>Considering that the selectivity studies showed no negative effects on winter cereals plants and the fact that prothioconazole is a known active substance, it can be concluded that CHR/ZF/PROTI 100 FS (Gamelan 100 FS/ Doraltes 100 FS) has no negative effect on parts of plants used for transformation processes and propagating purposes.</p>
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#### Summary and conclusion

This document summarises the information related to the efficacy of the plant protection product CHR/ZF/PROTI. The formulation of this product is a flowable concentrate for seed treatment (FS) and it comprises active prothioconazole (100 g/l). CHR/ZF/PROTI is a seed treatment in winter cereals.

The active substance prothioconazole is included in the Annex I of Directive 91/414 (now: Commission Implementing Regulation (EU) No 540/2011 of 25 May 2011) by Commission Directive 2006/64/CE of 18 July 2006 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards the list of approved active substances.



The active substance prothioconazole which was included into Annex I of Directive 91/414 by Commission Directive 2008/69/EC of 1st July 2008

This documents summarises 56 57 (in total) showing the results in research into product efficacy carried out in 2020/21 in winter wheat (18 field trials, 6 laboratory trials), winter triticale ( 6 field trials, 6 laboratory trials), winter rye ( 15 field trials, 6 laboratory trials) and 18 reports showing the results in research into product selectivity carried out in 2020/21 in winter wheat (6 field trials ), winter triticale ( 6 field trials), winter rye ( 6 field trials ), (list of these reports is contained in Appendix 1). All efficacy trials were designed, conducted and reported according to the following EPPO guidelines: PP 1/135 (4) Phytotoxicity assessment, PP 1/152 (4) Design and analysis of efficacy evaluation trials and PP 1/181 (4). Conduct and reporting of efficacy evaluation trials including good experimental practice and PP 1/19(4) Seed-borne cereal fungi.

Details of agricultural measures, fertilization, and other plant protection products applied during the experiments are included in detailed field study reports listed above.

On the basis of submitted research the seed treatment CHR/ZF/PROTI was effectively against of pathogens. The efficacy of the tested seed treatment was higher or comparable to the standard product

The obtained data in performed trials show that CHR/ZF/PROTI provides benefits against the most important fungal in winter cereals as shown in the table below:

≥ 80%	E- Effective
60-80 %	M- Medium sensitive
40-60 %	R - Reduction of diseases

## winter wheat – field trials

Product dose ml/100 kg	EPPO code	Scientific name	DA-A	Pest stage	Average	Efficacy
CHR/ZF/PROTI 100 FS 60 ml/100 kg	FUSASP	<i>Fusarium sp. summary ( autumn and spring)</i>	16, 49, 52, 169, 181, 183	PRINFC 100, MIXED	42,67	L
	FUSASP	<i>Fusarium sp. autumn assessment</i>	16, 49, 52	PRINFC 100, MIXED	25,37	L
	FUSASP	<i>Fusarium sp. spring assessment</i>	169, 181, 183	PRINFC 100, MIXED	59,97	L
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	153, 169, 181, 183, 188	PRINFC 100, MIXED	57,92	L
	TILLCA	<i>Tilletia caries</i>	247, 251, 281, 284, 293, 302	PRINFC 100, MIXED	89,99	E
	USTINT	<i>Ustilago tritici</i>	266	MIXED	94,70	E
CHR/ZF/PROTI 100 FS 80 ml/100 kg	FUSASP	<i>Fusarium sp. summary ( autumn and spring)</i>	16, 49, 52, 169, 181, 183	PRINFC 100, MIXED	61,35	ME
	FUSASP	<i>Fusarium sp. autumn assessment</i>	16, 49, 52	PRINFC 100, MIXED	50,40	L
	FUSASP	<i>Fusarium sp. spring assessment</i>	169, 181, 183	PRINFC 100, MIXED	72,30	ME
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	153, 169, 181, 183, 188	PRINFC 100, MIXED	76,13	ME
	TILLCA	<i>Tilletia caries</i>	247, 251, 281, 284, 293, 302	PRINFC 100, MIXED	96,36	E
	USTINT	<i>Ustilago tritici</i>	266	MIXED	100,00	E
CHR/ZF/PROTI 100 FS 100 ml/100 kg	FUSASP	<i>Fusarium sp. summary ( autumn and spring)</i>	16, 49, 52, 169, 181, 183	PRINFC 100, MIXED	73,28	ME
	FUSASP	<i>Fusarium sp. autumn assessment</i>	16, 49, 52	PRINFC 100, MIXED	67,00	ME
	FUSASP	<i>Fusarium sp. spring assessment</i>	169, 181, 183	PRINFC 100, MIXED	79,57	ME
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	153, 169, 181, 183, 188	PRINFC 100, MIXED	83,35	E
	TILLCA	<i>Tilletia caries</i>	247, 251, 281, 284, 293, 302	PRINFC 100, MIXED	100,00	E
	USTINT	<i>Ustilago tritici</i>	266	MIXED	100,00	E

## winter wheat – laboratory trials

Product dose ml/100 kg	EPPO code	Scientific name	DA-A	Pest stage	Average	Efficacy
CHR/ZF/PROTI 100 FS 60 ml/100 kg	FUSASP	<i>Fusarium sp.</i>	8, 18	FUSASP D	42,83	L
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	8, 16	MONGNI D	26,22	L
CHR/ZF/PROTI 100 FS 80 ml/100 kg	FUSASP	<i>Fusarium sp.</i>	8, 18	FUSASP D	62,05	ME
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	8, 16	MONGNI D	41,88	L
CHR/ZF/PROTI 100 FS 100 ml/100 kg	FUSASP	<i>Fusarium sp.</i>	8, 18	FUSASP D	72,77	ME
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	8, 16	MONGNI D	65,97	ME
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	8, 16	MONGNI D	53,50	L

### winter triticale – field trials

Product dose ml/100 kg	EPPO code	Scientific name	DA-A	Pest stage	Average	Efficacy
CHR/ZF/PROTI 100 FS 60 ml/100 kg	FUSASP	<i>Fusarium sp. summary (autumn and spring)</i>	20, 29, 49, 175, 183, 184	MIXED	38,02	L
	FUSASP	<i>Fusarium sp. autumn assessment</i>	20, 29, 49	MIXED	30,60	L
	FUSASP	<i>Fusarium sp. spring assessment</i>	175, 183, 184	MIXED	45,43	L
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	157, 183, 184	MIXED	49,85	L
CHR/ZF/PROTI 100 FS 80 ml/100 kg	FUSASP	<i>Fusarium sp. summary (autumn and spring)</i>	20, 29, 49, 175, 183, 184	MIXED	63,85	ME
	FUSASP	<i>Fusarium sp. autumn assessment</i>	20, 29, 49	MIXED	63,77	ME
	FUSASP	<i>Fusarium sp. spring assessment</i>	175, 183, 184	MIXED	63,93	ME
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	157, 183, 184	MIXED	73,15	ME
CHR/ZF/PROTI 100 FS 100 ml/100 kg	FUSASP	<i>Fusarium sp. summary (autumn and spring)</i>	20, 29, 49, 175, 183, 184	MIXED	79,87	ME
	FUSASP	<i>Fusarium sp. autumn assessment</i>	20, 29, 49	MIXED	80,07	E
	FUSASP	<i>Fusarium sp. spring assessment</i>	175, 183, 184	MIXED	79,67	ME
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	157, 183, 184	MIXED	85,55	E

### winter triticale – laboratory trials

Product dose ml/100 kg	EPPO code	Scientific name	DA-A	Pest stage	Average	Efficacy
CHR/ZF/PROTI 100 FS 60 ml/100 kg	FUSASP	<i>Fusarium sp.</i>	9, 21	FUSASP D	52,05	L
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	7, 15	MONGNI D	35,85	L
CHR/ZF/PROTI 100 FS 80 ml/100 kg	FUSASP	<i>Fusarium sp.</i>	9, 21	FUSASP D	64,17	ME
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	7, 15	MONGNI D	73,25	ME
CHR/ZF/PROTI 100 FS 100 ml/100 kg	FUSASP	<i>Fusarium sp.</i>	9, 21	FUSASP D	75,27	ME
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	7, 15	MONGNI D	81,75	E

## winter rye – field trials

Product dose ml/100 kg	EPPO code	Scientific name	DA-A	Pest stage	Average	Efficacy
CHR/ZF/PROTI 100 FS 60 ml/100 kg	FUSASP	<i>Fusarium sp.</i>	35, 39, 167, 182, 184	MIXED, PRINFC 100	50,78	L
	FUSASP	<i>Fusarium sp. autumn assessment</i>	35, 39	MIXED	64,13	ME
	FUSASP	<i>Fusarium sp. spring assessment</i>	167, 182, 184	PRINFC 100	37,43	L
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	147, 167, 182, 184	MIXED, PRINFC 100	61,15	ME
	UROCOC	<i>Urocystis occulta</i>	251, 254, 257	MIXED, PRINFC 100	94,90	E
CHR/ZF/PROTI 100 FS 80 ml/100 kg	FUSASP	<i>Fusarium sp.</i>	35, 39, 167, 182, 184	MIXED, PRINFC 100	71,40	ME
	FUSASP	<i>Fusarium sp. autumn assessment</i>	35, 39	MIXED	90,13	E
	FUSASP	<i>Fusarium sp. spring assessment</i>	167, 182, 184	PRINFC 100	52,67	L
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	147, 167, 182, 184	MIXED, PRINFC 100	86,32	E
	UROCOC	<i>Urocystis occulta</i>	251, 254, 257	MIXED, PRINFC 100	99,00	E
CHR/ZF/PROTI 100 FS 100 ml/100 kg	FUSASP	<i>Fusarium sp.</i>	35, 39, 167, 182, 184	MIXED, PRINFC 100	79,72	ME
	FUSASP	<i>Fusarium sp. autumn assessment</i>	35, 39	MIXED	95,50	E
	FUSASP	<i>Fusarium sp. spring assessment</i>	167, 182, 184	PRINFC 100	63,93	ME
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	147, 167, 182, 184	MIXED, PRINFC 100	92,75	E
	UROCOC	<i>Urocystis occulta</i>	251, 254, 257	MIXED, PRINFC 100	100,00	E

## winter rye – laboratory trials

Product dose ml/100 kg	EPPO code	Scientific name	DA-A	Pest stage	Average	Efficacy
CHR/ZF/PROTI 100 FS 60 ml/100 kg	FUSASP	<i>Fusarium sp.</i>	8,18	FUSASP D	44,32	L
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	8,16	MONGNI D	53,60	L
CHR/ZF/PROTI 100 FS 80 ml/100 kg	FUSASP	<i>Fusarium sp.</i>	8,18	FUSASP D	62,52	ME
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	8,16	MONGNI D	71,38	ME
CHR/ZF/PROTI 100 FS 100 ml/100 kg	FUSASP	<i>Fusarium sp.</i>	8,18	FUSASP D	81,97	E
	MONGNI	<i>Monographella nivalis (anam. Microdochium nivale)</i>	8,16	MONGNI D	75,53	ME

## Conclusions on the biological efficacy

The seed treatment CHR/ZF/PROTI has demonstrated excellent crop tolerance to cereals. Therefore concluded that CHR/ZF/PROTI is safe usage at proposed rate and this support the label claim for the field use in: winter wheat, winter triticale and winter rye.

Undesirable effects are not expected on succeeding crops, adjacent crop, part of plants used for propagating purposes and beneficial organisms.

According to the above, the plant protection product CHR/ZF/PROTI can be approved to the market and use in Poland, Czech Republic according to proposed range of use – GAP (Appendix -2)

Based on submitted data the following regulation on the label for field use is proposed in Poland and Czech Republic:

### Winter wheat, winter triticale and winter rye:

Recommended dose:

**Seed treatment 100 ml/100 kg seed**

**Undiluted Water: 700 ml/ 100 kg seed**

Comments of zRMS:	<p>The CHR/ZF/PROTI 100 FS is effective in controlling a <i>Fusarium spp.</i>: in winter wheat 73%(72 % lab.) and triticale 79% (75% lab.)- medium level of control and rye 79% (81% lab.)-effective control, <i>Mysphaerella nivale</i>/Microdochium nivale in winter wheat 83%, triticale 85%, rye 92%- effective control, <i>Tilletia caries</i> in winter wheat 100% and <i>Urocistis occulta</i> in rye 100 % full effective control. <i>Ustilago tritici</i> (3 trials)100% full effective control. The presented number of studies for <i>Ustilago tritici</i> does not meet the registration requirements in Poland. It may be conditionally present on the label until the number of tests is completed.</p> <p>The results of the field experiments were confirmed by the results of laboratory experiments. The test product performed at a similar level of efficacy as the reference products. The data obtained in the experiments confirm the proposed uses.</p> <p>The effectiveness of the studied product obtained in the experiments confirms the correctness of the information in the label. The Applicant has presented in the label appropriate elements of the anti-immune policy. CHR/ZF/PROTI 100 FS shows high selectivity towards cereals. No adverse plant symptoms or negative effects of the tested seed treatment on cereal yield were observed. The data obtained in the experiments confirm these features. Currently, there is no risk of pathogens resistance to prothioconazole, but with such frequent use this phenomenon may occur (Tab.3). Adequate policy should be followed and prothioconazole should not be applied more than twice per season on one crop e.g. seed treatment and one foliar(ear) application.</p> <p><b>The results obtained in the experiments justify the needed for registration of the studied agent for pathogens control in winter cereals in Poland. The data provided in dRR confirm the above applications and authorize the registration of CHR/ZF/PROTI 100 FS in Poland.</b></p>
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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)

In the field study, symptoms of phytotoxicity to cultivated plants were not observed. Therefore, according to EPPO PP 1/207 no separate studies have been carried out concerning the influence of product CHR/ZF/PROTI on succeeding plants. The owner of the product CHR/ZF/PROTI and of its registration documentation is referring to available sources in literature treating on fungicide prothioconazole.

Prothioconazole has a short half-life (2.8 Days) in soil. Glasshouse screening studies indicate a low potential for damage from pre-emergence use and therefore it is considered that adverse effects to succeeding crops from unlikely to occur. Consideration was also given of the possibility of the metabolite prothioconazole-desthio causing phytotoxic effects to following crops. In glasshouse screening studies the metabolite would have been present within a 21-day period at high levels and therefore be a severe test as in practice a longer period would elapse between treatment and sowing a following crop. Therefore, no waiting period is required and there is no restriction on the choice of succeeding crops.

*Prothioconazole\_DAR\_03\_Vol 3\_B1-5\_public.pdf*

According to EFSA Scientific Report (2007) 106, 1-98, no significant residues were found in both cereal and rapeseed crops in the northern and southern regions. Using foliar prothioconazole, the residues in wheat and

barley grains were below the LOQ of 0.01 mg/kg. In straw the residues were in the range 0.08 mg/kg to 1.1 mg/kg. In rape, the residues in the seeds were in the range from below LOQ 0.01 mg/kg to 0.02 mg/kg. In the straw, the highest residual value was 0.20 mg/kg. For the prothioconazole-desthio metabolite, the values for cereals were in the range below the LOQ of 0,85 mg/kg.

In succeeding crops, the residue pattern is similar to that observed in primary crops. The residue definitions proposed for primary crops are evenly valid. Under the experimental conditions of the submitted confined rotational crop study, residues of prothioconazole-desthio were present in edible part of Swiss chard and turnip at the level of 0.01 mg/kg, when these plants were sowed 28 and 146 days after application of the highest possible annual dose of prothioconazole on bare soil. The total amount of all metabolites containing the prothioconazole-desthio common structural moiety was around 0.03 mg/kg for the same time intervals. Therefore, under practical conditions of use of prothioconazole according to the representative uses and considering that a fraction of the applied rate is intercepted by the cereal crop, no residue of any metabolite above 0.01 mg/kg is expected in rotational crops and no plant back restriction needs to be proposed. No information is available as far as the uptake of triazole derivative metabolites by rotational crops is concerned, given that no study was conducted with radiolabelling in the triazole ring.  
*EFSA Scientific Report (2007) 106, 1-98*

Considering available data dealing with nature of residue, no study regarding magnitude of residues in succeeding crops is needed.

**Table 3.5-1: Waiting periods before planting succeeding crops**

Waiting period before planting succeeding crops		Overall waiting period proposed by zRMS for CHR/ZF/PROTI
Crop group	Led by prothioconazole	
Leafy vegetables	Not relevant for seed treatment	Not relevant for seed treatment
Root and tuber vegetables	Not relevant for seed treatment	Not relevant for seed treatment
Cereals	Not relevant for seed treatment	Not relevant for seed treatment

Comments of zRMS:	It is well known that prothioconazole is rapidly degraded in the soil and therefore the fungicide seed treatment CHR/ZF/PROTI 100 FS (Gamelan 100 FS/ Doraltes 100 FS) does not pose a risk to succeeding crops.
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**Table 3.5-2: PEC-values and TER-calculation of test product CHR/ZF/PROTI (active substance) based on EC10-values.**

Not applicable for seed treatment.

**Table 3.5-3: Results of field trials: Effects of test product CHR/ZF/PROTI on succeeding crops.**

Not applicable for seed treatment.

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

As was written in COMMISSION REGULATION (EU) No 284/2013 of 1 March 2013: Data are not required, where exposure is negligible, for example in the case of rodenticides, active substances used for wound protection or seed treatment, or in the case of active substances used on stored products or in glass-houses where exposure is precluded.

The formulation CHR/ZF/PROTI is a fungicide seed treatment, the risk to non-target terrestrial plants is negligible and no risk mitigation is needed,

Comments of zRMS:	Due to the fact that CHR/ZF/PROTI 100 FS (Gamelan 100 FS / Doraltes 100 FS) is a fungicide seed treatment and prothioconazole is rapidly degraded in the soil, it can be assumed that this product has no effect on other plants including adjacent crops.
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#### Tank cleaning

Immediately after use, clean the equipment thoroughly. Drain the system completely and rinse mixing tank two to three times with clean water.

No standard method is agreed at present and no standard method will be agreed due to the fact that the procedures for a measurement of the effectiveness is dependent from type of seed treatment application equipment.

The remains of the suspension with water which were used for cleaning the seed treatment equipment should be proceed in a way that minimizes the risk of contamination of surface and groundwater:

- The remains should be used during preparing next seed treatment,
- The remains should be degraded using a technical solution to ensure the biological degradation of the active substances of plant protection products, or
- The remains should be degraded in other ways, in accordance with the provisions on waste

Seed treatment equipment should be accurately cleaned and wash according to the instructions of given CHR/ZF/PROTI is non-corrosive to equipment, non-flammable and non-volatile.

Cleaning effectiveness was studied and results of these studies are described in section B1. The active substances in CHR/ZF/PROTI be effectively removed from seed treatment equipment by rinsing with water.

Comments of zRMS:	The information regarding the tank cleaning contained in registration report and in the label is quite sufficient.
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### 3.5.3 Effects on beneficial and other non-target organisms (KCP 6.5.3)

Detailed studies on the possible adverse effects to beneficial organisms are submitted and summarised in Part B, Section 9 (Ecotoxicology).

#### Compatibility with current management practices including IPM

Not applicable

#### Summary and conclusion

Not applicable

### 3.6 Other/special studies

Not performed

### 3.7 List of test facilities including the corresponding certificates

**Table 3.7-1: List of test facilities**

Test facility	Address	Certificate (Yes or No)
Staphyt Sp. z o.o.	ul. Poznańska 62/53, 60-853 Poznań, Poland	Yes
Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department	ul. Gliwicka 29, 44-153 Sońnicowice, Poland	Yes
Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department	ul. Wojska Polskiego 28, 60-637 Poznań, Poland	Yes



## Appendix 1 Lists of data considered in support of the evaluation

### List of data submitted by the applicant and relied on

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Verte- brate study Y/N	Owner
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Beata Szymańska	2021	Study of herbicide phytotoxicity CHR/ZF/PROTI 100 FS in cereal winter.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AH/20/PO/32/ZI/b/01 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Beata Szymańska	2021	Study of selectivity CHR/ZF/PROTI 100 FS in cereal winter.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/PO/32/Gr/b/02 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Patrycja Płonka	2021	Biological expertise of selectivity of seed treat- ment CHR/ZF/PROTI (100 FS) in winter wheat.  Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sońnicowice Poland  Report no.: 20 F/2021 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Patrycja Płonka	2021	Biological expertise of selectivity of seed treat- ment CHR/ZF/PROTI (100 FS) in winter wheat.  Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sońnicowice Poland  Report no.: 20 F/2021 - annex GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Patrycja Płonka	2021	Biological expertise of selectivity of seed treat- ment CHR/ZF/PROTI (100 FS) in winter wheat.  Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sońnicowice Poland  Report no.: 21 F/2021 GEP - yes Unpublished	N	Chemirol

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Veri- brate study Y/N	Owner
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Patrycja Płonka	2021	Biological expertise of selectivity of seed treat- ment CHR/ZF/PROTI (100 FS) in winter wheat.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 21 F/2021 - annex GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejew- ski	2021	The selectivity of CHR/ZF/PROTI 100 FS in winter cereals.  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47776-PL01 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejewski	2021	The selectivity of CHR/ZF/PROTI 100 FS in winter cereals.  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47776-PL02 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter wheat cultivation-laboratory experimental.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agron- omy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/PO/32/Pn/01 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter wheat cultivation-laboratory experimental.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agron- omy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/PO/32/Pn/02 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter wheat cultivation-laboratory experimental.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agron-	N	Chemiroł

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Veri- brate study Y/N	Owner
			omy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/PO/32/Pn/03 GEP - yes Unpublished		
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter wheat cultivation-laboratory experimental.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agron- omy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/PO/32/Pn/04 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter wheat cultivation-laboratory experimental.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agron- omy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/PO/32/Pn/05 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter wheat cultivation-laboratory experimental.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agron- omy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/PO/32/Pn/06 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Barbara Krzyż- ińska	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for <i>Ustilago tritici</i> in winter wheat.  Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sońnicowice Poland  Report no.: 8 F/2021 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2	Barbara Krzyż- ińska	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for <i>Ustilago tritici</i> in winter wheat.  Institute of Plant Protection - National Research	N	Chemiroł

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Veri- brate study Y/N	Owner
KCP 6.4.3			Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 9 F/2021 GEP - yes Unpublished		
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Barbara Krzy- żńska	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for <i>Ustilago tritici</i> in winter wheat.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 10 F/2021 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Szymura	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for <i>Fusarium</i> spp. and <i>Monographella nivalis</i> (anam. <i>Microdochium</i> <i>nivale</i> ) in winter wheat.).  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 11 F/2021 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Szymura	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for <i>Fusarium</i> spp. and <i>Monographella nivalis</i> (anam. <i>Microdochium</i> <i>nivale</i> ) in winter wheat..  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 12 F/2021 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Patrycja Płonka	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for <i>Tilletia caries</i> in winter wheat.).  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 22 F/2021 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2	Patrycja Płonka	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for <i>Tilletia caries</i> in	N	Chemirol

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Veri- brate study Y/N	Owner
KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3			winter wheat.).  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 23 F/2021 GEP - yes Unpublished		
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejewski	2021	The biological efficacy and selectivity of CHR/ZF/PROTI 100 FS in the fight against <i>Tilletia tritici</i> .  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47775-PL01 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejewski	2021	The biological efficacy and selectivity of CHR/ZF/PROTI 100 FS in the fight against <i>Tilletia tritici</i> .  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47775-PL02 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejewski	2021	The biological efficacy and selectivity of CHR/ZF/PROTI 100 FS in the fight against <i>Tilletia tritici</i> .  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47775-PL03 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejewski	2021	The biological efficacy and selectivity of CHR/ZF/PROTI 100 FS in the control of Foot rot of cereals and <i>Fusarium</i> sp.  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47891-PL01 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejewski	2021	The biological efficacy and selectivity of CHR/ZF/PROTI 100 FS in the control of Foot rot of cereals and <i>Fusarium</i> sp.  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47891-PL02	N	Chemirol

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Veri- brate study Y/N	Owner
			GEP - yes Unpublished		
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejewski	2021	The biological efficacy and selectivity of CHR/ZF/PROTI 100 FS in the control of Foot rot of cereals and Fusarium sp.  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47891-PL03 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeliński	2021	Biological assessment of efficacy of seed treatment CHR/ZF/PROTI against of diseases in winter wheat.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: AF/20/PO/32/Br/01 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeliński	2021	Biological assessment of efficacy of seed treatment CHR/ZF/PROTI against of diseases in winter wheat.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: AF/20/PO/32/Pr/02 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeliński	2021	Biological assessment of efficacy of seed treatment CHR/ZF/PROTI against of diseases in winter wheat.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: AF/20/PO/32/Gr/03 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeliński	2021	Biological assessment of efficacy of seed treatment CHR/ZF/PROTI against of diseases in winter wheat.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: AF/20/PO/32/Zł/04 GEP - yes	N	Chemiroł

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Veri- brate study Y/N	Owner
			Unpublished		
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeński	2021	Biological assessment of efficacy of seed treat- ment CHR/ZF/PROTI against of diseases in winter wheat.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: AF/20/PO/32/Br/05 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Beata Szymańska	2021	Study of selectivity CHR/ZF/PROTI 100 FS in cereal winter.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/PszO/32/ZI/b/03 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Beata Szymańska	2021	Study of selectivity CHR/ZF/PROTI 100 FS in cereal winter.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/PszO/32/Gr/b/04 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Agnieszka Maczyńska	2021	Biological expertise of selectivity of seed treat- ment CHR/ZF/PROTI (100 FS) in winter tritica- le.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 13 F/2021 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Agnieszka Maczyńska	2021	Biological expertise of selectivity of seed treat- ment CHR/ZF/PROTI (100 FS) in winter tritica- le.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 13 F/2021 - annex GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2	Agnieszka Maczyńska	2021	Biological expertise of selectivity of seed treat- ment CHR/ZF/PROTI (100 FS) in winter tritica-	N	Chemirol

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Veri- brate study Y/N	Owner
KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3			le.  Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sońnicowice Poland  Report no.: 14 F/2021 GEP - yes Unpublished		
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Agnieszka Maczyńska	2021	Biological expertise of selectivity of seed treat- ment CHR/ZF/PROTI (100 FS) in winter tritica- le.  Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sońnicowice Poland  Report no.: 14 F/2021 - annex GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejew- ski	2021	The selectivity of CHR/ZF/PROTI 100 FS in winter cereals.  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47776-PL03 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejew- ski	2021	The selectivity of CHR/ZF/PROTI 100 FS in winter cereals.  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47776-PL04 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter tritica- le cultivation-laboratory experymental.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agron- omy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/PszO/32/Pn/07 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter tritica- le cultivation-laboratory experymental.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agron- omy Department,	N	Chemirol



Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Veri- brate study Y/N	Owner
			Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/PszO/32/Pn/08 GEP - yes Unpublished		
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter tritica- le cultivation-laboratory experymetal.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agron- omy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/PszO/32/Pn/09 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter tritica- le cultivation-laboratory experymetal.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agron- omy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/PszO/32/Pn/10 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter tritica- le cultivation-laboratory experymetal.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agron- omy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/PszO/32/Pn/11 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter tritica- le cultivation-laboratory experymetal.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agron- omy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/PszO/32/Pn/12 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Agnieszka Mączyńska	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for Fusarium spp. and Monographella nivalis (anam. Microdochium nivale) in winter tritica-  Institute of Plant Protection - National Research	N	Chemirol

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Veri- brate study Y/N	Owner
			Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 15 F/2021 GEP - yes Unpublished		
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Agnieszka Maczyńska	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for Fusarium spp. and Monographella nivalis (anam. Microdochium nivale) in winter triticales.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 16 F/2021 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejew- ski	2021	Biological efficacy of selectivity CHR/ZF/PROTI 100 FS in the control of Foot rot of cereals and Fusarium Sp.  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47891-PL04 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejew- ski	2021	Biological efficacy of selectivity CHR/ZF/PROTI 100 FS in the control of Foot rot of cereals and Fusarium Sp.  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47891-PL05 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejew- ski	2021	Biological efficacy of selectivity CHR/ZF/PROTI 100 FS in the control of Foot rot of cereals and Fusarium Sp.  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47891-PL06 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeleński	2021	Biological assessment of efficacy of seed treat- ment CHR/ZF/PROTI against of diseases in winter triticales.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland	N	Chemirol

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Veri- brate study Y/N	Owner
			Report no.: AF/20/PszO/32/Pr/06 GEP - yes Unpublished		
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Beata Szymańska	2021	Study of selectivity CHR/ZF/PROTI 100 FS in cereal winter.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/ŻO/32/Ż/b/05 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Beata Szymańska	2021	Study of selectivity CHR/ZF/PROTI 100 FS in cereal winter.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/ŻO/32/Gr/b/06 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Joanna Pietryga	2021	Biological expertise of selectivity of seed treat- ment CHR/ZF/PROTI (100 FS) in winter rye.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 24 F/2021 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Joanna Pietryga	2021	Biological expertise of selectivity of seed treat- ment CHR/ZF/PROTI (100 FS) in winter rye.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 25 F/2021 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejew- ski	2021	The selectivity of CHR/ZF/PROTI 100 FS in winter cereals.  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47776-PL05 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1	Łukasz Pędziejew- ski	2021	The selectivity of CHR/ZF/PROTI 100 FS in winter cereals.  STAPHYT Sp z o.o.	N	Chemirol

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Veri- brate study Y/N	Owner
KCP 6.4.2 KCP 6.4.3			Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47776-PL06 GEP - yes Unpublished		
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter wheat cultivation-laboratory experimental.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/ZO/32/Pn/13 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter wheat cultivation-laboratory experimental.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/ZO/32/Pn/14 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter wheat cultivation-laboratory experimental.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/ZO/32/Pn/15 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter wheat cultivation-laboratory experimental.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/ZO/32/Pn/16 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter wheat cultivation-laboratory experimental.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department, Wojska Polskiego 28, 60-637 Poznań Poland	N	Chemirol

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Veri- brate study Y/N	Owner
			omy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/ŻO/32/Pn/17 GEP - yes Unpublished		
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Angelika Sobczak	2021	The evaluation of efficacy and phytotoxicity of product CHR/ZF/PROTI 100 FS in winter wheat cultivation-laboratory experimental.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agron- omy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/ŻO/32/Pn/18 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Agnieszka Mączyńska	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for Fusarium spp. and Monographella nivalis (anam. Microdochium nivale) in winter rye.  Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sońnicowice Poland  Report no.: 17 F/2021 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Agnieszka Mączyńska	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for Fusarium spp. and Monographella nivalis (anam. Microdochium nivale) in winter rye.  Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sońnicowice Poland  Report no.: 18 F/2021 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Agnieszka Mączyńska	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for Fusarium spp. and Monographella nivalis (anam. Microdochium nivale) in winter rye.  Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sońnicowice Poland  Report no.: 19 F/2021 GEP - yes Unpublished	N	Chemiroł
KCP 6 KCP 6.2	Joanna Pietryga	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for <i>Urocystis occulta</i>	N	Chemiroł

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Veri- brate study Y/N	Owner
KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3			in winter rye.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 26 F/2021 GEP - yes Unpublished		
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Joanna Pietryga	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for Urocystis occulta in winter rye.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 27 F/2021 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Joanna Pietryga	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for Urocystis occulta in winter rye.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 28 F/2021 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Joanna Pietryga	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for Urocystis occulta in winter rye.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 29 F/2021 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Joanna Pietryga	2021	Biological efficacy expertise of seed treatment CHR/ZF/PROTI (100 FS) for Urocystis occulta in winter rye.  Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department Gliwicka 29, 44-153 Sośnicowice Poland  Report no.: 30 F/2021 GEP - yes Unpublished	N	Chemirol
KCP 6	Łukasz Pędziewicz	2021	Biological efficacy and selectivity of	N	Chemirol

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Veri- brate study Y/N	Owner
KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	ski		CHR/ZF/PROTI 100 FS in the control of Foot rot of cereales and Fusarium sp.  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47891-PL07 GEP - yes Unpublished		
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejewski	2021	Biological efficacy and selectivity of CHR/ZF/PROTI 100 FS in the control of Foot rot of cereales and Fusarium sp.  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47891-PL08 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Łukasz Pędziejewski	2021	Biological efficacy and selectivity of CHR/ZF/PROTI 100 FS in the control of Foot rot of cereales and Fusarium sp.  STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań Poland  Report no.: APK-20-47891-PL09 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeliński	2021	Biological assessment of efficacy of seed treatment CHR/ZF/PROTI against of diseases in winter rye.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/ŻO/32/Br/07 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeliński	2021	Biological assessment of efficacy of seed treatment CHR/ZF/PROTI against of diseases in winter rye.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/ŻO/32/Pr/08 GEP - yes Unpublished	N	Chemirol
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeliński	2021	Biological assessment of efficacy of seed treatment CHR/ZF/PROTI against of diseases in winter rye.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department, Wojska Polskiego 28, 60-637 Poznań Poland	N	Chemirol

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Data Veri- ficate study Y/N	Owner
			omy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/ŻO/32/Gr/09 GEP - yes Unpublished		
KCP 6 KCP 6.2 KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeliński	2021	Biological assessment of efficacy of seed treat- ment CHR/ZF/PROTI against of diseases in winter rye.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agron- omy Department, Wojska Polskiego 28, 60-637 Poznań Poland  Report no.: AF/20/ŻO/32/ZI/10 GEP - yes Unpublished	N	Chemirol



## **Appendix 2      Additional information provided by the applicant**

### **COMPARISON OF CLIMATIC AND AGRICULTURAL CONDITIONS IN POLAND AND THE CZECH REPUBLIC IN REFERENCE TO REGISTRATION OF PLANT PROTECTION PRODUCT CHR/ZF/PROTI 100 FS**

#### **1.      Introduction**

The purpose of the following document is to compare climatic and agricultural conditions of Poland and the Czech Republic in order to enable data from efficacy and phytotoxicity trials conducted in Poland to be used for registration purposes of a winter wheat, winter triticale, winter rye seed treatment CHR/ZF/PROTI in the Czech Republic. According to the EPPO guidelines PP 1/ 241(1) Guidance on comparable climates, Poland belongs to North-east zone and Czech Republic to Maritime zone.

#### **2.      Plant protection products under consideration**

##### **2.1. General**

The efficacy and phytotoxicity studies were conducted in Poland in 2020/21 on the plant protection product CHR/ZF/PROTI 100 FS and a standard seed treatment:

- Premis 025 FS were used as a reference product in winter cereals
- Redigo 100 FS were used as a tested/reference product in winter cereals

Total of 56 efficacy: winter wheat (18 field trials, 6 laboratory trials), winter triticale ( 6 field trials, 6 laboratory trials), winter rye ( 15 field trials, 6 laboratory trials) and 18 reports showing the results in research into product selectivity carried out in 2020/21 in winter wheat (6 field trials ), winter triticale ( 6 field trials), winter rye ( 6 field trials) GEP trials were carried out to assess the product's efficacy and phytotoxic potential.

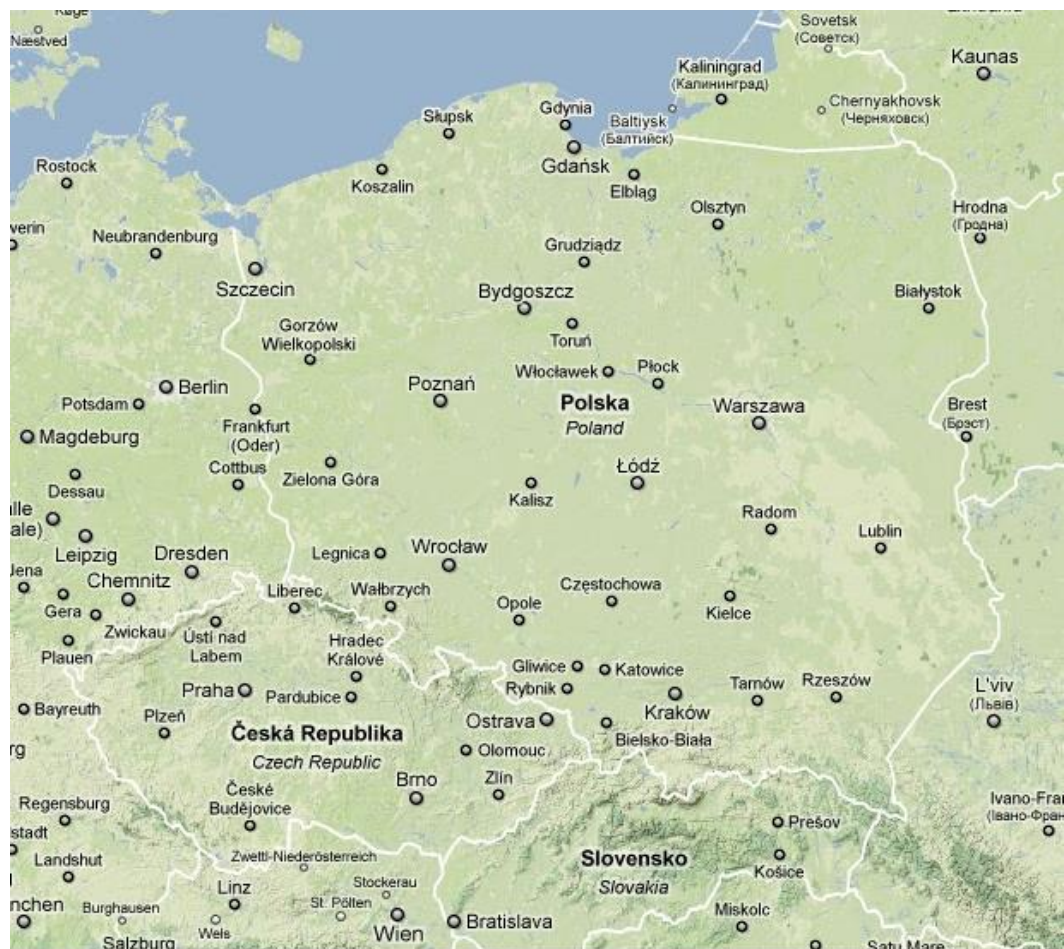
#### **3.      Climatic conditions**

Poland and the Czech Republic are geographically very close to one another. The geographical coordinates of the Czech Republic are: latitude 49.45°N, longitude 15.30°E. The geographical coordinates of Poland are: latitude 52.00°N, longitude 20.00°E. The two countries share 615 km border.

(ref. CIA World Factbook (<https://www.cia.gov/library/publications/the-world-factbook/index.html>))

The following map (originating from maps.google.com) illustrates the two countries location.

Figure 1. Location of Poland and the Czech Republic



The following sections present and compare particular elements of Polish and Czech climate. The following parameters are compared: average monthly temperature, average maximum monthly temperature, average minimum monthly temperature, and average monthly precipitation sum. To compare data in each country there were selected several locations from which average readings were calculated. The following map presents the location of climate stations included in calculations.

Figure 2. Location of climate stations



Table 1. Parameters of climate stations

Number on map	Location	Latitude	Longitude	Elevation (meters AMSL)
<b>POLAND</b>				
1.	Warsaw	52,10°N	20,58°E	106
2.	Szczecin	52,35°N	14,54°E	1
3.	Poznan	52,25°N	16,50°E	86
4.	Wroclaw	51,06°N	16,53°E	120
5.	Krakow	50,05°N	19,48°E	237
6.	Suwalki	54,08°N	22,57°E	186
<b>THE CZECH REPUBLIC</b>				
7.	Prague	50,00°N	14,40°E	303
8.	Brno	49,15°N	16,70°E	238
9.	Ostrava	49,68°N	18,10°E	256
10.	Cheb	50,08°N	12,40°E	474

data source: <http://pl.allmetsat.com/klimat/>

Climate stations were selected in a way that ensures their equal distribution throughout the area of each country. Data from Poland was collected from six stations while data from the Czech Republic was collected

from four stations. The number of Czech stations is smaller than that of Polish stations as detailed climatic data was not readily available from a greater number of stations in the Czech Republic. What is more, the authors of this report believe that the number of stations taken into account is sufficient to perform the comparison of climatic conditions and that it is relative to the acreage of each country.

### Average monthly temperature

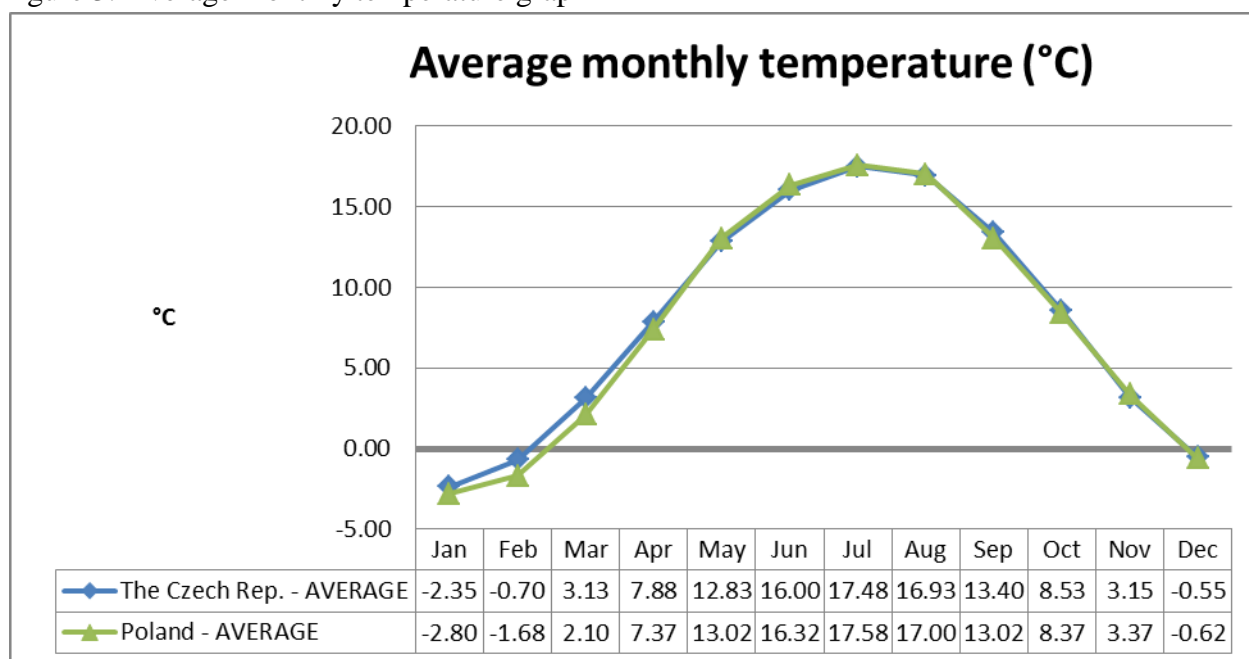
Table 2. Average monthly temperature data

Location	Average monthly temperature (°C)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
The Czech Rep.: Cheb	-2,5	-1,2	2,4	6,7	11,7	15,0	16,5	15,8	12,5	7,8	2,4	-1,0
The Czech Rep.: Prague	-2,0	-0,6	3,1	7,6	12,5	15,6	17,1	16,6	13,2	8,3	3,0	-0,2
The Czech Rep.: Brno	-2,5	-0,3	3,8	9,0	13,9	17,0	18,5	18,1	14,3	9,1	3,5	-0,6
The Czech Rep.: Ostrava	-2,4	-0,7	3,2	8,2	13,2	16,4	17,8	17,2	13,6	8,9	3,7	-0,4
The Czech Rep. - AVERAGE	<b>-2,35</b>	<b>-0,70</b>	<b>3,13</b>	<b>7,88</b>	<b>12,83</b>	<b>16,00</b>	<b>17,48</b>	<b>16,93</b>	<b>13,40</b>	<b>8,53</b>	<b>3,15</b>	<b>-0,55</b>
Poland: Warsaw	-3,3	-2,1	1,9	7,7	13,5	16,7	18,0	17,3	13,1	8,2	3,2	-0,9
Poland: Poznan	-2,0	-1,0	2,7	7,6	13,3	16,7	18,0	17,4	13,4	8,8	3,8	-0,1
Poland: Wroclaw	-1,8	-0,5	3,2	8,0	13,1	16,5	17,7	17,2	13,4	8,9	3,9	0,2
Poland: Krakow	-3,3	-1,6	2,4	7,9	13,1	16,2	17,5	16,9	13,1	8,3	3,2	-1,0
Poland: Szczecin	-1,1	-0,3	3,0	7,4	12,9	16,4	17,7	17,2	13,5	9,2	4,4	0,8
Poland: Suwalki	-5,3	-4,6	-0,6	5,6	12,2	15,4	16,6	16,0	11,6	6,8	1,7	-2,7
Poland - AVERAGE	-2,80	-1,68	2,10	7,37	13,02	16,32	17,58	17,00	13,02	8,37	3,37	-0,62

data source:

<http://www.climate-charts.com/>; NOAA Global Climate Normals 1961-1990; National Oceanic and Atmospheric Administration (NOAA).

Figure 3. Average monthly temperature graph





The table and graph above show that average temperature in Poland and in the Czech Republic is very similar. There are slight differences only in the winter months. The time which is of most importance to the application of product CHR/ZF/PROTI is end of summer/beginning of autumn from September to October and March/April when all symptoms of the fungicide activity are noticeable. The average temperatures is a close correlation between Poland and the Czech Republic.

### 3.1. Average maximum monthly temperature

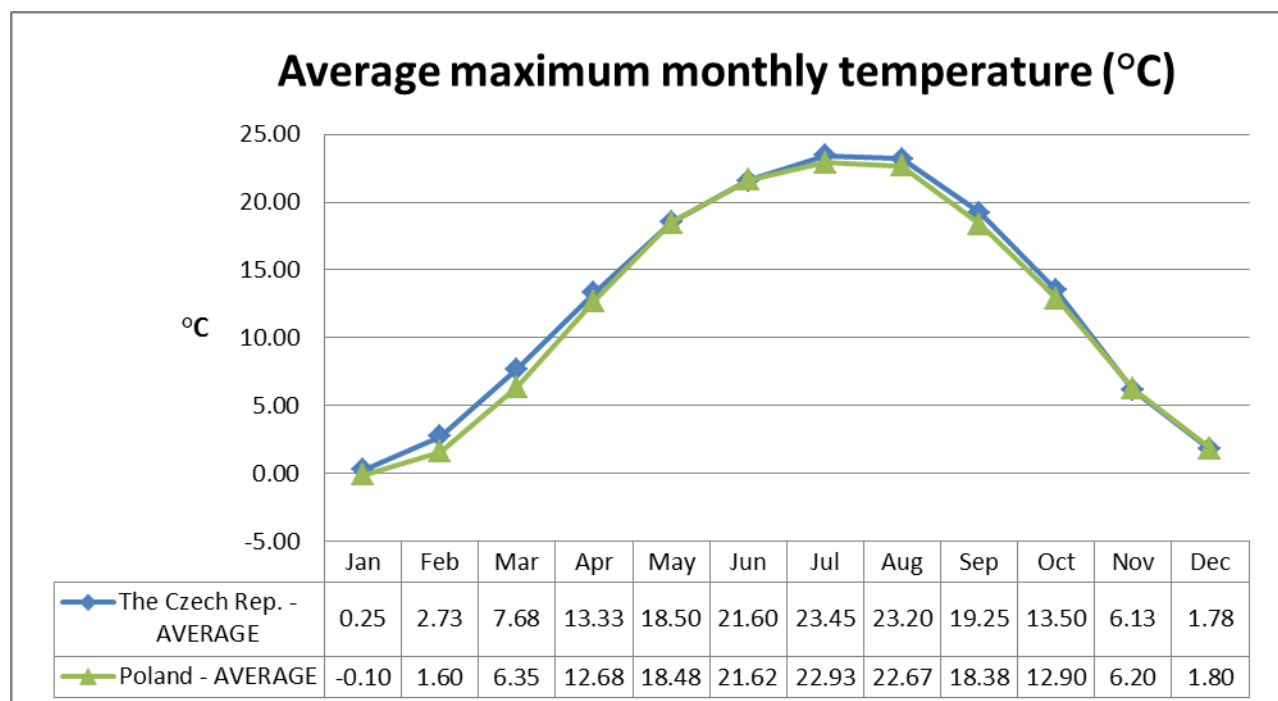
Table 3. Average maximum monthly temperature data

Location	Average maximum monthly temperature (°C)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
The Czech Rep.: Cheb	0,0	2,3	7,0	12,2	17,4	20,6	22,4	22,2	18,5	12,8	5,2	1,3
The Czech Rep.: Prague	0,4	2,7	7,7	13,2	18,3	21,4	23,3	23,0	19,0	13,1	6,0	1,9
The Czech Rep.: Brno	0,2	3,1	8,4	14,4	19,5	22,5	24,5	24,2	20,1	14,1	6,6	1,9
The Czech Rep.: Ostrava	0,4	2,8	7,6	13,5	18,8	21,9	23,6	23,4	19,4	14,0	6,7	2,0
The Czech Rep. - AVERAGE	<b>0,25</b>	<b>2,73</b>	<b>7,68</b>	<b>13,33</b>	<b>18,50</b>	<b>21,60</b>	<b>23,45</b>	<b>23,20</b>	<b>19,25</b>	<b>13,50</b>	<b>6,13</b>	<b>1,78</b>
Poland: Warsaw	-0,7	1,0	6,0	12,9	18,8	22,0	23,3	22,9	18,3	12,7	5,9	1,4
Poland: Poznan	0,5	2,2	6,8	13,0	18,8	22,1	23,5	23,1	18,7	13,1	6,4	2,2
Poland: Wroclaw	1,3	3,2	7,9	13,6	18,8	22,0	23,4	23,2	19,3	14,1	7,4	3,0
Poland: Krakow	-0,1	2,1	7,1	13,5	18,7	21,6	23,0	22,8	18,8	13,8	6,8	1,8
Poland: Szczecin	1,3	2,8	7,2	12,6	18,4	21,6	22,8	22,6	18,6	13,1	6,9	3,0
Poland: Suwalki	-2,9	-1,7	3,1	10,5	17,4	20,4	21,6	21,4	16,6	10,6	3,8	-0,6
Poland - AVERAGE	-0,10	1,60	6,35	12,68	18,48	21,62	22,93	22,67	18,38	12,90	6,20	1,80

data source:

<http://www.climate-charts.com/>; NOAA Global Climate Normals 1961-1990; National Oceanic and Atmospheric Administration (NOAA).

Figure 4. Average maximum monthly temperature graph



The table and graph above present the average maximum temperature in each month. It is clear that maximum temperature in Poland and in the Czech Republic is very similar.

### 1.1. Average minimum monthly temperatures

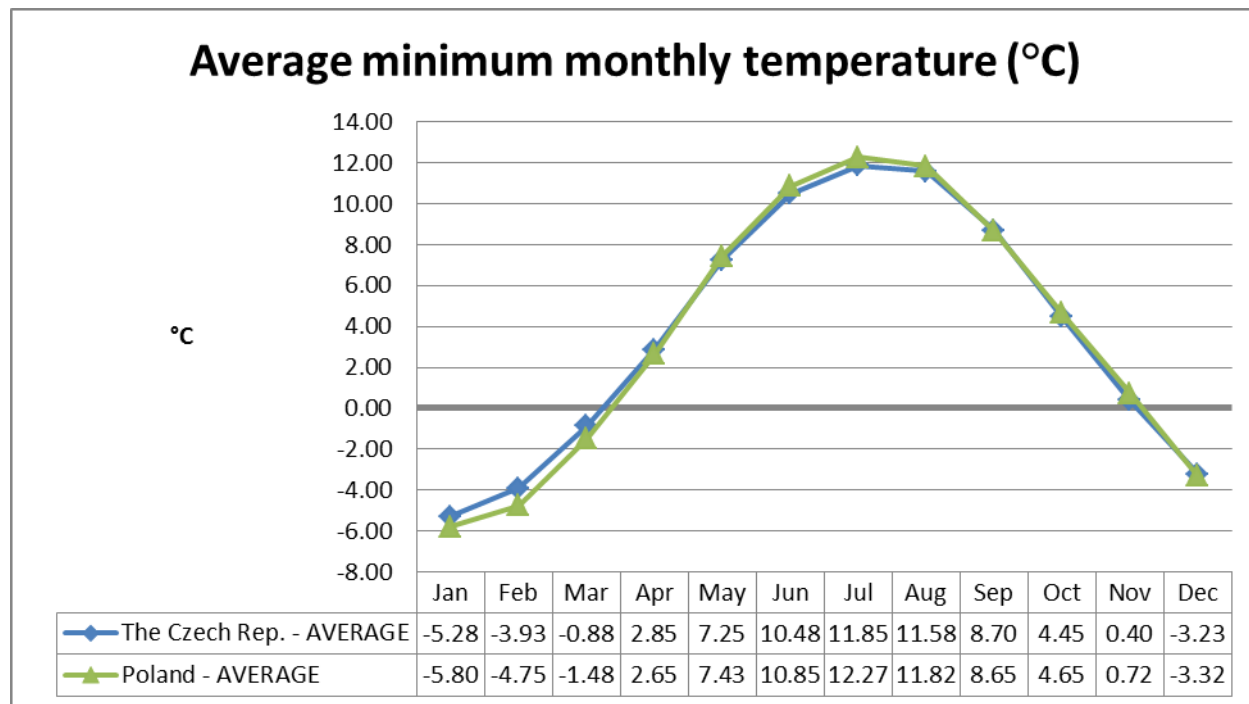
Table 4. Average minimum monthly temperature data

Location	Average minimum monthly temperature (°C)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
The Czech Rep.: Cheb	-5,0	-4,1	-1,2	2,1	6,3	9,6	11,0	10,6	8,0	4,1	0,0	-3,3
The Czech Rep.: Prague	-5,3	-4,2	-1,3	2,4	7,1	10,4	11,8	11,5	8,6	4,0	-0,2	-3,4
The Czech Rep.: Brno	-5,2	-3,3	-0,2	3,9	8,3	11,3	12,7	12,6	9,5	5,0	0,9	-3,0
The Czech Rep.: Ostrava	-5,6	-4,1	-0,8	3,0	7,3	10,6	11,9	11,6	8,7	4,7	0,9	-3,2
The Czech Rep. - AVERAGE	<b>-5,28</b>	<b>-3,93</b>	<b>-0,88</b>	<b>2,85</b>	<b>7,25</b>	<b>10,48</b>	<b>11,85</b>	<b>11,58</b>	<b>8,70</b>	<b>4,45</b>	<b>0,40</b>	<b>-3,23</b>
Poland: Warsaw	-6,1	-5,0	-1,5	3,0	8,0	11,3	12,6	12,1	8,7	4,5	0,8	-3,4
Poland: Poznan	-4,8	-3,9	-0,8	2,8	7,7	11,2	12,5	12,2	9,0	5,3	1,2	-2,6
Poland: Wroclaw	-5,3	-4,0	-0,9	2,8	7,1	10,7	12,0	11,6	8,7	4,6	0,6	-3,1
Poland: Krakow	-6,7	-4,8	-1,3	3,0	7,6	10,8	12,2	11,8	8,6	4,2	0,2	-4,0
Poland: Szczecin	-3,7	-3,1	-0,4	2,9	7,5	11,1	12,9	12,3	9,5	5,8	2,0	-1,6
Poland: Suwalki	-8,2	-7,7	-4,0	1,4	6,7	10,0	11,4	10,9	7,4	3,5	-0,5	-5,2
Poland - AVERAGE	<b>-5,80</b>	<b>-4,75</b>	<b>-1,48</b>	<b>2,65</b>	<b>7,43</b>	<b>10,85</b>	<b>12,27</b>	<b>11,82</b>	<b>8,65</b>	<b>4,65</b>	<b>0,72</b>	<b>-3,32</b>

data source:

<http://www.climate-charts.com/>; NOAA Global Climate Normals 1961-1990; National Oceanic and Atmospheric Administration (NOAA).

Figure 5. Average minimum monthly temperature graph



Average minimum monthly temperature in Poland and in the Czech Republic follows almost the same pattern, therefore, it is comparable.

### 1.1. Average monthly precipitation sum

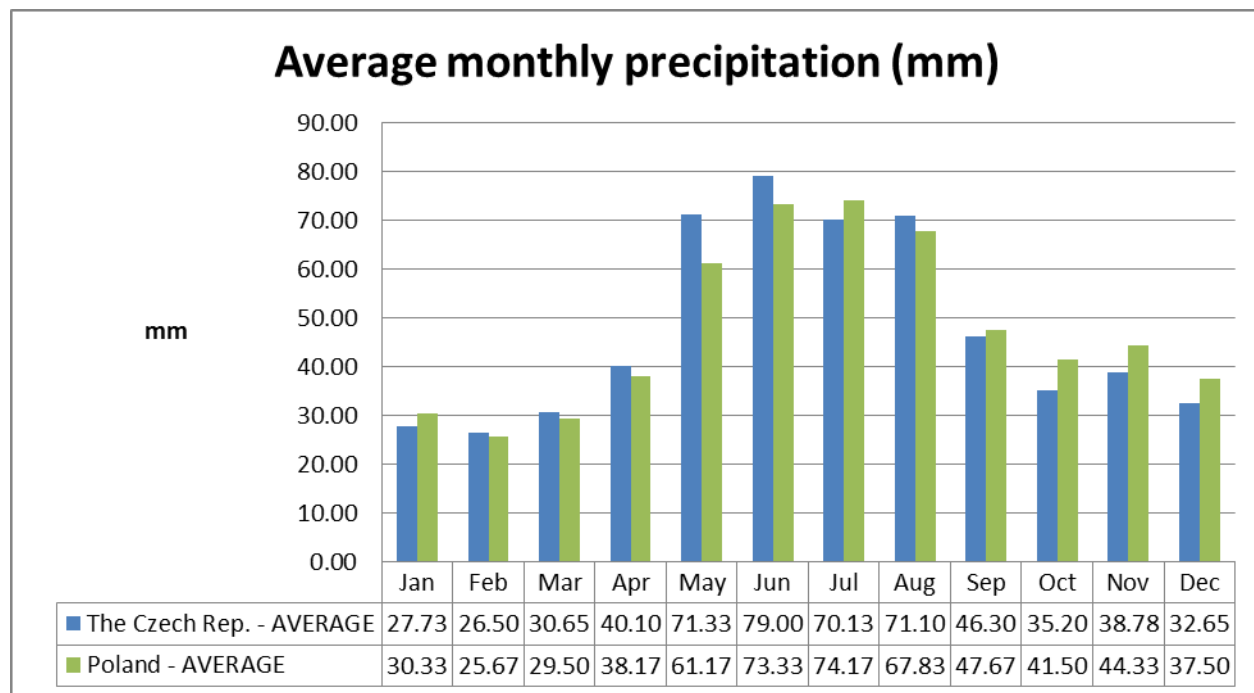
Table 5. Average monthly precipitation sum data

Location	Average monthly precipitation sum (mm)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
The Czech Rep.: Cheb	36,1	29,5	36,3	38,3	56,0	66,9	59,2	66,5	48,4	37,5	41,1	43,9
The Czech Rep.: Prague	23,6	22,6	28,1	38,2	77,2	72,7	66,2	69,6	40,4	30,5	31,9	25,3
The Czech Rep.: Brno	24,5	23,7	24,2	31,5	60,9	72,0	64,0	56,5	37,6	30,5	37,5	27,1
The Czech Rep.: Ostrava	26,7	30,2	34,0	52,4	91,2	104,4	91,1	91,8	58,8	42,3	44,6	34,3
The Czech Rep. - AVERAGE	<b>27,73</b>	<b>26,50</b>	<b>30,65</b>	<b>40,10</b>	<b>71,33</b>	<b>79,00</b>	<b>70,13</b>	<b>71,10</b>	<b>46,30</b>	<b>35,20</b>	<b>38,78</b>	<b>32,65</b>
Poland: Warsaw	22	21	26	33	58	71	69	62	43	37	41	32
Poland: Poznan	30	24	27	36	53	60	69	57	43	39	39	38
Poland: Wroclaw	28	26	26	39	64	80	84	78	48	40	43	34
Poland: Krakow	34	32	34	48	83	97	85	87	54	46	45	41
Poland: Szczecin	36	27	32	38	52	57	61	55	44	38	46	41
Poland: Suwalki	32	24	32	35	57	75	77	68	54	49	52	39
Poland - AVERAGE	30,33	25,67	29,50	38,17	61,17	73,33	74,17	67,83	47,67	41,50	44,33	37,50

data source:

<http://www.climate-charts.com/>; NOAA Global Climate Normals 1961-1990; National Oceanic and Atmospheric Administration (NOAA).

Figure 6. Average monthly precipitation sum graph



Average monthly precipitation sum in Poland and in the Czech Republic is similar. The graph above shows that there is slightly more precipitation in the Czech Republic in the first half of the year while the situation

is reversed in the second half of the year. The greatest difference in average precipitation sum is noted in the month of May – 10,16 mm.

4. Soil conditions

Soil conditions in Poland and in the Czech Republic are not compared.

5. Agricultural practice

5.1. Winter wheat, winter triticale, winter rye, winter barley sowing timing

According to the MOCA Study carried out by The MARS STAT Action in Poland sowing of winter wheat takes place in the second half of September (depending on the region term of sowing ranges from September 15th till October 5th). In the Czech Republic term of sowing of winter wheat is similar – the optimum sowing time is September 15th till October 15th.

Winter triticale follows practically are the same pattern with respect to sowing and entering subsequent development phases. The crops are winter cereals, therefore, it is assumed, they are subject to the same agricultural practices at the same time in each country

Spring barley, Spring wheat

According to the MOCA study in Poland sowing of spring barley takes place usually between March 15th and April 15th depending on the region. In Czech Republic spring barley should be planted as soon as possible when allowed by outside conditions.

Spring barley

According to the MOCA study in Poland sowing of spring barley takes place usually between March 15th and April 15th depending on the region. In Czech Republic spring barley should be planted as soon as possible when allowed by outside conditions.

Figure 7. Phenological crop calendar for winter wheat in Poland

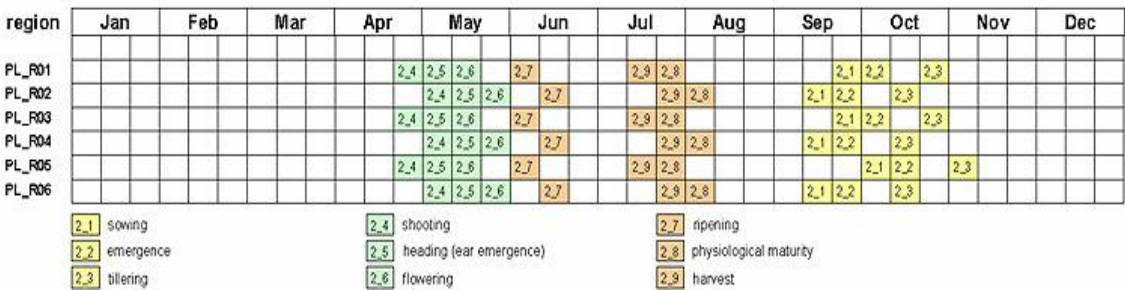


Figure 8. Phenological crop calendar for winter wheat in the Czech Republic





Figure 9. Phenological crop calendar for spring barley in the Poland



Figure 10. Phenological crop calendar for spring barley in the Czech Republic



The data tables are incomplete with respect to tillering and shooting phases in the Czech Republic. It is so, because for financial reasons complete phenological data from the Czech Hydrometeorological Institute was not available to the authors of the MOCA Study. However, the distribution of the other available phenological phases allows for the assumption that the missing data is also comparable. In both countries climatic conditions are comparable so the development of spring barley follows a similar pattern. Tillering starts in the fall in the second half of April until the beginning of May, shooting starts in first half of May.

## 6. Conclusion

Poland and the Czech Republic are neighbouring countries. According to the EPPO guidelines PP 1/ 241(1) Guidance on comparable climates, Poland belongs to North-east zone and Czech Republic to Maritime zone. Both countries are located in central Europe in the moderate climate zone. They share not only the border but also important climatic characteristics. Yearly temperature and precipitation patterns are very similar in both countries. This has influence on the agricultural practice in these countries and on the development of cultivated crops. The greatest pest problems are posed by almost the same fungal species in both countries. All of these and many more are targeted by seed treatment prothioconazole which is the active substance of product CHR/ZF/PROTI.

In conclusion, authors of this report state that Poland and the Czech Republic share many elements of climatic and agricultural conditions. This allows efficacy and phytotoxicity study results acquired in Poland to be

used in registration procedures of an autumn in winter cereals seed treatment CHR/ZF/PROTI 100 FS in the Czech Republic.

### Appendix 3 Summary of data on trials site and application details per use

Test report/ research number (1)	Trial location (2); Crop cultivar; F/G (3); N/A (4)	Testing Unit (5)	Test method (6); Plot size; Sample size (7)	Treatment			
				Growth stage (8)	Interval	Total number	Spray volume (ml/100 kg)
AH/20/PO/32/Zi/b/01	Złotniki / Poland winter wheat / Bogatka  F N	Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  1,4x8=11,2m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/PO/32/Gr/b/02	Gorzyń / Poland winter wheat / Opal  F N	Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  1,5x10=15m <sup>2</sup>	BBCH 00	n/a	1	700
20 F/2021	Sośnicowice / Poland winter wheat / Opoka  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  15m <sup>2</sup>	BBCH 00	n/a	1	700
21 F/2021	Łany Wielkie / Poland winter wheat / Pokusa  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  15m <sup>2</sup>	BBCH 00	n/a	1	700
APK-20-47776-PL01	Kajkowo / Poland winter wheat / Bilanz  F N	STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
APK-20-47776-PL02	Jasiona / Poland winter wheat / Mewa  F N	STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/PO/32/Pn/01	Poznań- Biocentrum / Poland winter wheat / Arkadia  F N	Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/PO/32/Pn/02	Poznań- Biocentrum / Poland winter wheat / Potenzial  F N	Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/PO/32/Pn/03	Poznań- Biocentrum /	Poznań University of Life Sciences, Re-	EPPO PP 1/26(4)	BBCH 00	n/a	1	700

	Poland winter wheat / Opal  F N	search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	0,25x0,5=0,125m <sup>2</sup>				
AF/20/PO/32/Pn/04	Poznań- Biocentrum / Poland winter wheat / Opal  F N	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/PO/32/Pn/05	Poznań- Biocentrum / Poland winter wheat / Princeps  F N	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/PO/32/Pn/06	Poznań- Biocentrum / Poland winter wheat / Tonacja  F N	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
8 F/2021	Sośnicowice / Poland winter wheat / Jubilar  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  10m <sup>2</sup>	BBCH 00	n/a	1	700
9 F/2021	Sośnicowice / Poland winter wheat / Turnia  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  10m <sup>2</sup>	BBCH 00	n/a	1	700
10 F/2021	Sośnicowice / Poland winter wheat / Nadobna  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  10m <sup>2</sup>	BBCH 00	n/a	1	700
11 F/2021	Sośnicowice / Poland winter wheat / Tobak  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  10m <sup>2</sup>	BBCH 00	n/a	1	700
12 F/2021	Sośnicowice / Poland winter wheat / Zyta  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch;	EPPO PP 1/26(4)  10m <sup>2</sup>	BBCH 00	n/a	1	700

	F N	Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland					
22 F/2021	Sośnicowice / Poland winter wheat / Zyta  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  12m <sup>2</sup>	BBCH 00	n/a	1	700
23 F/2021	Łany Wielkie / Poland winter wheat / Fidelius  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  12m <sup>2</sup>	BBCH 00	n/a	1	700
APK-20-47775-PL01	Kajkowo / Poland winter wheat / Bilanz  F N	STAPHYT Sp z o.o. Poznańska 62/53, 60- 853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
APK-20-47775-PL02	Jasiona / Poland winter wheat / Mewa  F N	STAPHYT Sp z o.o. Poznańska 62/53, 60- 853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
APK-20-47775-PL03	Łobez / Poland winter wheat / Julius  F N	STAPHYT Sp z o.o. Poznańska 62/53, 60- 853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
APK-20-47891-PL01	Kajkowo / Poland winter wheat / Julius  F N	STAPHYT Sp z o.o. Poznańska 62/53, 60- 853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
APK-20-47891-PL02	Jasiona / Poland winter wheat / Bilanz  F N	STAPHYT Sp z o.o. Poznańska 62/53, 60- 853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
APK-20-47891-PL03	Łobez / Poland winter wheat / Julius  F N	STAPHYT Sp z o.o. Poznańska 62/53, 60- 853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/PO/32/Br/01	Brody / Poland winter wheat / Potenzial  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/PO/32/Pr/02	Przybroda / Poland	Institute of Plant Protection - National	EPPO PP 1/26(4)	BBCH 00	n/a	1	700

	winter wheat / Tonacja  F N	Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	1,5x12=18m <sup>2</sup>				
AF/20/PO/32/Gr/03	Gorzyń / Poland winter wheat / Princips  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  1,5x10=15m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/PO/32/Zł/04	Złotniki / Poland winter wheat / Bogatka  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  1,5x8=12m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/PO/32/Br/05	Brody / Poland winter wheat / Princips  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/PszO/32/Zł/b/03	Złotniki / Poland winter triticale / Alik  F N	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  1,4x8=11,2m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/PszO/32/Gr/b/04	Gorzyń / Poland winter triticale / Twingo  F N	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  1,5x10=15m <sup>2</sup>	BBCH 00	n/a	1	700
13 F/2021	Sierakowice / Poland winter triticale / Trismart  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  15m <sup>2</sup>	BBCH 00	n/a	1	700
14 F/2021	Sośnicowice / Poland winter triticale / Rotondo  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  15m <sup>2</sup>	BBCH 00	n/a	1	700
APK-20-47776-PL03	Kajkowo / Poland winter triticale /	STAPHYT Sp z o.o. Poznańska 62/53, 60-	EPPO PP 1/26(4)	BBCH 00	n/a	1	700

	Bereniko	853 Poznań, Poland	1,5x7=10,5m <sup>2</sup>				
	F N						
APK-20-47776-PL04	Łaźniki / Poland winter triticales / Borowik	STAPHYT Sp z o.o. Poznańska 62/53, 60- 853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						
AF/20/PszO/32/Pn/07	Poznań- Biocentrum / Poland winter triticales / Twingo	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						
AF/20/PszO/32/Pn/08	Poznań- Biocentrum / Poland winter triticales / Salto	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						
AF/20/PszO/32/Pn/09	Poznań- Biocentrum / Poland winter triticales / Grenado	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						
AF/20/PszO/32/Pn/10	Poznań- Biocentrum / Poland winter triticales / Wilton	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						
AF/20/PszO/32/Pn/11	Poznań- Biocentrum / Poland winter triticales / Salto	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						
AF/20/PszO/32/Pn/12	Poznań- Biocentrum / Poland winter triticales / Magnat	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						
15 F/2021	Sośnicowice / Poland winter triticales / Trismart	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  15m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						
16 F/2021	Sierakowice / Poland winter triticales / Rotondo	Institute of Plant Protection - National Research Institute Sośnicowice Branch;	EPPO PP 1/26(4)  15m <sup>2</sup>	BBCH 00	n/a	1	700

	F N	Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland					
APK-20-47891-PL04	Kajkowo / Poland winter triticales / Porto  F N	STAPHYT Sp z o.o. Poznańska 62/53, 60- 853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
APK-20-47891-PL05	Wilkowyja / Poland winter triticales / Borowik  F N	STAPHYT Sp z o.o. Poznańska 62/53, 60- 853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
APK-20-47891-PL06	Łaźniki / Poland winter triticales / Borowik  F N	STAPHYT Sp z o.o. Poznańska 62/53, 60- 853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/PszO/32/Pr/06	Przybroda / Poland winter triticales / Twingo  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  1,5x12=18m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/ŻO/32/Zł/b/05	Złotniki / Poland winter rye / Diamant  F N	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  1,4x8=11,2m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/ŻO/32/Gr/b/06	Gorzyń / Poland winter rye / Poznańskie  F N	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  1,5x10=15m <sup>2</sup>	BBCH 00	n/a	1	700
24 F/2021	Sośnicowice / Poland winter rye / Dukato  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  15m <sup>2</sup>	BBCH 00	n/a	1	700
25 F/2021	Sierakowice / Poland winter rye / Su Forsetti  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  15m <sup>2</sup>	BBCH 00	n/a	1	700
APK-20-47776-PL05	Wilkowyja / Poland winter rye / Dańkowskie	STAPHYT Sp z o.o. Poznańska 62/53, 60- 853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700



	Turkus						
	F N						
APK-20-47776-PL06	Wólka Kro- snowska / Po- land winter rye / Dańkowskie Amber	STAPHYT Sp z o.o. Poznańska 62/53, 60- 853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						
AF/20/ŻO/32/Pn/13	Poznań- Biocentrum / Poland winter rye / Poznańskie	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						
AF/20/ŻO/32/Pn/14	Poznań- Biocentrum / Poland winter rye / Diamant	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						
AF/20/ŻO/32/Pn/15	Poznań- Biocentrum / Poland winter rye / Daniello	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						
AF/20/ŻO/32/Pn/16	Poznań- Biocentrum / Poland winter rye / Palazzo	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						
AF/20/ŻO/32/Pn/17	Poznań- Biocentrum / Poland winter rye / Diamant	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						
AF/20/ŻO/32/Pn/18	Poznań- Biocentrum / Poland winter rye / Poznańskie	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  0,25x0,5=0,125m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						
17 F/2021	Sośnicowice / Poland winter rye / Dańkowskie Rubin	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  10m <sup>2</sup>	BBCH 00	n/a	1	700
	F N						

18 F/2021	Sośnicowice / Poland winter rye / Dukato  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  10m <sup>2</sup>	BBCH 00	n/a	1	700
19 F/2021	Sośnicowice / Poland winter rye / Su Forsetti  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  10m <sup>2</sup>	BBCH 00	n/a	1	700
26 F/2021	Sośnicowice / Poland winter rye / Dukato  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  10m <sup>2</sup>	BBCH 00	n/a	1	700
27 F/2021	Sośnicowice / Poland winter rye / Dańkowskie Rubin  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  10m <sup>2</sup>	BBCH 00	n/a	1	700
28 F/2021	Sierakowice / Poland winter rye / Su Forsetti  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  10m <sup>2</sup>	BBCH 00	n/a	1	700
29 F/2021	Sośnicowice / Poland winter rye / Dańkowskie Granat  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  10m <sup>2</sup>	BBCH 00	n/a	1	700
30 F/2021	Sośnicowice / Poland winter rye / Dańkowskie Diament  F N	Institute of Plant Protection - National Research Institute Sośnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sośnicowice, Poland	EPPO PP 1/26(4)  10m <sup>2</sup>	BBCH 00	n/a	1	700
APK-20-47891-PL07	Kajkowo / Poland winter rye / Agat  F N	STAPHYT Sp z o.o. Poznańska 62/53, 60- 853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
APK-20-47891-PL08	Wilkowya / Poland	STAPHYT Sp z o.o. Poznańska 62/53, 60-	EPPO PP 1/26(4)	BBCH 00	n/a	1	700

	winter rye / Dańkowskie Turkus  F N	853 Poznań, Poland	1,5x7=10,5m <sup>2</sup>				
APK-20-47891-PL09	Wólka Kro- snowska / Po- land winter rye / Dańkowskie Amber  F N	STAPHYT Sp z o.o. Poznańska 62/53, 60- 853 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/ŻO/32/Br/07	Brody / Poland winter rye / Daniello  F N	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  1,5x7=10,5m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/ŻO/32/Pr/08	Przybroda / Poland winter rye / Poznańskie  F N	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  1,5x12=18m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/ŻO/32/Gr/09	Gorzyń / Poland winter rye / Palazzo  F N	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  1,5x10=15m <sup>2</sup>	BBCH 00	n/a	1	700
AF/20/ŻO/32/ZI/10	Złotniki / Poland winter rye / Dańkowskie Diamant  F N	Poznań University of Life Sciences, Re- search and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	EPPO PP 1/26(4)  1,5x8=12m <sup>2</sup>	BBCH 00	n/a	1	700

**Notes:**

- (1): test report number including the year of establishing the trial
- (2): precise place of the trial followed by the country
- (3): F= field trial, G=protected crop, specify
- (4): N=Natural infestation, A= Artificial inoculation
- (5): Trial responsible entity/ officially recognized organization
- (6): Test guideline used
- (7): Sample size per plot
- (8): Crop growth stage at application timing

#### Appendix 4 Summary of data on effectiveness trials per use

Test report (1)	Crop/ cultivar Harmful organ- ism/ weed species or intended use	Assessed part and variable (2) no / m²	Untreated  BBCH (during application)	Efficacy treatments (3)				Remarks (4)
				Product		Standard (s)		
				name	Dose [L/ha]	name	dose [L /ha]	
AF/20/PO/32/Pn/01	winter wheat / Arkadia  FUSASP	PLANT C	FUSASP BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 16.11.2020 Assessment date: 24.11.2020 04.12.2020
AF/20/PO/32/Pn/02	winter wheat / Potenzial  FUSASP	PLANT C	FUSASP BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 16.11.2020 Assessment date: 24.11.2020 04.12.2020
AF/20/PO/32/Pn/03	winter wheat / Opal  FUSASP	PLANT C	FUSASP BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 16.11.2020 Assessment date: 24.11.2020 04.12.2020
AF/20/PO/32/Pn/04	winter wheat / Opal  MONGNI	PLANT C	MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 11.01.2021 Assessment date: 19.01.2021 27.01.2021
AF/20/PO/32/Pn/05	winter wheat / Princeps  MONGNI	PLANT C	MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 11.01.2021 Assessment date: 19.01.2021 27.01.2021
AF/20/PO/32/Pn/06	winter wheat / Tonacja  MONGNI	PLANT C	MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 11.01.2021 Assessment date: 19.01.2021 27.01.2021
8 F/2021	winter wheat / Jubilar  USTINT	PLPRIN P	USTINT BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 25.09.2020 Assessment date: 18.06.2021
9 F/2021	winter wheat / Turnia  USTINT	PLPRIN P	USTINT BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 25.09.2020 Assessment date: 18.06.2021
10 F/2021	winter wheat / Nadobna  USTINT	PLPRIN P	USTINT BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 25.09.2020 Assessment date: 18.06.2021
11 F/2021	winter wheat / Tobak	PLPRIN P	FUSASP BBCH 00	1.CHR/ZF/PROTI 100 FS	60	Premis 025 FS	200	Application

	FUSASP MONGNI		MONGNI BBCH 00	2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	80 100	Redigo 100 FS	100	date: 25.09.2020 Assessment date: 13.11.2020 – FUSASP 25.02.2021 – MONGNI
12 F/2021	winter wheat / Zyta  FUSASP MONGNI	PLPRIN P	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 25.09.2020 Assessment date: 16.11.2020 – FUSASP 25.02.2021 – MONGNI
22 F/2021	winter wheat / Zyta  TILLCA	PLPRIN P	TILLCA BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 25.09.2020 Assessment date: 06.07.2021
23 F/2021	winter wheat / Fidelius  TILLCA	PLPRIN P	TILLCA BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 25.09.2020 Assessment date: 06.07.2021
APK-20-47775-PL01	winter wheat / Bilanz  TILLCA	EAR C	TILLCA BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 29.09.2020 Assessment date: 07.07.2021
APK-20-47775-PL02	winter wheat / Mewa  TILLCA	EAR C	TILLCA BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 30.09.2020 Assessment date: 29.07.2021
APK-20-47775-PL03	winter wheat / Julius  TILLCA	EAR C	TILLCA BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 29.09.2020 Assessment date: 19.07.2021
APK-20-47891-PL01	winter wheat / Julius  FUSASP MONGNI	PLANT C	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 30.09.2020 Assessment date: 01.04.2021
APK-20-47891-PL02	winter wheat / Bilanz  FUSASP MONGNI	PLANT C	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 01.10.2020 Assessment date: 31.03.2021
APK-20-47891-PL03	winter wheat / Julius  FUSASP MONGNI	PLANT C	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 29.09.2020 Assessment date: 17.03.2021

AF/20/PO/32/Br/01	winter wheat / Potenzial  TILLCA	EAR C	TILLCA BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 30.09.2020 Assessment date: 04.06.2021
AF/20/PO/32/Pr/02	winter wheat / Tonacja  TILLCA	EAR C	TILLCA BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 30.09.2020 Assessment date: 08.06.2021
AF/20/PO/32/Gr/03	winter wheat / Princeps  TILLCA	EAR C	TILLCA BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 30.09.2020 Assessment date: 04.06.2021
AF/20/PO/32/Zl/04	winter wheat / Bogatka  TILLCA	EAR C	TILLCA BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 01.10.2020 Assessment date: 09.06.2021
AF/20/PO/32/Br/05	winter wheat / Princeps  FUSASP MONGNI	PLANT C	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 30.09.2020 Assessment date: 16.10.2021 – FUSASP 06.04.2021 – MONGNI
AF/20/PszO/32/Pn/07	winter triticale / Twingo  FUSASP	PLANT C	FUSASP BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 01.02.2021 Assessment date: 10.02.2021 22.02.2021
AF/20/PszO/32/Pn/08	winter triticale / Salto  FUSASP	PLANT C	FUSASP BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 01.02.2021 Assessment date: 10.02.2021 22.02.2021
AF/20/PszO/32/Pn/09	winter triticale / Grenado  FUSASP	PLANT C	FUSASP BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 01.02.2021 Assessment date: 10.02.2021 22.02.2021
AF/20/PszO/32/Pn/10	winter triticale / Wilton  MONGNI	PLANT C	MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 23.02.2021 Assessment date: 02.03.2021 10.03.2021
AF/20/PszO/32/Pn/11	winter triticale / Salto  MONGNI	PLANT C	MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 23.02.2021 Assessment date: 02.03.2021 10.03.2021

AF/20/PszO/32/Pn/12	winter triticale / Magnat  MONGNI	PLANT C	MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 23.02.2021 Assessment date: 02.03.2021 10.03.2021
15 F/2021	winter triticale / Trismart  FUSASP MONGNI	PLPRIN P	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 21.09.2020 Assessment date: 20.10.2020 – FUSASP 25.02.2021 – MONGNI
16 F/2021	winter triticale / Rotondo  FUSASP MONGNI	PLPRIN P	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 21.09.2020 Assessment date: 09.10.2020 – FUSASP 25.02.2021 – MONGNI
APK-20-47891-PL04	winter triticale / Porto  FUSASP MONGNI	PLANT C	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 29.09.2020 Assessment date: 01.04.2021
APK-20-47891-PL05	winter triticale / Borowik  FUSASP MONGNI	PLANT C	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 30.09.2020 Assessment date: 24.03.2021
APK-20-47891-PL06	winter triticale / Borowik  FUSASP MONGNI	PLANT C	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 29.09.2020 Assessment date: 31.03.2021
AF/20/PszO/32/Pr/06	winter triticale / Twingo  FUSASP MONGNI	PLANT C	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 30.09.2020 Assessment date: 20.10.2020 – FUSASP 02.04.2021 – MONGNI
AF/20/ŽO/32/Pn/13	winter rye / Poznańskie  FUSASP	PLANT C	FUSASP BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 16.11.2020 Assessment date: 24.11.2020 04.12.2020
AF/20/ŽO/32/Pn/14	winter rye / Diamant  FUSASP	PLANT C	FUSASP BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 16.11.2020 Assessment date: 24.11.2020 04.12.2020

AF/20/ŽO/32/Pn/15	winter rye / Daniello  FUSASP	PLANT C	FUSASP BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 16.11.2020 Assessment date: 24.11.2020 04.12.2020
AF/20/ŽO/32/Pn/16	winter rye / Palazzo  MONGNI	PLANT C	MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 11.01.2021 Assessment date: 19.01.2021 27.01.2021
AF/20/ŽO/32/Pn/17	winter rye / Diamant  MONGNI	PLANT C	MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 11.01.2021 Assessment date: 19.01.2021 27.01.2021
AF/20/ŽO/32/Pn/18	winter rye / Poznańskie  MONGNI	PLANT C	MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 11.01.2021 Assessment date: 19.01.2021 27.01.2021
17 F/2021	winter rye / Dańkowskie Rubin  FUSASP MONGNI	PLPRIN P	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 01.10.2020 Assessment date: 05.11.2020 – FUSASP 25.02.2021 – MONGNI
18 F/2021	winter rye / Dukato  FUSASP MONGNI	PLPRIN P	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 01.10.2020 Assessment date: 05.11.2020 – FUSASP 25.02.2021 – MONGNI
19 F/2021	winter rye / Su Forsetti  FUSASP MONGNI	PLPRIN P	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 01.10.2020 Assessment date: 09.11.2020 – FUSASP 25.02.2021 – MONGNI
26 F/2021	winter rye / Dukato  UROCO	PLPRIN P	UROCO BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 01.10.2020 Assessment date: 31.03.2021
27 F/2021	winter rye / Dańkowskie Rubin  UROCO	PLPRIN P	UROCO BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 01.10.2020 Assessment date: 31.03.2021



28 F/2021	winter rye / Su Forsetti  UROCOG	PLPRIN P	UROCOG BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 01.10.2020 Assessment date: 31.03.2021
29 F/2021	winter rye / Dańkowskie Granat  UROCOG	PLPRIN P	UROCOG BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 01.10.2020 Assessment date: 31.03.2021
30 F/2021	winter rye / Dańkowskie Diamant  UROCOG	PLPRIN P	UROCOG BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 01.10.2020 Assessment date: 31.03.2021
APK-20-47891-PL07	winter rye / Agat  FUSASP MONGNI	PLANT C	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 29.09.2020 Assessment date: 01.04.2021
APK-20-47891-PL08	winter rye / Dańkowskie Turkus  FUSASP MONGNI	PLANT C	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 29.09.2020 Assessment date: 15.03.2021
APK-20-47891-PL09	winter rye / Dańkowskie Amber  FUSASP MONGNI	PLANT C	FUSASP BBCH 00  MONGNI BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 30.09.2020 Assessment date: 31.03.2021
AF/20/ŽO/32/Br/07	winter rye / Daniello  UROCOG	EAR C	UROCOG BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 30.09.2020 Assessment date: 08.06.2021
AF/20/ŽO/32/Pr/08	winter rye / Poznańskie  UROCOG	EAR C	UROCOG BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 30.09.2020 Assessment date: 14.06.2021
AF/20/ŽO/32/Gr/09	winter rye / Palazzo  UROCOG	EAR C	UROCOG BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 30.09.2020 Assessment date: 11.06.2021
AF/20/ŽO/32/Zi/10	winter rye / Dańkowskie Diamant  UROCOG	EAR C	UROCOG BBCH 00	1.CHR/ZF/PROTI 100 FS 2.CHR/ZF/PROTI 100 FS 3.CHR/ZF/PROTI 100 FS	60 80 100	Premis 025 FS Redigo 100 FS	200 100	Application date: 01.10.2020 Assessment date: 09.06.2021

**Notes:**

1): Test report number including the year of establishing the trial

- (2): Plant part assessed and criteria for assessment
- (3): efficacy or intended effect
- (4): Relevant conclusions on effectiveness

## Appendix 5 Summary of detailed data on fungicide seed treatment effectiveness trials

Table 1. The efficacy of CHR/ZF/PROTI in control of *FUSASP Fusarium sp.* in winter wheat. Assessment of efficacy in autumn 16 - 52 days after application.

Pest code			FUSASP Fusarium sp. autumn assessment					
report code			11 F/2021	12 F/2021	AF/20/PO/32/Br/05			
DA-A			49 DA-A	52 DA-A	16 DA-A			
date			13.11.2020	16.11.2020	16.10.2020	Average	min.	max.
Pest incidence / disease plant			62,00	55,00	35,90	50,97	35,90	62,00
Part assessed			PLPRIN P	PLPRIN P	PLANT C			
No.	Name	Rate (ml/100 kg)						
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	14,50	23,60	38,00	25,37	14,50	38,00
3	CHR/ZF/PROTI 100 FS	80,00	43,50	35,50	72,20	50,40	35,50	72,20
4	CHR/ZF/PROTI 100 FS	100,00	50,80	54,50	95,70	67,00	50,80	95,70
5	Premis 025 FS	200,00	48,40	50,90	98,00	65,77	48,40	98,00
6	Redigo 100 FS	100,00	50,80	58,20	95,00	68,00	50,80	95,00
LSD (P=.05)			10,40	7,90	11,88			

Table 2. The efficacy of CHR/ZF/PROTI in control of *FUSASP Fusarium sp.* in winter wheat. Assessment of efficacy in spring 169-183 days after application.

Pest code			FUSASP Fusarium sp. spring assessment					
report code			APK-20-47891-PL01	APK-20-47891-PL02	APK-20-47891-PL03			
DA-A			183 DA-A	181 DA-A	169 DA-A			
date			01.04.2021	31.03.2021	17.03.2021	Average	min.	max.
Pest incidence / disease plant			62,80	15,30	21,90	33,33	15,30	62,80
Part assessed			PLANT C	PLANT C	PLANT C			
No.	Name	Rate (ml/100 kg)						
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	33,40	79,50	67,00	59,97	33,40	79,50
3	CHR/ZF/PROTI 100 FS	80,00	39,10	100,00	77,80	72,30	39,10	100,00
4	CHR/ZF/PROTI 100 FS	100,00	50,20	100,00	88,50	79,57	50,20	100,00
5	Premis 025 FS	200,00	23,90	100,00	82,70	68,87	23,90	100,00
6	Redigo 100 FS	100,00	29,90	100,00	82,50	70,80	29,90	100,00
LSD (P=.05)			4,78	5,23	9,87			

Table 3. The efficacy of CHR/ZF/PROTI in control of *FUSASP Fusarium sp.* in winter wheat. Assessment of efficacy in laboratory experiments 8 - 18 days after application.

Pest code			FUSASP Fusarium sp.								
report code			AF/20/PO/32/Pn/01		AF/20/PO/32/Pn/02		AF/20/PO/32/Pn/03				
DA-A			8 DA-A	18 DA-A	8 DA-A	18 DA-A	8 DA-A	18 DA-A			
date			24.11.2020	04.12.2020	24.11.2020	04.12.2020	24.11.2020	04.12.2020	Average	min.	max.
Pest incidence / disease plant			6,30	8,30	5,30	6,00	7,00	8,00	6,82	5,30	8,30
Part assessed			PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C			
No.	Name	Rate (ml/100 kg)									
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	36,00	42,40	47,60	54,20	39,30	37,50	42,83	36,00	54,20
3	CHR/ZF/PROTI 100 FS	80,00	64,00	69,70	57,10	58,30	60,70	62,50	62,05	57,10	69,70
4	CHR/ZF/PROTI 100 FS	100,00	72,00	81,80	66,70	62,50	78,60	75,00	72,77	62,50	81,80
5	Premis 025 FS	200,00	52,00	66,70	47,60	47,80	67,90	68,80	58,47	47,60	68,80
6	Redigo 100 FS	100,00	68,00	66,70	71,40	71,80	71,40	71,90	70,20	66,70	71,90
LSD (P=.05)			23,12	19,36	36,03	39,99	19,88	17,40			

Table 4. The efficacy of CHR/ZF/PROTI in control of *MONGNI Monographella nivalis* (anam. *Microdochium nivale*). in winter wheat. Assessment of efficacy in field trials 153-188 days after application

Pest code			MONGNI Monographella nivalis (anam. Microdochium nivale)								
report code			11 F/2021	12 F/2021	APK-20-47891-PL01	APK-20-47891-PL02	APK-20-47891-PL03	AF/20/PO/32/Br/05			
DA-A			153 DA-A	153 DA-A	183 DA-A	181 DA-A	169 DA-A	188 DA-A			
date			25.02.2021	25.02.2021	01.04.2021	31.03.2021	17.03.2021	06.04.2021	Average	min.	max.
Pest incidence / disease plant			8,00	5,00	9,70	6,00	11,40	31,40	11,92	5,00	31,40
Part assessed			PLPRIN P	PLPRIN P	PLANT C	PLANT C	PLANT C	PLANT C			
No.	Name	Rate (ml/100 kg)									
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	41,90	52,40	56,30	91,40	72,90	32,60	57,92	32,60	91,40
3	CHR/ZF/PROTI 100 FS	80,00	54,80	61,90	66,00	100,00	100,00	74,10	76,13	54,80	100,00
4	CHR/ZF/PROTI 100 FS	100,00	61,30	66,70	76,90	100,00	100,00	95,20	83,35	61,30	100,00
5	Premis 025 FS	200,00	64,50	81,00	53,50	100,00	100,00	95,20	82,37	53,50	100,00
6	Redigo 100 FS	100,00	45,20	38,10	61,90	100,00	100,00	96,10	73,55	38,10	100,00
LSD (P=.05)			0,80	0,70	7,07	6,26	12,82	23,72			

Table 5. The efficacy of CHR/ZF/PROTI in control of *MONGNI Monographella nivalis* (anam. *Microdochium nivale*). in winter wheat. Assessment of efficacy in laboratory experiments 8 - 16 days after application

Pest code			MONGNI Monographella nivalis (anam. Microdochium nivale)								
report code			AF/20/PO/32/Pn/04		AF/20/PO/32/Pn/05		AF/20/PO/32/Pn/06				
DA-A			8 DA-A	16 DA-A	8 DA-A	16 DA-A	8 DA-A	16 DA-A			
date			19.01.2021	27.01.2021	19.01.2021	27.01.2021	19.01.2021	27.01.2021	Average	min.	max.
Pest incidence / disease plant			6,80	8,50	6,30	8,30	7,30	9,00	7,70	6,30	9,00
Part assessed			PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C			
No.	Name	Rate (ml/100 kg)									
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	22,20	26,50	36,00	39,40	13,80	19,40	26,22	13,80	39,40
3	CHR/ZF/PROTI 100 FS	80,00	29,60	29,40	52,00	69,70	34,50	36,10	41,88	29,40	69,70
4	CHR/ZF/PROTI 100 FS	100,00	55,60	61,80	52,00	72,70	75,90	77,80	65,97	52,00	77,80
5	Premis 025 FS	200,00	51,90	52,90	48,00	66,70	72,40	75,00	61,15	48,00	75,00
6	Redigo 100 FS	100,00	59,30	58,80	44,00	69,70	44,80	44,40	53,50	44,00	69,70
LSD (P=,05)			39,65	42,02	26,29	21,09	49,39	50,47			

Table 6. The efficacy of CHR/ZF/PROTI in control of *TILLCA Tilletia caries* in winter wheat

Pest code	report code	DA-A	date	Pest incidence / disease plant	Part assessed	No.	1	2	3	4	5	6	LSD (P=,05)
						Name	Untreated Check	CHR/ZF/PROTI 100 FS	CHR/ZF/PROTI 100 FS	CHR/ZF/PROTI 100 FS	Premis 025 FS	Redigo 100 FS	
						Rate (ml/100 kg)		60,00	80,00	100,00	200,00	100,00	
<b>TILLCA</b> <b>Tilletia</b> <b>caries</b>	22 F/2021	284 DA-A	06.07.2021	29,04	PLPRIN P		0,00	100,00	100,00	100,00	100,00	99,70	3,221
	23 F/2021	284 DA-A	06.07.2021	32,39	PLPRIN P		0,00	97,20	99,70	100,00	100,00	100,00	2,082
	APK-20-47775-PL01	281 DA-A	07.07.2021	349,70	EAR C		0,00	99,70	100,00	100,00	99,80	100,00	0,28
	APK-20-47775-PL02	302 DA-A	29.07.2021	114,40	EAR C		0,00	91,70	98,50	100,00	100,00	100,00	1,15
	APK-20-47775-PL03	293 DA-A	19.07.2021	225,20	EAR C		0,00	97,30	100,00	100,00	100,00	100,00	0,81
	AF/20/PO/32/Br/01	247 DA-A	04.06.2021	190,00	EAR C		0,00	84,00	93,00	100,00	99,00	100,00	2,90
	AF/20/PO/32/Pr/02	251 DA-A	08.06.2021	432,80	EAR C		0,00	83,00	94,00	100,00	99,00	100,00	3,10
	AF/20/PO/32/Gr/03	247 DA-A	04.06.2021	344,90	EAR C		0,00	80,00	91,00	100,00	100,00	100,00	0,2-3,8
	AF/20/PO/32/Zl/04	251 DA-A	09.06.2021	381,90	EAR C		0,00	77,00	91,00	100,00	100,00	100,00	0,1-2,9
			Average	233,37			0,00	89,99	96,36	100,00	99,76	99,97	
			min.	29,04			0,00	77,00	91,00	100,00	99,00	99,70	
			max.	432,80			0,00	100,00	100,00	100,00	100,00	100,00	



Table 7. The efficacy of CHR/ZF/PROTI in control of *USTINT Ustilago tritici* in winter wheat

Pest code			USTINT Ustilago tritici					
report code			8 F/2021	9 F/2021	10 F/2021			
DA-A			266 DA-A	266 DA-A	266 DA-A			
date			18.06.2021	18.06.2021	18.06.2021	Average	min.	max.
Pest incidence / disease plant			5,49	7,86	6,76	6,70	5,49	7,86
Part assessed			PLPRIN P	PLPRIN P	PLPRIN P			
No.	Name	Rate (ml/100 kg)						
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	93,60	95,50	95,00	94,70	93,60	95,50
3	CHR/ZF/PROTI 100 FS	80,00	100,00	100,00	100,00	100,00	100,00	100,00
4	CHR/ZF/PROTI 100 FS	100,00	100,00	100,00	100,00	100,00	100,00	100,00
5	Premis 025 FS	200,00	100,00	100,00	100,00	100,00	100,00	100,00
6	Redigo 100 FS	100,00	100,00	100,00	100,00	100,00	100,00	100,00
LSD (P=,05)			1,541	0,576	1,079			

Table 8. The efficacy of CHR/ZF/PROTI in control of *FUSASP Fusarium sp.* in winter triticale. Assessment of efficacy in autumn 20 - 49 days after application.

Pest code			FUSASP Fusarium sp. autumn assessment					
report code			15 F/2021	16 F/2021	AF/20/PszO/32/Pr/06			
DA-A			29 DA-A	49 DA-A	20 DA-A			
date			20.10.2020	09.10.2020	20.10.2020	Average	min.	max.
Pest incidence / disease plant			52,00	40,50	36,80	43,10	36,80	52,00
Part assessed			PLPRIN P	PLPRIN P	PLANT C			
No.	Name	Rate (ml/100 kg)						
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	34,60	27,20	30,00	30,60	27,20	34,60
3	CHR/ZF/PROTI 100 FS	80,00	60,60	66,70	64,00	63,77	60,60	66,70
4	CHR/ZF/PROTI 100 FS	100,00	66,30	80,20	93,70	80,07	66,30	93,70
5	Premis 025 FS	200,00	78,80	77,80	91,50	82,70	77,80	91,50
6	Redigo 100 FS	100,00	54,80	74,10	94,40	74,43	54,80	94,40
LSD (P=.05)			9,26	11,416	6,81			

Table 9. The efficacy of CHR/ZF/PROTI in control of *FUSASP Fusarium sp.* in winter triticale. Assessment of efficacy in spring 175-184 days after application.

Pest code			FUSASP Fusarium sp. spring assessment					
report code			APK-20-47891-PL04	APK-20-47891-PL05	APK-20-47891-PL06			
DA-A			184 DA-A	175 DA-A	183 DA-A			
date			01.04.2021	24.03.2021	31.03.2021	Average	min.	max.
Pest incidence / disease plant			66,00	19,10	18,00	34,37	18,00	66,00
Part assessed			PLANT C	PLANT C	PLANT C			
No.	Name	Rate (ml/100 kg)						
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	26,10	51,80	58,40	45,43	26,10	58,40
3	CHR/ZF/PROTI 100 FS	80,00	43,40	67,20	81,20	63,93	43,40	81,20
4	CHR/ZF/PROTI 100 FS	100,00	64,20	85,90	88,90	79,67	64,20	88,90
5	Premis 025 FS	200,00	62,60	79,50	87,50	76,53	62,60	87,50
6	Redigo 100 FS	100,00	61,60	82,40	89,90	77,97	61,60	89,90
LSD (P=.05)			12,50	22,07	11,63			

Table 10. The efficacy of CHR/ZF/PROTI in control of *FUSASP Fusarium sp.* in winter triticale. Assessment of efficacy in laboratory experiments 9 - 21 days after application.

Pest code			FUSASP Fusarium sp.								
report code			AF/20/PszO/32/Pn/07		AF/20/PszO/32/Pn/08		AF/20/PszO/32/Pn/09				
DA-A			9 DA-A	21 DA-A	9 DA-A	21 DA-A	9 DA-A	21 DA-A			
date			10.02.2021	22.02.2021	10.02.2021	22.02.2021	10.02.2021	22.02.2021	Average	min.	max.
Pest incidence / disease plant			5,00	6,80	5,30	6,30	6,30	9,30	6,50	5,00	9,30
Part assessed			PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C			
No.	Name	Rate (ml/100 kg)									
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	45,00	48,10	57,10	60,00	48,00	54,10	52,05	45,00	60,00
3	CHR/ZF/PROTI 100 FS	80,00	55,00	63,00	71,40	60,00	68,00	67,60	64,17	55,00	71,40
4	CHR/ZF/PROTI 100 FS	100,00	85,00	88,90	71,40	64,00	72,00	70,30	75,27	64,00	88,90
5	Premis 025 FS	200,00	30,00	37,00	47,60	48,00	80,00	91,90	55,75	30,00	91,90
6	Redigo 100 FS	100,00	35,00	51,90	57,10	56,00	76,00	81,10	59,52	35,00	81,10
LSD (P=.05)			59,58	55,26	31,59	21,70	27,14	22,65			

Table 11. The efficacy of CHR/ZF/PROTI in control of *MONGNI Monographella nivalis* (anam. *Microdochium nivale*) winter triticale. Assessment of efficacy in field trials 157-184 days after application.

Pest code			MONGNI Monographella nivalis (anam. Microdochium nivale)								
report code			15 F/2021	16 F/2021	APK-20-47891-PL04	APK-20-47891-PL05	APK-20-47891-PL06	AF/20/PszO/32/Pr/06			
DA-A			157 DA-A	157 DA-A	184 DA-A	175 DA-A	183 DA-A	184 DA-A			
date			25.02.2021	25.02.2021	01.04.2021	24.03.2021	31.03.2021	02.04.2021	Average	min.	max.
Pest incidence / disease plant			17,25	19,50	13,50	15,50	10,20	29,70	17,61	10,20	29,70
Part assessed			PLPRIN P	PLPRIN P	PLANT C	PLANT C	PLANT C	PLANT C			
No.	Name	Rate (ml/100 kg)									
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	34,80	39,70	43,80	75,10	86,70	19,00	49,85	19,00	86,70
3	CHR/ZF/PROTI 100 FS	80,00	59,40	69,20	53,00	100,00	100,00	57,30	73,15	53,00	100,00
4	CHR/ZF/PROTI 100 FS	100,00	66,70	82,10	68,60	100,00	100,00	95,90	85,55	66,70	100,00
5	Premis 025 FS	200,00	56,50	83,30	70,40	100,00	100,00	91,30	83,58	56,50	100,00
6	Redigo 100 FS	100,00	79,70	83,30	68,10	100,00	100,00	95,70	87,80	68,10	100,00
LSD (P=.05)			3,124	3,541	11,58	11,21	6,96	12,81			

Table 12. The efficacy of CHR/ZF/PROTI in control of *MONGNI Monographella nivalis* (anam. *Microdochium nivale*) winter triticales. Assessment of efficacy in laboratory experiments 7 - 15 days after application.

Pest code			MONGNI Monographella nivalis (anam. Microdochium nivale)								
report code			AF/20/PszO/32/Pn/10		AF/20/PszO/32/Pn/11		AF/20/PszO/32/Pn/12				
DA-A			7 DA-A	15 DA-A	7 DA-A	15 DA-A	7 DA-A	15 DA-A			
date			02.03.2021	10.03.2021	02.03.2021	10.03.2021	02.03.2021	10.03.2021	Average	min.	max.
Pest incidence / disease plant			6,30	8,30	5,00	5,80	5,30	6,30	6,17	5,00	8,30
Part assessed			PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C			
No.	Name	Rate (ml/100 kg)									
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	36,00	39,40	40,00	30,40	33,30	36,00	35,85	30,40	40,00
3	CHR/ZF/PROTI 100 FS	80,00	76,00	75,80	80,00	73,90	65,80	68,00	73,25	65,80	80,00
4	CHR/ZF/PROTI 100 FS	100,00	88,00	81,80	90,00	82,60	71,10	77,00	81,75	71,10	90,00
5	Premis 025 FS	200,00	76,00	81,80	85,00	73,90	66,70	56,00	73,23	56,00	85,00
6	Redigo 100 FS	100,00	80,00	81,80	75,00	73,90	66,70	44,00	70,23	44,00	81,80
LSD (P=.05)			17,75	20,03	24,20	27,02	51,37	48,26			

Table 13. The efficacy of CHR/ZF/PROTI in control of *FUSASP Fusarium sp.* winter rye. Assessment of efficacy in autumn 35-39 days after application

Pest code			FUSASP Fusarium sp. autumn assessment					
report code			17 F/2021	18 F/2021	19 F/2021			
DA-A			35 DA-A	35 DA-A	39 DA-A			
date			05.11.2020	05.11.2020	09.11.2020	Average	min.	max.
Pest incidence / disease plant			12,00	18,50	9,50	13,33	9,50	18,50
Part assessed			PLPRIN P	PLPRIN P	PLPRIN P			
No.	Name	Rate (ml/100 kg)						
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	75,00	59,50	57,90	64,13	57,90	75,00
3	CHR/ZF/PROTI 100 FS	80,00	100,00	75,70	94,70	90,13	75,70	100,00
4	CHR/ZF/PROTI 100 FS	100,00	100,00	86,50	100,00	95,50	86,50	100,00
5	Premis 025 FS	200,00	83,30	83,80	94,70	87,27	83,30	94,70
6	Redigo 100 FS	100,00	83,30	89,20	84,20	85,57	83,30	89,20
LSD (P=.05)			1,439	3,209	1,959			

Table 14. The efficacy of CHR/ZF/PROTI in control of *FUSASP Fusarium sp.* winter rye. Assessment of efficacy in spring 167-184 days after application.

Pest code			FUSASP Fusarium sp. spring assessment					
report code			APK-20-47891-PL07	APK-20-47891-PL08	APK-20-47891-PL09			
DA-A			184 DA-A	167 DA-A	182 DA-A			
date			01.04.2021	15.03.2021	31.03.2021	Average	min.	max.
Pest incidence / disease plant			46,90	21,00	51,80	39,90	21,00	51,80
Part assessed			PLANT C	PLANT C	PLANT C			
No.	Name	Rate (ml/100 kg)						
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	33,90	42,90	35,50	37,43	33,90	42,90
3	CHR/ZF/PROTI 100 FS	80,00	45,20	71,60	41,20	52,67	41,20	71,60
4	CHR/ZF/PROTI 100 FS	100,00	55,40	82,80	53,60	63,93	53,60	82,80
5	Premis 025 FS	200,00	50,70	77,80	50,10	59,53	50,10	77,80
6	Redigo 100 FS	100,00	55,50	76,70	52,20	61,47	52,20	76,70
LSD (P=.05)			11,20	11,95	7,05			



Table 15. The efficacy of CHR/ZF/PROTI in control of FUSASP Fusarium sp. winter rye. Assessment of efficacy in laboratory experiments 8-18 days after applica-  
tion

Pest code			FUSASP Fusarium sp.								
report code			AF/20/ŽO/32/Pn/13		AF/20/ŽO/32/Pn/14		AF/20/ŽO/32/Pn/15				
DA-A			8 DA-A	18 DA-A	8 DA-A	18 DA-A	8 DA-A	18 DA-A			
date			24.11.2020	04.12.2020	24.11.2020	04.12.2020	24.11.2020	04.12.2020	Average	min.	max.
Pest incidence / disease plant			5,80	7,00	5,00	6,80	6,00	6,80	6,23	5,00	7,00
Part assessed			PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C			
No.	Name	Rate (ml/100 kg)									
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	60,90	64,30	25,00	33,30	41,70	40,70	44,32	25,00	64,30
3	CHR/ZF/PROTI 100 FS	80,00	65,20	71,40	45,00	48,10	75,00	70,40	62,52	45,00	75,00
4	CHR/ZF/PROTI 100 FS	100,00	82,60	85,70	85,00	85,20	79,20	74,10	81,97	74,10	85,70
5	Premis 025 FS	200,00	69,60	71,40	50,00	63,00	70,80	66,70	65,25	50,00	71,40
6	Redigo 100 FS	100,00	69,60	64,30	55,00	63,00	66,70	59,30	62,98	55,00	69,60
LSD (P=.05)			40,51	36,39	59,78	56,99	29,84	20,52			

Table 16. The efficacy of CHR/ZF/PROTI in control of *MONGNI Monographella nivalis* (anam. *Microdochium nivale*) winter rye. Assessment of efficacy in field trials 147-184 days after application.

Pest code			MONGNI Monographella nivalis (anam. Microdochium nivale)								
report code			17 F/2021	18 F/2021	19 F/2021	APK-20-47891-PL07	APK-20-47891-PL08	APK-20-47891-PL09			
DA-A			147 DA-A	147 DA-A	147 DA-A	184 DA-A	167 DA-A	182 DA-A			
date			25.02.2021	25.02.2021	25.02.2021	01.04.2021	15.03.2021	31.03.2021	Average	min.	max.
Pest incidence / disease plant			5,25	9,75	5,75	13,10	13,50	6,70	9,01	5,25	13,50
Part assessed			PLPRIN P	PLPRIN P	PLPRIN P	PLANT C	PLANT C	PLANT C			
No.	Name	Rate (ml/100 kg)									
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	71,40	64,10	65,20	26,90	79,50	59,80	61,15	26,90	79,50
3	CHR/ZF/PROTI 100 FS	80,00	95,20	89,70	95,70	64,20	100,00	73,10	86,32	64,20	100,00
4	CHR/ZF/PROTI 100 FS	100,00	100,00	94,90	100,00	77,20	100,00	84,40	92,75	77,20	100,00
5	Premis 025 FS	200,00	81,00	94,90	95,70	78,60	100,00	80,30	88,42	78,60	100,00
6	Redigo 100 FS	100,00	76,20	97,40	87,00	76,00	100,00	76,10	85,45	76,00	100,00
LSD (P=.05)			1,063	1,231	0,953	13,74	4,99	23,88			

Table 17. The efficacy of CHR/ZF/PROTI in control of *MONGNI Monographella nivalis* (anam. *Microdochium nivale*) winter rye. Assessment of efficacy in laboratory experiments 8 - 16 days after application.

Pest code			MONGNI Monographella nivalis (anam. Microdochium nivale)								
report code			AF/20/ZO/32/Pn/16		AF/20/ZO/32/Pn/17		AF/20/PszO/32/Pn/18				
DA-A			8 DA-A	16 DA-A	8 DA-A	16 DA-A	8 DA-A	16 DA-A			
date			19.01.2021	27.01.2021	19.01.2021	27.01.2021	19.01.2021	27.01.2021	Average	min.	max.
Pest incidence / disease plant			5,50	7,30	5,50	6,80	5,80	7,00	6,32	5,50	7,30
Part assessed			PLANT C	PLANT C	PLANT C	PLANT C	PLANT C	PLANT C			
No.	Name	Rate (ml/100 kg)									
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	36,40	44,80	63,20	55,60	60,90	60,70	53,60	36,40	63,20
3	CHR/ZF/PROTI 100 FS	80,00	68,20	69,00	68,40	66,70	73,90	82,10	71,38	66,70	82,10
4	CHR/ZF/PROTI 100 FS	100,00	72,70	72,40	73,70	70,40	78,30	85,70	75,53	70,40	85,70
5	Premis 025 FS	200,00	59,10	58,60	68,40	63,00	73,90	75,00	66,33	58,60	75,00
6	Redigo 100 FS	100,00	54,50	51,70	52,60	51,90	78,30	78,60	61,27	51,70	78,60
LSD (P=.05)			53,18	45,29	43,35	33,92	23,61	28,63			

Table 18. The efficacy of CHR/ZF/PROTI in control of *UROCOC Urocystis occulta* winter rye.

Pest code			UROCOC Urocystis occulta											
report code			AF/20/ŽO/32/Br/07	AF/20/ŽO/32/Pr/08	AF/20/PO/32/Gr/09	AF/20/ŽO/32/Zl/10	26 F/2021	27 F/2021	28 F/2021	29 F/2021	30 F/2021			
DA-A			251 DA-A	257 DA-A	254 DA-A	251 DA-A	242 DA-A	242 DA-A	242 DA-A	242 DA-A	242 DA-A			
date			08.06.2021	14.06.2021	11.06.2021	09.06.2021	31.03.2021	31.03.2021	31.03.2021	31.03.2021	31.03.2021	Average	min.	max.
Pest incidence / disease plant			623,30	576,8	541,40	478,60	5,21	5,17	5,01	5,94	6,66	249,79	5,01	623,30
Part assessed			EAR C	EAR C	EAR C	EAR C	PLPRIN P	PLPRIN P	PLPRIN P	PLPRIN P	PLPRIN P			
No.	Name	Rate (ml/100 kg)												
1	Untreated Check		0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
2	CHR/ZF/PROTI 100 FS	60,00	89,00	89,00	89,00	90,00	100,00	100,00	100,00	100,00	97,10	94,90	89,00	100,00
3	CHR/ZF/PROTI 100 FS	80,00	97,00	98,00	97,00	99,00	100,00	100,00	100,00	100,00	100,00	99,00	97,00	100,00
4	CHR/ZF/PROTI 100 FS	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
5	Premis 025 FS	200,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
6	Redigo 100 FS	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
LSD (P=.05)			2.50	2.800	3.00	0.4-3.6	0.742	0.683	1.298	0.797	0.985			

## Appendix 6 Summary of phytotoxicity trials data in summary form

Table 1 – data from efficacy field trials – winter wheat

Report code	Treatment	Dose [ml/100 kg]	Phytotoxicity in %		
8 F/2021	Timing of assessment	DA-A	24 DA-A	38 DA-A	
	date		19.10.2020	02.11.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				
9 F/2021	Timing of assessment	DA-A	24 DA-A	38 DA-A	
	date		19.10.2020	02.11.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				
10 F/2021	Timing of assessment	DA-A	24 DA-A	38 DA-A	
	date		19.10.2020	02.11.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				
11 F/2021	Timing of assessment	DA-A	39 DA-A		
	date		03.11.2020		

	1.Untreated Check		0,00		
	2.CHR/ZF/PROTI 100 FS	60	0,00		
	3.CHR/ZF/PROTI 100 FS	80	0,00		
	4.CHR/ZF/PROTI 100 FS	100	0,00		
	5.Premis 025 FS	200	0,00		
	6.Redigo 100 FS	100	0,00		
	LSD (P=.05)				
12 F/2021	Timing of assessment	DA-A	39 DA-A		
	date		03.11.2020		
	1.Untreated Check		0,00		
	2.CHR/ZF/PROTI 100 FS	60	0,00		
	3.CHR/ZF/PROTI 100 FS	80	0,00		
	4.CHR/ZF/PROTI 100 FS	100	0,00		
	5.Premis 025 FS	200	0,00		
	6.Redigo 100 FS	100	0,00		
	LSD (P=.05)				
22 F/2021	Timing of assessment	DA-A	35 DA-A	42 DA-A	
	date		30.10.2020	06.11.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				
23 F/2021	Timing of assessment	DA-A	38 DA-A	46 DA-A	
	date		02.11.2020	10.11.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				
APK-20-47775-PL01	Timing of assessment	DA-A	34 DA-A	261 DA-A	

	<b>date</b>		<b>02.11.2020</b>	<b>17.06.2021</b>	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				
<b>APK-20-47775-PL02</b>	<b>Timing of assessment</b>	<b>DA-A</b>	<b>49 DA-A</b>	<b>264 DA-A</b>	
	<b>date</b>		<b>18.11.2020</b>	<b>21.06.2021</b>	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				
<b>APK-20-47775-PL03</b>	<b>Timing of assessment</b>	<b>DA-A</b>	<b>45 DA-A</b>	<b>255 DA-A</b>	
	<b>date</b>		<b>13.11.2020</b>	<b>11.06.2021</b>	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				
<b>APK-20-47891-PL01</b>	<b>Timing of assessment</b>	<b>DA-A</b>	<b>34 DA-A</b>	<b>56 DA-A</b>	<b>259 DA-A</b>
	<b>date</b>		<b>03.11.2020</b>	<b>25.11.2020</b>	<b>16.06.2021</b>
	1.Untreated Check		0,00	0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00	0,00
	LSD (P=.05)				

APK-20-47891-PL02	Timing of assessment	DA-A	39 DA-A	55 DA-A	259 DA-A
	date		09.11.2020	25.11.2020	17.06.2021
	1.Untreated Check		0,00	0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00	0,00
	LSD (P=.05)				
APK-20-47891-PL03	Timing of assessment	DA-A	45 DA-A	57 DA-A	255 DA-A
	date		13.11.2020	25.11.2020	11.06.2021
	1.Untreated Check		0,00	0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00	0,00
	LSD (P=.05)				
AF/20/PO/32/Br/01	Timing of assessment	DA-A	19 DA-A	247 DA-A	
	date		19.10.2020	04.06.2021	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				
AF/20/PO/32/Pr/02	Timing of assessment	DA-A	20 DA-A	251 DA-A	
	date		20.10.2020	08.06.2021	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				



	LSD (P=.05)				
AF/20/PO/32/Gr/03	Timing of assessment	DA-A	19 DA-A	247 DA-A	
	date		19.10.2020	04.06.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				
AF/20/PO/32/ZI/04	Timing of assessment	DA-A	20 DA-A	251 DA-A	
	date		21.10.2020	09.06.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				
AF/20/PO/32/Br/05	Timing of assessment	DA-A	16 DA-A	188 DA-A	
	date		16.10.2020	06.04.2021	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				

Table 2 – data from efficacy laboratory trials – winter wheat

Report code	Treatment	Dose [ml/100 kg]	Phytotoxicity in %	
AF/20/PO/32/Pn/01	Timing of assessment	DA-A	8 DA-A	18 DA-A

	<b>date</b>		<b>24.11.2020</b>	<b>04.12.2020</b>
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			
<b>AF/20/PO/32/Pn/02</b>	<b>Timing of assessment</b>	<b>DA-A</b>	<b>8 DA-A</b>	<b>18 DA-A</b>
	<b>date</b>		<b>24.11.2020</b>	<b>04.12.2020</b>
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			
<b>AF/20/PO/32/Pn/03</b>	<b>Timing of assessment</b>	<b>DA-A</b>	<b>8 DA-A</b>	<b>18 DA-A</b>
	<b>date</b>		<b>24.11.2020</b>	<b>04.12.2020</b>
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			
<b>AF/20/PO/32/Pn/04</b>	<b>Timing of assessment</b>	<b>DA-A</b>	<b>8 DA-A</b>	<b>16 DA-A</b>
	<b>date</b>		<b>19.01.2021</b>	<b>27.01.2021</b>
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00

	LSD (P=.05)			
AF/20/PO/32/Pn/05	Timing of assessment	DA-A	8 DA-A	16 DA-A
	date		19.01.2021	27.01.2021
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			
AF/20/PO/32/Pn/06	Timing of assessment	DA-A	8 DA-A	16 DA-A
	date		19.01.2021	27.01.2021
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			

Table 3 – data from selectivity field trials – winter wheat

Report code	Treatment	Dose [ml/100 kg]	Phytotoxicity in %				
20 F/2021	Timing of assessment	DA-A	32 DA-A	35 DA-A			
	date		27.10.2020	30.10.2020			
	1.Untreated Check		0,00	0,00			
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00			
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00			
	4.Premis 025 FS	200	0,00	0,00			
	5.Premis 025 FS	300	0,00	0,00			
	6.Redigo 100 FS	100	0,00	0,00			

	7.Redigo 100 FS	150	0,00	0,00			
	LSD (P=.05)						
21 F/2021	Timing of assessment	DA-A	32 DA-A	35 DA-A			
	date		27.10.2020	30.10.2020			
	1.Untreated Check		0,00	0,00			
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00			
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00			
	4.Premis 025 FS	200	0,00	0,00			
	5.Premis 025 FS	300	0,00	0,00			
	6.Redigo 100 FS	100	0,00	0,00			
	7.Redigo 100 FS	150	0,00	0,00			
	LSD (P=.05)						
APK-20-47776-PL01	Timing of assessment	DA-A	33 DA-A	62 DA-A	183 DA-A	259 DA-A	
	date		02.11.2020	01.12.2020	01.04.2021	16.06.2021	
	1.Untreated Check		0,00	0,00	0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00	0,00	0,00	
	4.Premis 025 FS	200	0,00	0,00	0,00	0,00	
	5.Premis 025 FS	300	0,00	0,00	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	0,00	0,00	
	7.Redigo 100 FS	150	0,00	0,00	0,00	0,00	
	LSD (P=.05)						
APK-20-47776-PL02	Timing of assessment	DA-A	39 DA-A	55 DA-A	181 DA-A	259 DA-A	
	date		09.11.2020	25.11.2020	31.03.2021	17.06.2021	
	1.Untreated Check		0,00	0,00	0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00	0,00	0,00	
	LSD (P=.05)						

	4.Premis 025 FS	200	0,00	0,00	0,00	0,00	
	5.Premis 025 FS	300	0,00	0,00	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	0,00	0,00	
	7.Redigo 100 FS	150	0,00	0,00	0,00	0,00	
	LSD (P=.05)						
AH/20/PO/32/ZI/b/01	Timing of assessment	DA-A	18 DA-A	21 DA-A	25 DA-A	32 DA-A	152 DA-A
	date		19.10.2020	22.10.2020	26.10.2020	02.11.2020	02.03.2021
	1.Untreated Check		0,00	0,00	0,00	0,00	0,00
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00	0,00	0,00	0,00
	4.Premis 025 FS	200	0,00	0,00	0,00	0,00	0,00
	5.Premis 025 FS	300	0,00	0,00	0,00	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00	0,00	0,00	0,00
	7.Redigo 100 FS	150	0,00	0,00	0,00	0,00	0,00
	LSD (P=.05)						
AF/20/PO/32/Gr/b/02	Timing of assessment	DA-A	5 DA-A	8 DA-A	14 DA-A	23 DA-A	205 DA-A
	date		05.10.2020	08.10.2020	14.10.2020	23.10.2020	23.04.2021
	1.Untreated Check		0,00	0,00	0,00	0,00	0,00
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00	0,00	0,00	0,00
	4.Premis 025 FS	200	0,00	0,00	0,00	0,00	0,00
	5.Premis 025 FS	300	0,00	0,00	0,00	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00	0,00	0,00	0,00
	7.Redigo 100 FS	150	0,00	0,00	0,00	0,00	0,00
	LSD (P=.05)						

Table 4 – data from efficacy field trials – winter triticale

Report code	Treatment	Dose [ml/100 kg]	Phytotoxicity in %		
15 F/2021	Timing of assessment	DA-A	17 DA-A	29 DA-A	
	date		08.10.2020	20.11.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				
16 F/2021	Timing of assessment	DA-A	32 DA-A	45 DA-A	
	date		23.10.2020	05.11.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				
APK-20-47891-PL04	Timing of assessment	DA-A	34 DA-A	57 DA-A	252 DA-A
	date		02.11.2020	25.11.2020	08.06.2021
	1.Untreated Check		0,00	0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00	0,00
	LSD (P=.05)				

APK-20-47891-PL05	Timing of assessment	DA-A	14 DA-A	23 DA-A	241 DA-A
	date		14.10.2020	23.10.2020	29.05.2021
	1.Untreated Check		0,00	0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00	0,00
	LSD (P=.05)				
APK-20-47891-PL06	Timing of assessment	DA-A	36 DA-A	45 DA-A	248 DA-A
	date		04.11.2020	13.11.2020	04.06.2021
	1.Untreated Check		0,00	0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00	0,00
	LSD (P=.05)				
AF/20/PszO/32/Pr/06	Timing of assessment	DA-A	25 DA-A	184 DA-A	
	date		25.10.2020	02.04.2021	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				

Table 5 – data from efficacy laboratory trials – winter triticales

Report code	Treatment	Dose [ml/100 kg]	Phytotoxicity in %	
AF/20/PszO/32/Pn/07	Timing of assessment	DA-A	9 DA-A	21 DA-A
	date		10.02.2021	22.02.2021
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			
AF/20/PszO/32/Pn/08	Timing of assessment	DA-A	9 DA-A	21 DA-A
	date		10.02.2021	22.02.2021
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			
AF/20/PszO/32/Pn/09	Timing of assessment	DA-A	9 DA-A	21 DA-A
	date		10.02.2021	22.02.2021
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00



	LSD (P=.05)			
AF/20/PszO/32/Pn/10	Timing of assessment	DA-A	7 DA-A	15 DA-A
	date		02.03.2021	10.03.2021
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			
AF/20/PszO/32/Pn/11	Timing of assessment	DA-A	7 DA-A	15 DA-A
	date		02.03.2021	10.03.2021
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			
AF/20/PszO/32/Pn/12	Timing of assessment	DA-A	7 DA-A	15 DA-A
	date		02.03.2021	10.03.2021
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			

Table 6 – data from selectivity field trials – winter triticale

Report code	Treatment	Dose [ml/100 kg]	Phytotoxicity in %				
13 F/2021	Timing of assessment	DA-A	32 DA-A	45 DA-A			
	date		23.10.2020	05.11.2020			
	1.Untreated Check		0,00	0,00			
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00			
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00			
	4.Premis 025 FS	200	0,00	0,00			
	5.Premis 025 FS	300	0,00	0,00			
	6.Redigo 100 FS	100	0,00	0,00			
	7.Redigo 100 FS	150	0,00	0,00			
	LSD (P=.05)						
14 F/2021	Timing of assessment	DA-A	12 DA-A	21 DA-A			
	date		03.10.2020	12.10.2020			
	1.Untreated Check		0,00	0,00			
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00			
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00			
	4.Premis 025 FS	200	0,00	0,00			
	5.Premis 025 FS	300	0,00	0,00			
	6.Redigo 100 FS	100	0,00	0,00			
	7.Redigo 100 FS	150	0,00	0,00			
	LSD (P=.05)						
APK-20-47776-PL03	Timing of assessment	DA-A	33 DA-A	56 DA-A	183 DA-A	251 DA-A	
	date		02.11.2020	25.11.2020	01.04.2021	08.06.2021	
	1.Untreated Check		0,00	0,00	0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00	0,00	0,00	
	4.Premis 025 FS	200	0,00	0,00	0,00	0,00	
	5.Premis 025 FS	300	0,00	0,00	0,00	0,00	

APK-20-47776-PL04	6.Redigo 100 FS	100	0,00	0,00	0,00	0,00	
	7.Redigo 100 FS	150	0,00	0,00	0,00	0,00	
	LSD (P=.05)						
	Timing of assessment	DA-A	36 DA-A	45 DA-A	183 DA-A	248 DA-A	
	date		04.11.2020	13.11.2020	31.03.2021	04.06.2021	
	1.Untreated Check		0,00	0,00	0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00	0,00	0,00	
	4.Premis 025 FS	200	0,00	0,00	0,00	0,00	
	5.Premis 025 FS	300	0,00	0,00	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	0,00	0,00	
	7.Redigo 100 FS	150	0,00	0,00	0,00	0,00	
	LSD (P=.05)						
AF/20/PszO/32/ZI/b/03	Timing of assessment	DA-A	14 DA-A	15 DA-A	22 DA-A	32 DA-A	204 DA-A
	date		15.10.2020	16.10.2020	23.10.2020	02.11.2020	23.04.2021
	1.Untreated Check		0,00	0,00	0,00	0,00	0,00
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00	0,00	0,00	0,00
	4.Premis 025 FS	200	0,00	0,00	0,00	0,00	0,00
	5.Premis 025 FS	300	0,00	0,00	0,00	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00	0,00	0,00	0,00
	7.Redigo 100 FS	150	0,00	0,00	0,00	0,00	0,00
	LSD (P=.05)						
AF/20/PszO/32/Gr/b/04	Timing of assessment	DA-A	5 DA-A	8 DA-A	14 DA-A	23 DA-A	205 DA-A
	date		05.10.2020	08.10.2020	14.10.2020	23.10.2020	23.04.2021
	1.Untreated Check		0,00	0,00	0,00	0,00	0,00
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00	0,00	0,00	0,00
	4.Premis 025 FS	200	0,00	0,00	0,00	0,00	0,00

	5.Premis 025 FS	300	0,00	0,00	0,00	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00	0,00	0,00	0,00
	7.Redigo 100 FS	150	0,00	0,00	0,00	0,00	0,00
	LSD (P=.05)						

Table 7 – data from efficacy field trials – winter rye

Report code	Treatment	Dose [ml/100 kg]	Phytotoxicity in %		
17 F/2021	Timing of assessment	DA-A	22 DA-A	35 DA-A	
	date		23.10.2020	05.11.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				
18 F/2021	Timing of assessment	DA-A	22 DA-A	35 DA-A	
	date		23.10.2020	05.11.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				
19 F/2021	Timing of assessment	DA-A	22 DA-A	35 DA-A	
	date		23.10.2020	05.11.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	

	LSD (P=,05)				
26 F/2021	Timing of assessment	DA-A	22 DA-A	35 DA-A	
	date		23.10.2020	05.11.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=,05)				
27 F/2021	Timing of assessment	DA-A	22 DA-A	35 DA-A	
	date		23.10.2020	05.11.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=,05)				
28 F/2021	Timing of assessment	DA-A	22 DA-A	39 DA-A	
	date		23.10.2020	09.11.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=,05)				
29 F/2021	Timing of assessment	DA-A	22 DA-A	35 DA-A	
	date		23.10.2020	05.11.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	

	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=,05)				
30 F/2021	Timing of assessment	DA-A	22 DA-A	35 DA-A	
	date		23.10.2020	05.11.2020	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=,05)				
APK-20-47891-PL07	Timing of assessment	DA-A	34 DA-A	57 DA-A	252 DA-A
	date		02.11.2020	25.11.2020	08.06.2021
	1.Untreated Check		0,00	0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00	0,00
	LSD (P=,05)				
APK-20-47891-PL08	Timing of assessment	DA-A	22 DA-A	38 DA-A	241 DA-A
	date		21.10.2020	06.11.2020	28.05.2021
	1.Untreated Check		0,00	0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00	0,00
	LSD (P=,05)				
APK-20-47891-PL09	Timing of assessment	DA-A	36 DA-A	48 DA-A	247 DA-A
	date		05.11.2020	17.11.2020	04.06.2021
	1.Untreated Check		0,00	0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00

	5.Premis 025 FS	200	0,00	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00	0,00
	LSD (P=,05)				
AF/20/ŽO/32/Br/07	Timing of assessment	DA-A	23 DA-A	251 DA-A	
	date		23.10.2020	08.06.2021	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=,05)				
AF/20/ŽO/32/Pr/08	Timing of assessment	DA-A	22 DA-A	257 DA-A	
	date		22.10.2020	14.06.2021	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=,05)				
AF/20/PO/32/Gr/09	Timing of assessment	DA-A	26 DA-A	254 DA-A	
	date		26.10.2020	11.06.2021	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=,05)				
AF/20/ŽO/32/ZI/10	Timing of assessment	DA-A	22 DA-A	251 DA-A	
	date		23.10.2020	09.06.2021	
	1.Untreated Check		0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00	

	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00	
	5.Premis 025 FS	200	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	
	LSD (P=.05)				

Table 8 – data from efficacy laboratory trials – winter rye

Report code	Treatment	Dose [ml/100 kg]	Phytotoxicity in %	
AF/20/ŽO/32/Pn/13	Timing of assessment	DA-A	8 DA-A	18 DA-A
	date		24.11.2020	04.12.2021
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			
AF/20/ŽO/32/Pn/14	Timing of assessment	DA-A	8 DA-A	18 DA-A
	date		24.11.2020	04.12.2021
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			
AF/20/ŽO/32/Pn/15	Timing of assessment	DA-A	8 DA-A	18 DA-A
	date		24.11.2020	04.12.2021
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			



	LSD (P=.05)			
AF/20/ZO/32/Pn/16	Timing of assessment	DA-A	8 DA-A	16 DA-A
	date		19.01.2021	27.01.2021
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			
AF/20/ZO/32/Pn/17	Timing of assessment	DA-A	8 DA-A	16 DA-A
	date		19.01.2021	27.01.2021
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			
AF/20/ZO/32/Pn/13	Timing of assessment	DA-A	8 DA-A	16 DA-A
	date		19.01.2021	27.01.2021
	1.Untreated Check		0,00	0,00
	2.CHR/ZF/PROTI 100 FS	60	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	80	0,00	0,00
	4.CHR/ZF/PROTI 100 FS	100	0,00	0,00
	5.Premis 025 FS	200	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00
	LSD (P=.05)			

Table 9 – data from selectivity field trials – winter rye

Report code	Treatment	Dose [ml/100 kg]	Phytotoxicity in %				
APK-20-47776-PL05	Timing of assessment	DA-A	24 DA-A	35 DA-A	176 DA-A	242 DA-A	
	date		23.10.2020	03.11.2020	24.03.2021	29.05.2021	
	1.Untreated Check		0,00	0,00	0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00	0,00	0,00	
	4.Premis 025 FS	200	0,00	0,00	0,00	0,00	
	5.Premis 025 FS	300	0,00	0,00	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	0,00	0,00	
	7.Redigo 100 FS	150	0,00	0,00	0,00	0,00	
	LSD (P=.05)						
APK-20-47776-PL06	Timing of assessment	DA-A	36 DA-A	48 DA-A	182 DA-A	247 DA-A	
	date		05.11.2020	17.11.2020	31.03.2021	04.06.2021	
	1.Untreated Check		0,00	0,00	0,00	0,00	
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00	0,00	
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00	0,00	0,00	
	4.Premis 025 FS	200	0,00	0,00	0,00	0,00	
	5.Premis 025 FS	300	0,00	0,00	0,00	0,00	
	6.Redigo 100 FS	100	0,00	0,00	0,00	0,00	
	7.Redigo 100 FS	150	0,00	0,00	0,00	0,00	
	LSD (P=.05)						
AF/20/ŽO/32/ZI/b/05	Timing of assessment	DA-A	15 DA-A	18 DA-A	20 DA-A	25 DA-A	153 DA-A
	date		16.10.2020	19.10.2020	21.10.2020	26.10.2020	03.03.2021
	1.Untreated Check		0,00	0,00	0,00	0,00	0,00
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00	0,00	0,00	0,00
	4.Premis 025 FS	200	0,00	0,00	0,00	0,00	0,00
	5.Premis 025 FS	300	0,00	0,00	0,00	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00	0,00	0,00	0,00
	7.Redigo 100 FS	150	0,00	0,00	0,00	0,00	0,00
	LSD (P=.05)						
AF/20/ŽO/32/Gr/b/06	Timing of assessment	DA-A	5 DA-A	8 DA-A	14 DA-A	23 DA-A	205 DA-A
	date		05.10.2020	08.10.2020	14.10.2020	23.10.2020	23.04.2021

	1.Untreated Check		0,00	0,00	0,00	0,00	0,00
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00	0,00	0,00	0,00
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00	0,00	0,00	0,00
	4.Premis 025 FS	200	0,00	0,00	0,00	0,00	0,00
	5.Premis 025 FS	300	0,00	0,00	0,00	0,00	0,00
	6.Redigo 100 FS	100	0,00	0,00	0,00	0,00	0,00
	7.Redigo 100 FS	150	0,00	0,00	0,00	0,00	0,00
	LSD (P=.05)						
24 F/2021	Timing of assessment	DA-A	22 DA-A	35 DA-A			
	date		23.10.2020	05.11.2020			
	1.Untreated Check		0,00	0,00			
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00			
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00			
	4.Premis 025 FS	200	0,00	0,00			
	5.Premis 025 FS	300	0,00	0,00			
	6.Redigo 100 FS	100	0,00	0,00			
	7.Redigo 100 FS	150	0,00	0,00			
	LSD (P=.05)						
25 F/2021	Timing of assessment	DA-A	22 DA-A	39 DA-A			
	date		23.10.2020	09.11.2020			
	1.Untreated Check		0,00	0,00			
	2.CHR/ZF/PROTI 100 FS	100	0,00	0,00			
	3.CHR/ZF/PROTI 100 FS	150	0,00	0,00			
	4.Premis 025 FS	200	0,00	0,00			
	5.Premis 025 FS	300	0,00	0,00			
	6.Redigo 100 FS	100	0,00	0,00			
	7.Redigo 100 FS	150	0,00	0,00			
	LSD (P=.05)						

Table 10 data from phytotoxicity trials

Test report (1)	Testing Unit GEP (2)	Country Region (3)	Dates of trials and GS (4)	Cultivar F/G (5) N/A (6)	Experimental design Test method (7) Replicates	Remarks
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AH/20/PO/32/ZI/b/01	Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	Złotniki / Poland	01.10.2020 BBCH 00	winter wheat / Bogatka F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 5,8
AF/20/PO/32/Gr/b/02	Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	Gorzyń / Poland	30.09.2020 BBCH 00	winter wheat / Opal F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 6,4
20 F/2021	Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sońnicowice, Poland	Sońnicowice / Poland	06.10.2020 BBCH 00	winter wheat / Opoka F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 6,2
21 F/2021	Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sońnicowice, Poland	Łany Wielkie / Poland	08.10.2020 BBCH 00	winter wheat / Pokusa F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 6,1
APK-20-47776-PL01	STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań, Poland	Kajkowo / Poland	09.10.2020 BBCH 00	winter wheat / Bilanz F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 5,6
APK-20-47776-PL02	STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań, Poland	Jasiona / Poland	10.10.2020 BBCH 00	winter wheat / Mewa F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 7,2
AF/20/PszO/32/ZI/b/03	Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637	Złotniki / Poland	01.10.2020 BBCH 00	winter triticale / Alik F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 5,8

	Poznań, Poland					
AF/20/PszO/32/Gr/b/04	Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	Gorzyń / Poland	30.09.2020 BBCH 00	winter triticale / Twingo F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 6,4
13 F/2021	Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sońnicowice, Poland	Sierakowice / Poland	09.10.2020 BBCH 00	winter triticale / Trismart F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 6,3
14 F/2021	Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sońnicowice, Poland	Sońnicowice / Poland	24.09.2020 BBCH 00	winter triticale / Rotondo F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy clay loam pH 6,07
APK-20-47776-PL03	STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań, Poland	Kajkowo / Poland	09.10.2020 BBCH 00	winter triticale / Bereniko F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 5,6
APK-20-47776-PL04	STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań, Poland	Łaźniki / Poland	07.10.2020 BBCH 00	winter triticale / Borowik F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 7,4
AF/20/ŻO/32/Z1/b/05	Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	Złotniki / Poland	01.10.2020 BBCH 00	winter rye / Diament F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 5,8

AF/20/ŻO/32/Gr/b/06	Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań, Poland	Gorzyń / Poland	30.09.2020 BBCH 00	winter rye / Poznańskie F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 6,4
24 F/2021	Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sońnicowice, Poland	Sońnicowice / Poland	07.10.2020 BBCH 00	winter rye / Dukato F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 6
25 F/2021	Institute of Plant Protection - National Research Institute Sońnicowice Branch; Pesticide Efficacy Testing Department, Gliwicka 29, 44-153 Sońnicowice, Poland	Sierakowice / Poland	09.10.2020 BBCH 00	winter rye / Su Forsetti F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 5,9
APK-20-47776-PL05	STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań, Poland	Wilkowyja / Poland	30.09.2020 BBCH 00	winter rye / Dańkowskie Turkus F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 5,4
APK-20-47776-PL06	STAPHYT Sp z o.o. Poznańska 62/53, 60-853 Poznań, Poland	Wólka Krosnowska / Poland	05.10.2020 BBCH 00	winter rye / Dańkowskie Amber F N	Randomized blocks EPPO PP 1/135 (4)	Soil type: sandy loam pH 7,2

Notes:

- (1): test report number
- (2): Trial responsible entity/ officially recognized organization
- (3): precise place of the trial followed by the country
- (4): Crop growth stage at application timing
- (5): F= field trial, G=protected crop, specify
- (6): N=Natural infestation, A= Artificial inoculation
- (7): Test guideline used

**Appendix 7      Summary of available studies: Adverse effects on beneficial organisms.**

None

**Appendix 8      Summary of data on succeeding crop**

None