

FINAL REGISTRATION REPORT

Part B

Section 3

Efficacy Data and Information

Concise summary

Product code: **FLUDIO 025 GF**

Product names: **FLUDIO ŻEL 025 FS /**

FUNABEN[®] ŻEL 025 FS

Chemical active substance:

Fludioxonil, 25 g/L

Central Zone

Zonal Rapporteur Member State: **Poland**

CORE ASSESSMENT

(authorization)

Applicant: **Synthos Agro Sp. z o.o.**

Submission date: **01/2023**

MS Finalisation date: **06/2023; 10/2023 02/2024**

Version history

When	What
01/2023	Initial dRR
05/2023	Addition of information about annex to selectivity trials
05/2023	Addition of justification for performing trials in one season
06/2023	ZRMs evaluated submitted dRR by Applicant
10/2023	Final Registration Report
02/2024	ZRMs corrected fRR in line to comments from MRiRW

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

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

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

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

Abstract

Comments of zRMS: Overall summaries are not necessary here. It was provided at the end of each chapter of the dRR.

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. *	Member state(s)	Crop and/ or situation (crop destination / purpose of crop)	F, Fn, Fnp G, Gn, Gnp or I**	Pests or Group of pests controlled (additionally: develop- mental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	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	PL	Winter rye	F	<i>Fusarium spp.</i> <i>Urocystis occulta</i>	Seed treat- ment	BBCH 00	1	-	0,2-0,4 L/ha	Fludioxonil 5 – 10 g	-		200 mL/100 kg seeds Sowing rate: 100 – 200 kg seeds/ha	Acceptable
2	PL	Winter wheat	F	<i>Fusarium spp.</i> <i>Monographella nivalis</i> <i>Tilletia caries</i>	Seed treat- ment	BBCH 00	1	-	0,3-0,5 L/ha	Fludioxonil: 7,5-12,5g	-		200 ml/100 kg seeds Sowing rate: 150- 250 kg seeds/ha	Acceptable
3	PL	Winter barley	F	<i>Fusarium spp.</i> <i>Monographella nivalis</i> <i>Pyrenophora graminea</i>	Seed treat- ment	BBCH 00	1	-	0,24-0,4 L/ha	Fludioxonil: 6- 10g	-		200 ml/100 kg seeds Sowing rate: 120- 200 kg seeds/ha	Acceptable
4	PL	Winter triticale	F	<i>Fusarium spp.</i>	Seed treat- ment	BBCH 00	1	-	0,2-0,4 L/ha	Fludioxonil 5 – 10 g	-		200 ml/100 kg seeds Sowing rate (triticale): 100- 200 kg seeds/ha	Acceptable
5	PL	Spring wheat	F	<i>Fusarium spp.</i> <i>Tilletia caries</i>	Seed treat- ment	BBCH 00	1	-	0,3-0,5 L/ha	Fludioxonil: 7,5-12,5g	-		200 ml/100 kg seeds Sowing rate: 150- 250 kg seeds/ha	Acceptable
6	PL	Spring barley	F	<i>Fusarium spp.</i>	Seed treat-	BBCH 00	1	-	0,24-0,4 L/ha	Fludioxonil: 6-	-		200 ml/100 kg	Acceptable

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. *	Member state(s)	Crop and/ or situation (crop destination / purpose of crop)	F, Fn, Fnp G, Gn, Gnp or I**	Pests or Group of pests controlled (additionally: develop- mental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	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			
					ment					10g			seeds Sowing rate: 120- 200 kg seeds/ha	
Minor uses according to Article 51 (interzonal uses)														
7														
8														

* 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, Fnp: professional and non-professional field use, G: professional greenhouse use, Gn: non-professional greenhouse use, Gnp: 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

Applicant applies for authorization for the marketing of plant protection product FLUDIO 025 GF pursuant to article 33 of the Regulation of the European Parliament and the Council in a number 1107/2009 of 21 October 2009.

DRR this core assessment. The applicant shall be in Poland. The applicant points out Poland as a country rapporteur Requested. The formulation of this product is a flowable concentrate for seed treatment (FS). This document describes the acceptable use conditions required for the registration of FLUDIO 025 GF containing as a.i. fludioxonil (25 g/L).

Commission Implementing Regulation (EU) 2022/1480 of 7 September 2022 amending Implementing Regulation (EU) No 540/2011 as regards the extension of the approval periods of the active substances 2-phenylphenol (including its salts such as the sodium salt), 8-hydroxyquinoline, amidosulfuron, bensulfuron, bifenox, chlormequat, chlorotoluron, clofentezine, clomazone, daminozide, deltamethrin, dicamba, difenoconazole, diflufenican, dimethachlor, esfenvalerate, etofenprox, fenoxaprop-P, fenpropidin, fenpyrazamine, fludioxonil, flufenacet, flumetralin, fosthiazate, lenacil, MCPA, MCPB, nicosulfuron, paraffin oils, paraffin oil, penconazole, picloram, prohexadione, propaquizafop, prosulfocarb, quizalofop-P-ethyl, quizalofop-P-tefuryl, sodium 5-nitroguaiacolate, sodium o-nitrophenolate, sodium p-nitrophenolate, sulphur, tebufenpyrad, tetraconazole, tri-allate, triflusulfuron and tritosulfuron

Fludioxonil is a non-systemic fungicide used for the treatment of crops (particularly cereals, fruits and vegetables, and ornamental plants). The mode of action of fludioxonil is the inhibition of transport-associated phosphorylation of glucose as well as preventing glycerol synthesis.

Information on the detailed composition of FLUDIO 025 GF can be found in the confidential dossier of this submission (Registration Report – Part C).

General information such as active substance, chemical group, mode of action, other biological properties (e.g. mobility, persistence...) there are in Part B section: 1, 2, 3, 4, 5, 6, 7.

Description of active substances

Fludioxonil is the ISO common name for 4-(2,2-difluoro-1,3-benzodioxol-4-yl)-1H-pyrrole-3-carbonitrile (IUPAC).

Mode of action

This document provides information on the effectiveness of FLUDIO 025 GF plant protection product containing active substance – fludioxonil.

Fludioxonil is a phenylpyrrole fungicide with broad – spectrum activity against fungal plant pathogens among diseases of seed, including seedling blight, stem-base browning, snow mold and common bunt. The mode of action of fludioxonil is the inhibition of transport – associated phosphorylation of glucose as well as preventing glycerol synthesis.

Table 3.2-1: Details of the active substances

Active substance	Fludioxonil
Concentration (Unit: g/kg or g/L)	25 g/L
Chemical group	phenylpyrroles
Mode of action	signal transduction
Biological action	preventive
Type	Fungicide

Description of the plant protection product

FLUDIO 025 GF is a flowable concentrate for seed treatment [code: FS] containing 25 g/ fludioxonil.

Justification regarding the difference in the formulation type between the product code name - FLUDIO 025 GF and the product trade names - FLUDIO ŻEL 025 FS, FUNABEN® ŻEL 025 FS is presented in Part C.

The product code name FLUDIO 025 GF is used in all draft Registration Report.

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

Uses		Member State	Requested rate(s)	Comments / Other relevant details on GAPs
Crops	Target(s)			
Winter wheat	<i>Fusarium spp.</i> <i>Monographella nivalis</i> <i>Tilletia caries</i>	PL	200 mL/100 kg seeds	
Spring wheat	<i>Fusarium spp.</i> <i>Tilletia caries</i>	PL	200 mL/100 kg seeds	
Winter triticale	<i>Fusarium spp.</i>	PL	200 mL/100 kg seeds	
Winter rye	<i>Fusarium spp.</i> <i>Urocystis occulta</i>	PL	200 mL/100 kg seeds	
Winter barley	<i>Fusarium spp.</i> <i>Monographella nivalis</i> <i>Pyrenophora graminea</i>	PL	200 mL/100 kg seeds	
Spring barley	<i>Fusarium spp.</i>	PL	200 mL/100 kg seeds	

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

Description of the target pests

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

EPPO code	Scientific name	Common name*	Polish name
FUSASP	<i>Fusarium spp.</i>	Seedling blight	Zgorzel siewek
TILLCA	<i>Tilletia caries</i>	Stinking smut	Śnieć cuchnąca
UROCOC	<i>Urocystis occulta</i>	Flag smut	Głownia żdźbłowa
PYRNGR	<i>Pyrenophora graminea</i>	Barley leaf stripe	Pasiastosc liści jęczmienia
MONGNI	<i>Monographella nivalis</i>	Snow mould	Pleśń śniegowa

* optional

Seedling blight is a fungal infection that causes the seed or seedling to rot and die. It can be characterized by patches in the field that fail to germinate. If the seedlings do manage to germinate, they may not emerge, or they may emerge and then become brown, pinched and die. Other symptoms include stunted and yellow growth, or reduced root growth with brown spots on the roots and coleoptile. There are many fungi present in the soil that can cause seedling death. Among these fungi are *Pythium spp.*, *Fusarium spp.*, and *Rhizoctonia spp.* Most infection is soil borne, but it can also be seed born.

Stinking smut is a disease of both spring and winter wheats. It caused by two very closely related fungi, *Tilletia tritici* (anam. *Tilletia caries*) and *Tilletia laevis* (anam. *Tilletia foetida*). In some cases mixed infection may be occurred of fungi belonging to the same genus (*Tilletia*), i.e. *Tilletia tritici* (which is synonymous with *Tilletia caries*) - the fungus responsible for stinking smut and *Tilletia foetida* - the fungus responsible for common bunt. These diseases are closely related. It is very difficult to distinguish fungi at the species level and usually is only possible with the use of advanced molecular methods. Moreover, in accordance with literature common bunts could be caused by *Tilletia leavis* and *Tilletia caries* are also known as stinking smuts. Moreover, the wheat disease caused by *Tilletia leavis* is relatively rare in Poland. Hence, if a mixed disease caused by both fungus (*T. leavis* and *T. tritici*) occurred in some trials, it has been classified as a disease caused by *T. tritici* (anam. *T. caries*). Infection occurs from smut spores on seed or from spores in soil close to the seed. Soil-borne spores can last for decades. Spores germinate in cool conditions attacking the seedling before emergence. Its development is favoured by cool soil temperatures. Bunt can be difficult to detect as it is inconspicuous in the standing crop until near maturity. Infected plants are moderately stunted and produce fewer, smaller heads than normal plants. In infected heads, gray – brown bunt balls filled with dark brown spores replace all or some of the kernels. Crushing a bunt ball releases a foul, fishy odour. Common bunt reduces yield and quality. Yield losses are equivalent to the percentage of infected tillers. Grain contaminated with bunt balls is discounted at the elevator.

Flag smut is caused by a fungus known by the name *Urocystis tritici*. The flag smug fungus infects the young wheat plant in the fall of the year after the young plant germinates and the seedling is exposed in the soil. There the fungus spores germinate along with the plant seedling and invade the plant becoming systemic in the intercellular regions. No symptoms at this time can be seen by the naked eye. As the wheat plant breaks dormancy in the spring and grows, so does the fungus inside the plant. When the wheat plant reaches the heading and flowering stage, the flag smut fungus sporulates within leaves and stems. The sori of the fungus, a spore bearing structure, erupt through infected tissues and then can be seen by as black to gray smutted tissue. Infected plants are also poorly tillered, stunted, stems and leaves twisted tightly or curled and little seed or grain is produced.

Leaf stripe, caused by *Pyrenophora graminea* is one of the most important disease of barley. Symptoms first occur on the first, second and third leaf and subsequently on the other leaves. Yellow stripes are formed at the base of the leaf and the leaf sheath. They gradually extend and become brown and chlorotic and may merge. Eventually this leads to the death of the leaf. The leaf splits at the end which makes it look shredded. Infected plants may be stunted and heads may be distorted and failing to emerge from the sheath. Ear length and the number of kernels may be reduced and kernels may be brown.

Snow mould (caused by *Monographella nivalis*, anam *Microdochium nivale*) of cereals this disease is largely seed-borne, but also arises from infected crop debris. Infections occur in the autumn, with the disease progressing in warmer, drier soils between 10-15°C. Stem base infections can give rise to perithecia under moist conditions in May, which release ascospores to either infect flag leaves and/or ears at anthesis - both of which also require high humidity. Seedling infections (*Monographella nivalis*, anam *Microdochium nivale*) can result in poor growth of foliage and root systems, with an impact on final ear development.

Table 3.2-4: 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	-	FUSASP	PL	-
			MONGINI	PL	-
			TILLCA	PL	-
Spring wheat	PL	-	FUSASP	-	PL
			TILLCA	-	PL

Crop and/or situation	Crop status		Pests or group of pests controlled	Pest status	
	Major	Minor		Major	Minor
Winter triticale	PL	-	FUSASP	PL	-
Winter rye	PL	-	FUSASP	PL	-
			UROCOC	PL	-
Winter barley	PL	-	FUSASP	PL	-
			MONGINI	PL	-
			PYRNGR	PL	-
Spring barley	PL	-	FUSASP	PL	-

Compliance with the Uniform Principles

Assessment was performed according to EPPO guidelines.

Information on trials submitted (3.1 Efficacy data)

Table 3.2-5: Presentation of trials (efficacy trials, preliminary trials...)

Crop(s) *	Target(s)*	Country	Years	Type of trial**	Number of trials (number of valid trials)		GEP, non-GEP, official***	Comments (any other relevant information)
					Central zone			
Winter wheat	<i>Fusarium spp.</i> (FUSASP)	Poland	2021	MED+E	7		GEP	The study was conducted in Poland under different climate and soil for different varieties of winter wheat
	TOTAL	-	2021	-	7	-	-	
	<i>Monographella nivalis</i> (MONGNI)	Poland	2021	MED+E	6		GEP	The study was conducted in Poland under different climate and soil for different varieties of winter wheat
	TOTAL	-	2021	-	6	-	-	
	<i>Tilletia tritici</i> , (TILLCA)	Poland	2021	MED+E	7	-	GEP	The study was conducted in Poland under different climate and soil for different varieties of winter wheat
TOTAL	-	2021	-	7	-	-		
TOTAL	-	-		-	20		-	
Winter	<i>Fusarium spp.</i>	Poland	2021	MED+E	2		GEP	The study was

Crop(s) *	Target(s)*	Country	Years	Type of trial**	Number of trials (number of valid trials)		GEP, non-GEP, official***	Comments (any other relevant information)
					Central zone			
triticale	(FUSASP)							conducted in Poland under different climate and soil for different varieties of winter triticale
TOTAL	-	-		-	2		-	
Winter rye	<i>Fusarium spp.</i> (FUSASP)	Poland	2021	MED+E	7	-	GEP	The study was conducted in Poland under different climate and soil for different varieties of winter rye
	TOTAL	-	2021	-	7	-	-	
	<i>Urocystis occulta</i> (UROCOC)	Poland	2021	MED+E	7	-	GEP	The study was conducted in Poland under different climate and soil for different varieties of winter rye
	TOTAL	-	2021	-	7	-	-	
TOTAL	-	-		-	14		-	
Winter barley	<i>Fusarium spp.</i> (FUSASP)	Poland	2021	MED+E	9	-	GEP	The study was conducted in Poland under different climate and soil for different varieties of winter barley
	TOTAL	-	2021	-	9	-	-	
	<i>Pyrenophora graminea</i> (PYRNGR)	Poland	2021	MED+E	7	-	GEP	The study was conducted in Poland under different climate and soil for different varieties of winter barley
	TOTAL	-	2021	-	7	-	-	
	<i>Monographella nivalis</i> (MONGNI)	Poland	2021	MED+E	6	-	GEP	The study was conducted in Poland under different climate and soil for different varieties of winter rye
	TOTAL	-	2021	-	6	-	-	
TOTAL	-	-		-	22		-	
Spring barley	<i>Fusarium spp.</i> (FUSASP)	Poland	2021	MED+E	3	-	GEP	The study was conducted in Poland

Crop(s) *	Target(s)*	Country	Years	Type of trial**	Number of trials (number of valid trials)		GEP, non-GEP, official***	Comments (any other relevant information)
					Central zone			
								under different climate and soil for different varieties of spring barley
TOTAL	-	-	-	-	3		-	
Spring wheat	<i>Fusarium spp.</i> (FUSASP)	Poland	2021	MED+E	3	-	GEP	The study was conducted in Poland under different climate and soil for different varieties of spring wheat
	TOTAL	-	2021	-	2	-	-	
	<i>Tilletia tritici</i> , <i>Tilletia foetida</i> (TILLCA)	Poland	2021	MED+E	4	-	GEP	The study was conducted in Poland under different climate and soil for different varieties of winter wheat
	TOTAL	-	2021	-	4	-	-	
TOTAL	-	-	-	-	7		-	

* 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.

All trials were performed in one growing season (2021) in Poland under different climate and soil for different varieties of cereals. The trials included the fungal diseases are common and typical for the crops fields all over Poland. The active substance fludioxonil are well known and has been commonly used all over the world for many years. All trials conducted in 2021 were performed in different part of Poland (6 localizations), in number higher than minimal number of trials required for appropriate crops. Efficacy results obtained in all trials are consistent across experiments.

The active substance fludioxonil is a very well-known substance, the high effectiveness in combating fungal pathogens in various crops has been confirmed many times effect. For today, there are many registered products containing this active substance in Poland (about 64 products – status on May, 2023), including fungicides that are used as seed treatments.

The mechanism of action of the active substance is well known. In accordance with FRAC Code List, fludioxonil belongs to 12 FRAC Group. In this case, the resistance risk of active substance belongs to this group used as seed treatment is classified by FRAC as low. For this reason, fludioxonil does not contribute to the development of resistance in pathogens.

Efficacy results obtained in all trials are consistent across experiments. In the selectivity experiments, seed treatment containing the active substance fludioxonil does not show phytotoxic effects, the seed germination ability was confirmed after one month and after 12 months from treatment. For this reason, trials performed in one season is sufficient.

Table 3.2-6: Presentation of reference standards used in trials (efficacy trials, preliminary trials)

Crop(s)	Reference standard	Country(ies) where the product is registered (1)	Authorization number	Active substance(s)	Formulation		Registered application rate(3)	Application rate in trials (per treatment)	Remark(4)
					Type(2)	Concentration of a.s.			
Winter barley, Spring barley, Winter triticale, Winter rye, Winter barley, Spring barley	MAXIM 025 FS	Poland	Zezwolenie MRiRW nr R-38/2007 z dnia 29.08.2007 r.	Fludioxonil	FS	25 g/L	200 mL/100 kg seeds	200-300 mL/100 kg seeds	Rate 300 ml/100 kg seeds was used to phytotoxicity trials

(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>This document was prepared by Applicant for registration the FLUDIO ŻEL 025 FS / FUNABEN ŻEL (product code: FLUDIO 025 GF) containing fludioxonil (25 g/L). The formulation of this product is a flowable concentrate for seed treatment (FS).</p> <p>Fludioxonil is a broad-spectrum fungicide for foliar and seed treatment applications on a wide range of different crops against many air-, soil- and seed borne diseases.</p> <p>FLUDIO ŻEL 025 FS / FUNABEN ŻEL (product code: FLUDIO 025 GF) containing fludioxonil (25 g/L) by Synthos Agro Sp. z o.o. has not been previously evaluated in any country according to Uniform Principles. Poland is a ZRMs.</p> <p>In Poland 64 plant protection products containing fludioxonil are already registered and commonly use. All necessary information's about tested plant protection product, active substance, studied disease, reference products, etc. are correctly presented in this drr by Applicant.</p>
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3.2.1 Preliminary tests (KCP 6.1)

Preliminary studies have not been conducted because the active substance fludioxonil is known and has long been used in the protection of plants. The effect of the active substances is well known and sufficient large scale efficacy trials are available to evaluate the effectiveness of FLUDIO 025 GF. Therefore preliminary tests are not described and not required.

Comments of zRMS:	<p>Statement accepted. The active substances of FLUDIO ŻEL 025 FS / FUNABEN ŻEL (product code: FLUDIO 025 GF) containing fludioxonil (25 g/L) is registered and has been commonly used in crop protection in EU Countries for many years.</p> <p>Fludioxonil is an active substance from the phenylpyrrole group. It is used to control many species of fungi. The substance is used both in the protection of cereals and orchard crops. Fludioxonil has an effect on cell membrane functions, as well as on the process of amino acid synthesis of pathogens. Its action is associated with inhibition of the formation and germination of conidial spores. Mycelial growth is also inhibited. It is distinguished by its extremely strong preventive effect. Fludioxonil is not systemic, but has the ability to penetrate into the tissue. It is used to prevent snow mold of cereals and grasses, fusarium seedling gangrene and storage diseases - apple bitter rot, gray mold and wet rot. It works in a wide range of temperatures.</p>
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	A large-scale efficacy trials are available to evaluate the effectiveness of products containing this active compound. Therefore, there was no need for preliminary range-finding tests in the opinion of Evaluator.
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3.2.1 Minimum effective dose tests (KCP 6.2)

No results of preliminary screening tests are here. The efficacy of reduced rates of FLUDIO 025 GF for diseases control in winter wheat (FUSASP, TILLCA, MONGNI), spring wheat (FUSASP, TILLCA), winter triticale (FUSASP), winter rye (FUSASP, UROCOC), winter barley (PYRNGR, FUSASP, MONGNI), spring barley (FUSASP) was investigated in field tests carried out in 2021. In the appropriate researches of efficacy were tested several doses and to register was chosen the lowest effective. All researches were conducted according to EPPO standard PP 1/225 '*Minimum effective dose*'.

Winter wheat/FUSASP

7 field trials were established in order to determine the minimum effective dose for the control of the winter wheat/ FUSASP. FLUDIO 025 GF was tested at 120 to 200 ml of product per 100 kg seeds in winter wheat for the control of FUSASP. The rates reflect the proposed label rate and 60% and 80% of the full recommended rate of FLUDIO 025 GF, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

A summary of the dose response results is provided in **Błąd! Nie można odnaleźć źródła odwołania..**

Winter wheat/MONGNI

6 field trials were established in order to determine the minimum effective dose for the control of the winter wheat/ FUSASP. FLUDIO 025 GF was tested at 120 to 200 ml of product per 100 kg seeds in winter wheat for the control of MONGNI. The rates reflect the proposed label rate and 60% and 80% of the full recommended rate of FLUDIO 025 GF, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

A summary of the dose response results is provided in **Błąd! Nie można odnaleźć źródła odwołania..**

Winter wheat/TILLCA

7 field trials were established in order to determine the minimum effective dose for the control of the winter wheat/ TILLCA FLUDIO 025 GF was tested at 120 to 200 ml of product per 100 kg seeds in winter wheat for the control of TILLCA. The rates reflect the proposed label rate and 60% and 80% of the full recommended rate of FLUDIO 025 GF, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

A summary of the dose response results is provided in **Błąd! Nie można odnaleźć źródła odwołania..**

Spring wheat/FUSASP

2 field trials were established in order to determine the minimum effective dose for the control of the spring wheat/FUSASP FLUDIO 025 GF was tested at 120 to 200 ml of product per 100 kg seeds in spring wheat for the control of FUSASP. The rates reflect the proposed label rate and 60% and 80% of the full recommended rate of FLUDIO 025 GF, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

A summary of the dose response results is provided in **Błąd! Nie można odnaleźć źródła odwołania..**

Spring wheat/TILLCA

4 field trials were established in order to determine the minimum effective dose for the control of the spring wheat/TILLCA FLUDIO 025 GF was tested at 120 to 200 ml of product per 100 kg seeds in spring wheat for the control of TILLCA. The rates reflect the proposed label rate and 60% and 80% of the full

recommended rate of FLUDIO 025 GF, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

A summary of the dose response results is provided in **Błąd! Nie można odnaleźć źródła odwołania..**

Winter triticale/FUSASP

2 field trials were established in order to determine the minimum effective dose for the control of the winter triticale/FUSASP FLUDIO 025 GF was tested at 120 to 200 ml of product per 100 kg seeds in winter triticale for the control of FUSASP. The rates reflect the proposed label rate and 60% and 80% of the full recommended rate of FLUDIO 025 GF, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

A summary of the dose response results is provided in **Błąd! Nie można odnaleźć źródła odwołania..**

Winter triticale/MONGNI

1 field trial was established in order to determine the minimum effective dose for the control of the winter triticale/MONGNI FLUDIO 025 GF was tested at 120 to 200 ml of product per 100 kg seeds in winter triticale for the control of MONGNI. The rates reflect the proposed label rate and 60% and 80% of the full recommended rate of FLUDIO 025 GF, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

A summary of the dose response results is provided in **Błąd! Nie można odnaleźć źródła odwołania..**

Winter rye/FUSASP

7 field trials were established in order to determine the minimum effective dose for the control of the winter rye/FUSASP FLUDIO 025 GF was tested at 120 to 200 ml of product per 100 kg seeds in winter rye for the control of FUSASP. The rates reflect the proposed label rate and 60% and 80% of the full recommended rate of FLUDIO 025 GF, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

A summary of the dose response results is provided in **Błąd! Nie można odnaleźć źródła odwołania..**

Winter rye/UROCOC

7 field trials were established in order to determine the minimum effective dose for the control of the winter rye/UROCOC FLUDIO 025 GF was tested at 120 to 200 ml of product per 100 kg seeds in winter rye for the control of UROCOC. The rates reflect the proposed label rate and 60% and 80% of the full recommended rate of FLUDIO 025 GF, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

A summary of the dose response results is provided in **Błąd! Nie można odnaleźć źródła odwołania..**

Winter rye/FUSASP

7 field trials were established in order to determine the minimum effective dose for the control of the winter rye/FUSASP FLUDIO 025 GF was tested at 120 to 200 ml of product per 100 kg seeds in winter rye for the control of FUSASP. The rates reflect the proposed label rate and 60% and 80% of the full recommended rate of FLUDIO 025 GF, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

A summary of the dose response results is provided in **Błąd! Nie można odnaleźć źródła odwołania..**

Winter barley/FUSASP

9 field trials were established in order to determine the minimum effective dose for the control of the winter barley/FUSASP FLUDIO 025 GF was tested at 120 to 200 ml of product per 100 kg seeds in winter barley for the control of FUSASP. The rates reflect the proposed label rate and 60% and 80% of the full recommended rate of FLUDIO 025 GF, in accordance with the EPPO standard PP 1/225 '*Minimum effective*

tive dose’.

A summary of the dose response results is provided in **Błąd! Nie można odnaleźć źródła odwołania..**

Winter barley/MONGNI

6 field trials were established in order to determine the minimum effective dose for the control of the winter barley/MONGNI FLUDIO 025 GF was tested at 120 to 200 ml of product per 100 kg seeds in winter barley for the control of MONGNI. The rates reflect the proposed label rate and 60% and 80% of the full recommended rate of FLUDIO 025 GF, in accordance with the EPPO standard PP 1/225 ‘Minimum effective dose’.

A summary of the dose response results is provided in **Błąd! Nie można odnaleźć źródła odwołania..**

Winter barley/PYRNGR

7 field trials were established in order to determine the minimum effective dose for the control of the winter barley/PYRNGR FLUDIO 025 GF was tested at 120 to 200 ml of product per 100 kg seeds in winter barley for the control of PYRNGR. The rates reflect the proposed label rate and 60% and 80% of the full recommended rate of FLUDIO 025 GF, in accordance with the EPPO standard PP 1/225 ‘Minimum effective dose’.

A summary of the dose response results is provided in **Błąd! Nie można odnaleźć źródła odwołania..**

Spring barley/FUSASP

3 field trials were established in order to determine the minimum effective dose for the control of the spring barley/FUSASP FLUDIO 025 GF was tested at 120 to 200 ml of product per 100 kg seeds in spring barley for the control of FUSASP. The rates reflect the proposed label rate and 60% and 80% of the full recommended rate of FLUDIO 025 GF, in accordance with the EPPO standard PP 1/225 ‘Minimum effective dose’.

A summary of the dose response results is provided in **Błąd! Nie można odnaleźć źródła odwołania..**

As it was already mentioned, in the Table 3.2.7. are presented the summary of all efficacy results for trials where the pest infestation threshold was met - for pests responsible for: seedling blight, barley leaf stripe and snow mould the minimum value is 5%. In the case of stinking smut and flag smut, according to Harmonization Meeting about effectiveness, in the seed treatment a threshold of harmfulness equal to 1% of the affected plants is allowed. For these reason in the case of TILLCA in the spring wheat, the minimum value of pest severity is 2.9%.

Table 3.2-7: Minimum effective dose. Efficacy of FLUDIO 025 GF at proposed label rate, at 60% and 80% dose rates on targets

Grouping *	Number of trials	Infestation of the untreated control (unit)		% control with FLUDIO 025 GF					
				120 mL (60% of full rate)		160 mL (80% of full rate)		200 mL (Full rate)	
		Mean	Min & Max	Mean	Min. & Max.	Mean	Min & Max	Mean	Min. & Max.
Winter rye/ UROCOC	7	8.5	5.1-21.2	94.1	70.9-100.0	97.5	82.6-100.0	98.7	91.2-100.0
Winter rye/ FUSASP	7	15.4	5.0-63.6	54.9	39.2-73.0	73.7	65.7-87.0	85.6	80.0-91.0
Winter barley/ PYRNGR	7	11.5	5.7-19.3	76.5	73.4-79.0	82.5	81.0-84.0	87.0	84.0-89.5
Winter barley/ FUSASP	9	13.3	8.7-18.0	54.6	45.0-65.6	68.3	63.0-75.8	81.8	70.0-90.6
Winter	6	28.0	12.0-46.0	73.0	50.0-82.0	79.8	58.0-89.0	83.2	67.0-93.0

Grouping *	Number of trials	Infestation of the untreated control (unit)		% control with FLUDIO 025 GF					
				120 mL (60% of full rate)		160 mL (80% of full rate)		200 mL (Full rate)	
		Mean	Min & Max	Mean	Min. & Max.	Mean	Min & Max	Mean	Min. & Max.
barley/ MONGNI									
Spring barley/ FUSASP	3	39.9	11.8-59.5	70.2	62.0-78.7	78.3	69.0-83.9	84.8	76.0-91.5
Spring wheat/ FUSASP	2	25.8	19.5-32.0	67.5	66.0-69.0	75.5	72.0-79.0	88.0	84.0-92.0
Spring wheat/ TILLCA	4	8.2	2.9-23.5	70.8	55.0-89.0	81.7	73.3-92.0	91.5	87.8-100.0
Winter wheat/ MONGNI	6	32.3	14.8-51.0	54.5	46.0-67.0	68.0	63.0-70.0	80.5	76.0-87.0
Winter wheat/ FU-SASP	7	27.7	10.9-64.1	55.6	29.0-80.0	67.3	45.0-86.0	80.2	49.0-92.0
Winter wheat/ TILLCA	7	55.7	5.7-76.3	87.1	70.8-100.0	93.6	83.0-98.2	96.8	90.3-100.0
Winter triticale/ FUSASP	2	9.9	8.9-10.9	62.1	61.2-62.9	75.5	73.9-77.1	91.0	90.9-91.1

Summary and conclusions on the preliminary MED (minimum effective dose) trials

Winter rye/UROCOC

According to the proposal results, the dose of 120 mL /100 kg seed of FLUDIO 025 GF provided the optimum overall control and should be considered as effective against these 1 major pest, for which activity of FLUDIO 025 GF is claimed. However, in practise, Applicant perform one treatment to protect crops during the growing season from a broader spectrum of seed borne and soilborne disease. For this reason, although the dose of 120 mL/100 kg seed was sufficiently effective, the dose of 200 mL/100 kg seed is recommended (with highest efficacy >90%). This dose is also recommended in plant protection products registered for today in Poland, that contain the tested active substance.

Winter rye/FUSASP

According to the presented results, the dose of 200ml/ 100 kg seeds of FLUDIO 025 GF provided the optimum overall control and should be considered as effective against these 1 major pest, for which activity of FLUDIO 025 GF is claimed.

As a result, the proposed rate of 200ml/ 100 kg seeds should be considered the minimum effective dose to deliver broad spectrum control of FUSASP under a wide range of environmental conditions.

Winter barley/PYRNGR

According to the proposal results, the dose of 160 mL /100 kg seed of FLUDIO 025 GF provided the optimum overall control and should be considered as effective against these 1 major pest, for which activity of FLUDIO 025 GF is claimed. However, in practise, Applicant perform one treatment to protect crops during the growing season from a broader spectrum of seed borne and soilborne disease. For this reason, although the dose of 160 mL/100 kg seed was sufficiently effective, the dose of 200 mL/100 kg seed is recommended. This dose is also recommended in plant protection products registered for today in Poland, that contain the tested active substance.

Winter barley/FUSASP

According to the presented results, the dose of 200ml/ 100 kg seeds of FLUDIO 025 GF provided the optimum overall control and should be considered as effective against these 1 major pest, for which activ-

ity of FLUDIO 025 GF is claimed.

As a result, the proposed rate of 200ml/ 100 kg seeds should be considered the minimum effective dose to deliver broad spectrum control of FUSASP under a wide range of environmental conditions.

Winter barley/MONGNI

According to the presented results, the dose of 200ml/ 100 kg seeds of FLUDIO 025 GF provided the optimum overall control and should be considered as effective against these 1 major pest, for which activity of FLUDIO 025 GF is claimed.

As a result, the proposed rate of 200ml/ 100 kg seeds should be considered the minimum effective dose to deliver broad spectrum control of MONGNI under a wide range of environmental conditions.

Spring barley/FUSASP

According to the presented results, the dose of 200ml/ 100 kg seeds of FLUDIO 025 GF provided the optimum overall control and should be considered as effective against these 1 major pest, for which activity of FLUDIO 025 GF is claimed.

As a result, the proposed rate of 200ml/ 100 kg seeds should be considered the minimum effective dose to deliver broad spectrum control of FUSASP under a wide range of environmental conditions.

Spring wheat/FUSASP

According to the presented results, the dose of 200ml/ 100 kg seeds of FLUDIO 025 GF provided the optimum overall control and should be considered as effective against these 1 major pest, for which activity of FLUDIO 025 GF is claimed.

As a result, the proposed rate of 200ml/ 100 kg seeds should be considered the minimum effective dose to deliver broad spectrum control of FUSASP under a wide range of environmental conditions.

Spring wheat/TILLCA

According to the proposal results, the dose of 160 mL /100 kg seed of FLUDIO 025 GF provided the optimum overall control and should be considered as effective against these 1 major pest, for which activity of FLUDIO 025 GF is claimed. However, in practise, Applicant perform one treatment to protect crops during the growing season from a broader spectrum of seed borne and soilborne disease. For this reason, although the dose of 160 mL/100 kg seed was sufficiently effective, the dose of 200 mL/100 kg seed is recommended. This dose is also recommended in plant protection products registered for today in Poland, that contain the tested active substance.

Winter wheat/MONGNI

According to the presented results, the dose of 200ml/ 100 kg seeds of FLUDIO 025 GF provided the optimum overall control and should be considered as effective against these 1 major pest, for which activity of FLUDIO 025 GF is claimed.

As a result, the proposed rate of 200ml/ 100 kg seeds should be considered the minimum effective dose to deliver broad spectrum control of MONGNI under a wide range of environmental conditions.

Winter wheat/FUSASP

According to the presented results, the dose of 200ml/ 100 kg seeds of FLUDIO 025 GF provided the optimum overall control and should be considered as effective against these 1 major pest, for which activity of FLUDIO 025 GF is claimed.

As a result, the proposed rate of 200ml/ 100 kg seeds should be considered the minimum effective dose to deliver broad spectrum control of FUSASP under a wide range of environmental conditions.

Winter wheat/TILLCA

According to the proposal results, the dose of 120 mL /100 kg seed of FLUDIO 025 GF provided the optimum overall control and should be considered as effective against these 1 major pest, for which activity of FLUDIO 025 GF is claimed. However, in practise, Applicant perform one treatment to protect crops during the growing season from a broader spectrum of seed borne and soilborne disease. For this reason, although the dose of 120 mL/100 kg seed was sufficiently effective, the dose of 200 mL/100 kg seed is recommended (with highest efficacy >90%). This dose is also recommended in plant protection

products registered for today in Poland, that contain the tested active substance.

Winter triticale/FUSASP

According to the presented results, the dose of 200ml/ 100 kg seeds of FLUDIO 025 GF provided the optimum overall control and should be considered as effective against these 1 major pest, for which activity of FLUDIO 025 GF is claimed.

As a result, the proposed rate of 200ml/ 100 kg seeds should be considered the minimum effective dose to deliver broad spectrum control of FUSASP under a wide range of environmental conditions.

Comments of zRMS:	<p>To provide information to establish the minimum effective dose, some of the trials conducted to demonstrate efficacy should include at least two lower dose(s) than recommended dose. In the appropriate research of efficacy were tested differ doses and to register was chosen the lowest effective, which is in accordance to EPPO 1/225 (2).</p> <p>During field tests Applicant used different doses (120 ml/100 kg seed – 0,6 N; 160 ml/100 kg seed – 0,8 N and 200 ml/100 kg seed – N recommended) of seed treatment product – FLUDIO ŽEL 025 FS / FUNABEN ŽEL (product code: FLUDIO 025 GF) containing fludioxonil (25 g/L). So, in the appropriate research of efficacy were tested differ doses and to register was chosen the lowest effective, which is in accordance with EPPO 1/225 (2).</p> <p>In total, Applicant submitted 32 trials carried out on: spring cereals (7) – spring barley (3) and spring wheat (4) and winter cereals (25) – winter rye (7), winter barley (9), winter wheat (7) and winter triticale (2). In some reports, several diseases were tested at the same time, so the number of tests performed on individual crops is not equal to the number of tests for individual fungal diseases.</p> <p>What is more, seed treatments products containing active ingredient –fludioxonil (25 g/L) have been allowed to use for many years. Also, in the literature of crop protection vast amounts of information can be found on efficacy of the plant protection products containing fludioxonil as an active compound.</p> <p>Therefore, the submitted documentation can be observed as acceptable in the opinion of Evaluator. Recommended dose 200 ml / 100 kg seed effectively control all studied fungal diseases. In all trials level of infestation was at acceptable level.</p> <ul style="list-style-type: none">• winter rye (7 trials), winter barley (9 trials), spring wheat (2 trials), spring barley (3 trials), winter wheat (7 trials), winter triticale (2 trials) / FUSASP as a result, the proposed rate of 200 ml/ 100 kg seeds should be considered the minimum effective dose to deliver broad spectrum control of FUSASP under a wide range of environmental conditions.• winter rye (7 trials) / UROCOC as a result, the proposed rate of 200ml/ 100 kg seeds should be considered the minimum effective dose to deliver broad spectrum control of UROCOC under a wide range of environmental conditions.• winter barley (6 trials), winter wheat (6 trials) / MONGNI - as a result, the proposed rate of 200 ml/ 100 kg seeds should be considered the minimum effective dose to deliver broad spectrum control of MONGNI under a wide range of environmental conditions.• winter barley (7 trials) / PYRNGR as a result, the proposed rate of 200ml/ 100 kg seeds should be considered the minimum effective dose to deliver broad spectrum control of PYRNGR under a wide range of environmental conditions.• spring wheat (4 trials), winter wheat (7 trials) / TILLCA as a result, the proposed rate of 200ml/ 100 kg seeds should be considered the minimum effective dose to deliver broad spectrum control of TILLCA under a wide range of environmental conditions.
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3.2.2 Efficacy tests (KCP 6.2)

The applicant submitted 32 reports (in total) showing the results in research into product efficacy carried out in 2021 in winter rye (7 trials), winter barley (9 trials), spring barley (3 trials), spring wheat (4 trials), winter wheat (7 trials), winter triticale (2 trials).

List of these reports is contained in **Appendix 1**.

Trials were randomized block design and conducted in different regions in Poland.

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

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

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

PP 1/135(4) Phytotoxicity assessment

PP 1/225(2) Minimum effective dose

Winter rye

Urocystic occulta (UROCOC)

A total 7 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of UROCOC in winter rye.

Efficacy data of UROCOC are presented in 7 trials. All the trials were conducted in 2021 in Poland.

Table 3.2-8: Details on trial methodology

TRIAL: 313/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized block
	Plot size	16.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter rye
	Varieties per crop	Dańkowskie Hadron
	Sowing period	01.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, plant emergence, phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 14.10.2021 BBCH 11 21.10.2021 BBCH 12 28.10.2021 Plant emergence BBCH 12-13 03.11.2021 Harvest BBCH 92 16.05.2022 Assesment of weight of 1000 grains BBCH 99 26.08.2022
Other relevant information	Soil type, pH	Loamy sand, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Winna Góra, prov. Wielkopolskie

The trial was set up in the central part of Poland.

The level of infection of the Dańkowskie Hadron winter rye seedlings caused by *Urocystic occulta*. Type of fungi, which are the agents of flag smut was at a quite high level in the control and reached 21.2%.

The level of *Urocystic occulta* infection present on the Dańkowskie Hadron winter rye was sufficient to perform efficacy assessment for the test treatment.

The experiment found that the tested product had no effect on other harmful organisms and non target organisms.

Neither the test treatment FLUDIO 025 GF applied at any of the test rates nor the reference product had any adverse effect on the Dańkowskie Hadron winter rye crop. No adverse effect of seed treatment FLUDIO 025 GF as well as standard product MAXIM 025 FS on the number of emergence under field conditions was found. The number of emergence did not differ statistically significantly between the experimental objects. After the application of seed treatment FLUDIO 025 GF as well as standard product MAXIM 025 FS, the grain yield was significantly higher as compared to untreated object.

After the application of product FLUDIO 025 GF in a dose of 200, 160 and 120 mL as well as standard product MAXIM 025 FS, the average percent of plants with symptoms of seedling blight was significantly lower as compared to untreated object. The test treatment FLUDIO 025 GF demonstrated efficacy of 92.5-100.0%. The test treatment FLUDIO 025 GF applied at the rate of 120/100 kg to 200 mL/100 kg seeds provided very high (92.5-100.0%) efficacy against disease, which was at the same level as efficacy of the standard product MAXIM 025 FS (100.0%).

TRIAL: 50F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized block
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter rye
	Varieties per crop	Dukato
	Sowing period	01.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10-11 11.10.2021 BBCH 11 15.10.2021 BBCH 12 22.10.2021 Plant emergence BBCH 12 22.10.2021
Other relevant information	Soil type, pH	Loamy sand, pH 6.4
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Sośnicowice, prov. Śląskie

The trial was set up in the south-west part of Poland. At the beginning of October 2021, the weather conditions favoured the proper emergence of winter rye plants. Active plant growth ended in the third decade of November. The winter rye entered dormancy period in good condition at the growth stage of BBCH

21-25. The winter of 2021-2022 was mild with a small and short-lived snow cover. Plant vegetation resumed on March 26, 2022. The winter rye plants overwintering very well.

In this experiment, artificial inoculation with *Urocystis occulta* (5 g spores of fungus per 1 kg grain) was performed on 30.09.2021 (BBCH 00).

The level of infection on the Dukato winter rye seedlings caused by the *Urocystis occulta* type of fungi, which are the agents of flag smut was at a quite high level in the control and reached 9.92%.

The level of *Urocystis occulta* infection present on the Dukato winter rye was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product Maxim 025 FS did not adversely affect the development of winter rye plants of the Dukato variety. Plant emergence were homogeneous across the trial. Winter rye plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 ml per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Urocystis* genus and demonstrated very high efficacy (100.0%) in each tested doses. The test treatment FLUDIO 025 GF applied at rate of 120 mL/100kg to 200 mL/100 kg seeds provided very high (100.0%) efficacy against disease, which was at the same level as the efficacy of the standard product MAXIM 025 FS (100.0%).

TRIAL: 51F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized block
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter rye
	Varieties per crop	Dańkowskie Granat
	Sowing period	01.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10-11 11.10.2021 BBCH 11 15.10.2021 Plant emergence BBCH 12 26.10.2021
Other relevant information	Soil type, pH	Loamy sand, pH 6.4
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Sośnicowice, prov. Śląskie

The trial was set up in the south-west part of Poland. At the beginning of October 2021, the weather conditions favoured the proper emergence of winter rye plants. Active plant growth ended in the third decade of November. The winter rye entered dormancy period in good condition at the growth stage of BBCH

21-25. The winter of 2021-2022 was mild with a small and short-lived snow cover. Plant vegetation resumed on March 26, 2022. The winter rye plants overwintering very well.

In this experiment, artificial inoculation with *Urocystis occulta* (5 g spores of fungus per 1 kg grain) was performed on 30.09.2021 (BBCH 00).

The level of infection on the Dańkowskie Granat winter rye seedlings caused by the *Urocystis occulta* type of fungi, which are the agents of flag smut was at a quite high level in the control and reached 5.24%.

The level of *Urocystis occulta* infection present on the Dańkowskie Granat winter rye was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product Maxim 025 FS did not adversely affect the development of winter rye plants of the Dańkowskie Granat variety. Plant emergence were homogeneous across the trial. Winter rye plant density after the application of the tested FLUDIO 025 GF FS product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 ml per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Urocystis* genus and demonstrated very high efficacy (98.09-100.0%) in each tested doses. The test treatment FLUDIO 025 GF applied at rate of 120 mL/100kg to 200 mL/100kg seeds provided very high (98.02%-100.0%) efficacy against disease, which was at the same level as the efficacy of the standard product MAXIM 025 FS (100.0%).

TRIAL: 52F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized block
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter rye
	Varieties per crop	Dańkowskie Diament
	Sowing period	01.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10-11 11.10.2021 BBCH 11 15.10.2021 BBCH 12 22.10.2021 Plant emergence BBCH 11-13 29.10.2021
Other relevant information	Soil type, pH	Loamy sand, pH 6.4
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Sośnicowice, prov. Śląskie

The trial was set up in the south-west part of Poland. At the beginning of October 2021, the weather con-

ditions favoured the proper emergence of winter rye plants. Active plant growth ended in the third decade of November. The winter rye entered dormancy period in good condition at the growth stage of BBCH 21-25. The winter of 2021-2022 was mild with a small and short-lived snow cover. Plant vegetation resumed on March 26, 2022. The winter rye plants overwintering very well.

In this experiment, artificial inoculation with *Urocystis occulta* (5 g spores of fungus per 1 kg grain) was performed on 30.09.2021 (BBCH 00).

The level of infection on the Dańkowskie Diament winter rye seedlings caused by the *Urocystis occulta* type of fungi, which are the agents of flag smut was at a quite high level in the control and reached 6.58%.

The level of *Urocystis occulta* infection present on the Dańkowskie Diament winter rye was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product Maxim 025 FS did not adversely affect the development of winter rye plants of the Dańkowskie Diament variety. Plant emergence were homogeneous across the trial. Winter rye plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Urocystis* genus and demonstrated very high efficacy (97.56-100.0%) in each tested doses. The test treatment FLUDIO 025 GF applied at rate of 120 mL/100kg to 200 mL/100kg seeds provided very high (97.56%-100.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (100.0%).

TRIAL: 53F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized block
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter rye
	Varieties per crop	Dańkowskie Rubin
	Sowing period	01.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10-11 11.10.2021 BBCH 11 15.10.2021 BBCH 12 22.10.2021 Plant emergence BBCH 12 26.10.2021
Other relevant information	Soil type, pH	Loamy sand, pH 6.4
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Sośnicowice, prov. Śląskie

The trial was set up in the south-west part of Poland. At the beginning of October 2021, the weather conditions favoured the proper emergence of winter rye plants. Active plant growth ended in the third decade of November. The winter rye entered dormancy period in good condition at the growth stage of BBCH 21-25. The winter of 2021-2022 was mild with a small and short-lived snow cover. Plant vegetation resumed on March 26, 2022. The winter rye plants overwintering very well.

In this experiment, artificial inoculation with *Urocystis occulta* (5 g spores of fungus per 1 kg grain) was performed on 30.09.2021 (BBCH 00).

The level of infection on the Dańkowskie Rubin winter rye seedlings caused by the *Urocystis occulta* type of fungi, which are the agents of flag smut was at a quite high level in the control and reached 5.16%.

The level of *Urocystis occulta* infection present on the Dańkowskie Rubin winter rye was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product Maxim 025 FS did not adversely affect the development of winter rye plants of the Dańkowskie Rubin variety. Plant emergence were homogeneous across the trial. Winter rye plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Urocystis* genus and demonstrated very high efficacy (100.0%) in each tested doses. The test treatment FLUDIO 025 GF applied at rate of 120 mL/100kg to 200 mL/100kg seeds provided very high (100.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (100.0%).

TRIAL: 54F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized block
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter rye
	Varieties per crop	Słowiańskie
	Sowing period	01.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10-11 11.10.2021 BBCH 11 15.10.2021 BBCH 12 22.10.2021 Plant emergence BBCH 12 26.10.2021
Other relevant infor-	Soil type, pH	Loamy sand, pH 6.4
	Natural / artificial	natural

mation	innoculation	
	Field / Greenhouse	Fields, Sośnicowice, prov. Śląskie

The trial was set up in the south-west part of Poland. At the beginning of October 2021, the weather conditions favoured the proper emergence of winter rye plants. Active plant growth ended in the third decade of November. The winter rye entered dormancy period in good condition at the growth stage of BBCH 21-25. The winter of 2021-2022 was mild with a small and short-lived snow cover. Plant vegetation resumed on March 26, 2022. The winter rye plants overwintering very well.

In this experiment, artificial inoculation with *Urocystis occulta* (5 g spores of fungus per 1 kg grain) was performed on 30.09.2021 (BBCH 00).

The level of infection on the Słowiańskie winter rye seedlings caused by the *Urocystis occulta* type of fungi, which are the agents of flag smut was at a quite high level in the control and reached 5.05%.

The level of *Urocystis occulta* infection present on the Słowiańskie winter rye was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product Maxim 025 FS did not adversely affect the development of winter rye plants of the Słowiańskie variety. Plant emergence were homogeneous across the trial. Winter rye plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Urocystis* genus and demonstrated very high efficacy (100.0%) in each tested doses. The test treatment FLUDIO 025 GF applied at rate of 120 mL/100kg to 200 mL/100kg seeds provided very high (100.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (100.0%).

TRIAL 334_01_F22_74

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized complete block
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter rye
	Varieties per crop	Tur F1
	Sowing period	27.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 14.10.2021 BBCH 12 29.11.2021 BBCH 21 22.03.2022 Assesment of weight of 1000 grains, yield BBCH 89 08.08.2022 BBCH 99 11.08.2022
Other re-	Soil type, pH	Loamy sand, pH 6.6

levant information	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Rzeszyn, prov. Kujawsko-Pomorskie

The trial was set up in the central part of Poland. The level of infection on the Tur F1 winter rye seedlings caused by *Urocystis occulta* type of fungi, which are the agents of flag smut, was at a quite high level in the control and reached 6.06%. The level of *Urocystis occulta* winter rye was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter rye of the Tur F1 variety. There were no statistical difference in the case of moisture content as well as weight of 1000 grains.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Urocystis occulta* genus and demonstrated efficacy of 70.86 – 91.24 %. The test treatment FLUDIO 025 GF applied at rate of 160 - 200 mL/100kg seeds provided high (82.63 – 91.24%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (90.71%).

Winter rye

Fusarium spp. (FUSASP)

A total 7 trials were carried out to evaluated the efficacy of FLUDIO 025 GF for the control of FUSASP in winter rye.

Efficacy data of FUSASP are presented in 7 trials. All the trials were conducted in 2021 in Poland.

TRIAL: 313/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized block
	Plot size	16.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter rye
	Varieties per crop	Dańkowskie Hadron
	Sowing period	01.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, plant emergence, phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 14.10.2021 BBCH 11 21.10.2021 BBCH 12 28.10.2021 Plant emergence BBCH 12-13 03.11.2021 Harvest BBCH 92 16.05.2022 Assesment of weight of 1000 grains BBCH 99 26.08.2022
Other re-	Soil type, pH	Loamy sand, pH 6.6

levant information	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Winna Góra, prov. Wielkopolskie

The trial was set up in the central part of Poland.

The level of infection of the Dańkowskie Hadron winter rye seedlings caused by *Fusarium* spp. Type of fungi, which are the agents of seedling blight was at a quite high level in the control and reached 63.6%.

The level of *Fusarium* spp. Infection present on the Dańkowskie Hadron winter rye was sufficient to perform efficacy assessment for the test treatment.

The experiment found that the tested product had no effect on other harmful organisms and non target organisms.

Neither the test treatment FLUDIO 025 GF applied at any of the test rates nor the reference product had any adverse effect on the Dańkowskie Hadron winter rye crop. No adverse effect of seed treatment FLUDIO 025 GF as well as standard product MAXIM 025 FS on the number of emergence under field conditions was found. The number of emergence did not differ statistically significantly between the experimental objects. After the application of seed treatment FLUDIO 025 GF as well as standard product MAXIM 025 FS, the grain yield was significantly higher as compared to untreated object.

After the application of product FLUDIO 025 GF in a dose of 200,160 and 120 mL as well as standard product MAXIM 025 FS, the average percent of plants with symptoms of seedling blight was significantly lower as compared to untreated object. The test treatment FLUDIO 025 GF demonstrated efficacy of 73.0 – 84.0%. The test treatment FLUDIO 025 GF applied at the rate of 200 mL/100 kg seeds provided high (84.0%) efficacy against disease, which was 12% higher than efficacy of the standard product MAXIM 025 FS.

TRIAL: 50F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized block
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter rye
	Varieties per crop	Dukato
	Sowing period	01.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10-11 11.10.2021 BBCH 11 15.10.2021 BBCH 12 22.10.2021 Plant emergence BBCH 12 22.10.2021
Other relevant information	Soil type, pH	Loamy sand, pH 6.4
	Natural / artificial inoculation	natural

	Field / Greenhouse	Fields, Sośnicowice, prov. Śląskie
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The trial was set up in the south-west part of Poland. At the beginning of October 2021, the weather conditions favoured the proper emergence of winter rye plants. Active plant growth ended in the third decade of November. The winter rye entered dormancy period in good condition at the growth stage of BBCH 21-25. The winter of 2021-2022 was mild with a small and short-lived snow cover. Plant vegetation resumed on March 26, 2022. The winter rye plants overwintering very well.

The level of infection on the Dukato winter rye seedlings caused by the *Fusarium* spp. type of fungi, which are the agents of seedling blight was at a quite high level in the control and reached 11.5%.

The level of *Fusarium* spp. infection present on the Dukato winter rye was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product Maxim 025 FS did not adversely affect the development of winter rye plants of the Dukato variety. Plant emergence were homogeneous across the trial. Winter rye plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium* genus and demonstrated efficacy of 53.0-91.0%. The test treatment FLUDIO 025 GF applied at rate of 160 mL/100kg to 200 mL/100 kg seeds provided very high (87.0-91.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (87.0%).

TRIAL: 51F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized block
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter rye
	Varieties per crop	Dańkowskie Granat
	Sowing period	01.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10-11 11.10.2021 BBCH 11 15.10.2021 Plant emergence BBCH 12 26.10.2021
Other relevant information	Soil type, pH	Loamy sand, pH 6.4
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Sośnicowice, prov. Śląskie

The trial was set up in the south-west part of Poland. At the beginning of October 2021, the weather conditions favoured the proper emergence of winter rye plants. Active plant growth ended in the third decade of November. The winter rye entered dormancy period in good condition at the growth stage of BBCH 21-25. The winter of 2021-2022 was mild with a small and short-lived snow cover. Plant vegetation resumed on March 26, 2022. The winter rye plants overwintering very well.

The level of infection on the Dańkowskie Granat winter rye seedlings caused by the *Fusarium* spp. type of fungi, which are the agents of seedling blight was at a quite high level in the control and reached 5.5%. The level of *Fusarium* spp. infection present on the Dańkowskie Granat winter rye was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product Maxim 025 FS did not adversely affect the development of winter rye plants of the Dańkowskie Granat variety. Plant emergence were homogeneous across the trial. Winter rye plant density after the application of the tested FLUDIO 025 GF FS product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium* genus and demonstrated efficacy of 55.0-82.0%. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (82.0%) efficacy against disease, which was at the same level as the efficacy of the standard product MAXIM 025 FS (82.0%).

TRIAL: 52F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized block
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter rye
	Varieties per crop	Dańkowskie Diament
	Sowing period	01.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10-11 11.10.2021 BBCH 11 15.10.2021 BBCH 12 22.10.2021 Plant emergence BBCH 11-13 29.10.2021
Other relevant information	Soil type, pH	Loamy sand, pH 6.4
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Sośnicowice, prov. Śląskie

The trial was set up in the south-west part of Poland. At the beginning of October 2021, the weather conditions favoured the proper emergence of winter rye plants. Active plant growth ended in the third decade of November. The winter rye entered dormancy period in good condition at the growth stage of BBCH

21-25. The winter of 2021-2022 was mild with a small and short-lived snow cover. Plant vegetation resumed on March 26, 2022. The winter rye plants overwintering very well.

The level of infection on the Dańkowskie Diament winter rye seedlings caused by the *Fusarium* spp. type of fungi, which are the agents of seedling blight was at a quite high level in the control and reached 6.5%. The level of *Fusarium* spp. infection present on the Dańkowskie Diament winter rye was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 025 FS did not adversely affect the development of winter rye plants of the Dańkowskie Diament variety. Plant emergence were homogeneous across the trial. Winter rye plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium* genus and demonstrated efficacy of 54.0-85.0%. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (85.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (85.0%).

TRIAL: 53F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized block
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter rye
	Varieties per crop	Dańkowskie Rubin
	Sowing period	01.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10-11 11.10.2021 BBCH 11 15.10.2021 BBCH 12 22.10.2021 Plant emergence BBCH 12 26.10.2021
Other relevant information	Soil type, pH	Loamy sand, pH 6.4
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Sośnicowice, prov. Śląskie

The trial was set up in the south-west part of Poland. At the beginning of October 2021, the weather conditions favoured the proper emergence of winter rye plants. Active plant growth ended in the third decade of November. The winter rye entered dormancy period in good condition at the growth stage of BBCH 21-25. The winter of 2021-2022 was mild with a small and short-lived snow cover. Plant vegetation resumed on March 26, 2022. The winter rye plants overwintering very well.

The level of infection on the Dańkowskie Rubin winter rye seedlings caused by the *Fusarium* spp. type of

fungi, which are the agents of seedling blight was at a quite high level in the control and reached 5.0%. The level of *Fusarium* spp. infection present on the Dańkowskie Rubin winter rye was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 025 FS did not adversely affect the development of winter rye plants of the Dańkowskie Rubin variety. Plant emergence were homogeneous across the trial. Winter rye plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium* genus and demonstrated efficacy of 60.0-90.0%. The test treatment FLUDIO 025 GF applied at rate of 160 - 200 mL/100kg seeds provided high (80.0-90.0%) efficacy against disease, which was in the case of dose 200 mL/100 kg seed 10% higher than efficacy of the standard product MAXIM 025 FS (80.0%).

TRIAL: 54F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized block
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter rye
	Varieties per crop	Słowiańskie
	Sowing period	01.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10-11 11.10.2021 BBCH 11 15.10.2021 BBCH 12 22.10.2021 Plant emergence BBCH 12 26.10.2021
Other relevant information	Soil type, pH	Loamy sand, pH 6.4
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Sośnicowice, prov. Śląskie

The trial was set up in the south-west part of Poland. At the beginning of October 2021, the weather conditions favoured the proper emergence of winter rye plants. Active plant growth ended in the third decade of November. The winter rye entered dormancy period in good condition at the growth stage of BBCH 21-25. The winter of 2021-2022 was mild with a small and short-lived snow cover. Plant vegetation resumed on March 26, 2022. The winter rye plants overwintering very well.

The level of infection on the Słowiańskie winter rye seedlings caused by the *Fusarium* spp. type of fungi, which are the agents of seedling blight was at a quite high level in the control and reached 5.0%.

The level of *Fusarium* spp. infection present on the Słowiańskie winter rye was sufficient to perform effi-

cacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 025 FS did not adversely affect the development of winter rye plants of the Słowiańskie variety. Plant emergence were homogeneous across the trial. Winter rye plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Urocystis* genus and demonstrated efficacy of 50.0-800.0%. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (80.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (80.0%).

TRIAL 334_01_F22_74

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized complete block
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter rye
	Varieties per crop	Tur F1
	Sowing period	27.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 14.10.2021 BBCH 12 29.11.2021 BBCH 21 22.03.2022 Assesment of weight of 1000 grains, yield BBCH 89 08.08.2022 BBCH 99 11.08.2022
Other relevant information	Soil type, pH	Loamy sand, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Rzeszyn, prov. Kujawsko-Pomorskie

The trial was set up in the central part of Poland. The level of infection on the Tur F1 winter rye seedlings caused by *Fusarium* spp. type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 10.63%. The level of *Fusarium* spp. winter rye was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter rye of the Tur F1 variety. There were no statistical difference in the case of moisture content as well as weight of 1000 grains.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium*

spp. genus and demonstrated efficacy of 39.24 – 86.98 %. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (86.98%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (87.08%).

Winter barley

Pyrenophora graminea (PYRNGR)

A total 7 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of PYRNGR in winter barley.

Efficacy data of PYRNGR are presented in 7 trials. All the trials were conducted in 2021 in Poland

TRIAL: 20 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	U-313
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, plant emergence, phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 11 18.10.2021 BBCH 11 22.10.2021 Plant density assessment BBCH 12 28.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. At the beginning of October 2021, the weather conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded properly and ended in the third decade of November. The winter barley crop entered the winter dormancy period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of March 2022. The plants overwintered in very good shape.

The level of infection on the U-313 winter barley seedlings caused by *Pyrenophora graminea*, type of fungi, which are the agents of barley leaf stripe, was at a quite high level in the control and reached 15.57%. The level of *Pyrenophora graminea* winter barley was sufficient to perform efficacy assessment for the test treatments.

The trial used the U 313 barley grain from a plantation that had been infected with *Pyrenophora graminea* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the U-313 variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Pyrenophora graminea* genus and demonstrated efficacy of 78.0-86.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL) with the addition of water (800 mL). The obtained efficacy was high (90.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 160 - 200 mL/100kg seeds provided high (83.0-86.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (87.0%).

TRIAL 21 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	Igri
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, plant emergence, phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 22.10.2021 Plant emergence BBCH 12-13 28.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. At the beginning of October 2021, the weather conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded properly and ended in the third decade of November. The winter barley crop entered the winter dormancy period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of March 2022. The plants overwintered in very good shape.

The level of infection on the Igri winter barley seedlings caused by *Pyrenophora graminea*, type of fungi, which are the agents of barley leaf stripe, was at a quite high level in the control and reached 19.28%. The level of *Pyrenophora graminea* winter barley was sufficient to perform efficacy assessment for the test treatments.

The trial used the Igri barley grain from a plantation that had been infected with *Pyrenophora graminea* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the Igrı variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Pyrenophora graminea* genus and demonstrated efficacy of 79.0-86.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL) with the addition of water (800 mL). The obtained efficacy was high (85.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 160 - 200 mL/100kg seeds provided high (84.0-86.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (86.0%).

TRIAL 22 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	SY 216-464
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, plant emergence, phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 22.10.2021 Plant emergence BBCH 12-13 29.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. At the beginning of October 2021, the weather conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded properly and ended in the third decade of November. The winter barley crop entered the winter dormancy period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of March 2022. The plants overwintered in very good shape.

The level of infection on the SY 216-464 winter barley seedlings caused by *Pyrenophora graminea*, type of fungi, which are the agents of barley leaf stripe, was at a quite high level in the control and reached 10.81%. The level of *Pyrenophora graminea* winter barley was sufficient to perform efficacy assessment for the test treatments.

The trial used the SY 216-464 barley grain from a plantation that had been infected with *Pyrenophora*

graminea during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the SY 216-464 variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Pyrenophora graminea* genus and demonstrated efficacy of 79.0-86.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL) with the addition of water (800 mL). The obtained efficacy was high (85.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 160 - 200 mL/100kg seeds provided high (84.0-86.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (86.0%).

TRIAL 24 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	C62
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, plant emergence, phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 22.10.2021 Plant emergence BBCH 12-13 29.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. At the beginning of October 2021, the weather conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded properly and ended in the third decade of November. The winter barley crop entered the winter dormancy period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of March 2022. The plants overwintered in very good shape.

The level of infection on the C62 winter barley seedlings caused by *Pyrenophora graminea*, type of fungi, which are the agents of barley leaf stripe, was at a quite high level in the control and reached 9.78%. The level of *Pyrenophora graminea* winter barley was sufficient to perform efficacy assessment for the

test treatments.

The trial used the C62 barley grain from a plantation that had been infected with *Pyrenophora graminea* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the C62 variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Pyrenophora graminea* genus and demonstrated efficacy of 74.0-84.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high (87.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 160 - 200 mL/100kg seeds provided high (81.0-84.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (87.0%).

TRIAL 334_01_F22_76

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomised complete block
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	Zenek
	Sowing period	27.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 12 29.11.2021 BBCH 22 22.03.2022 BBCH 59 17.05.2022 Assesment of weight of 1000 grains, yield BBCH 89 22.07.2022 BBCH 99 01.08.2022
Other relevant information	Soil type, pH	Sandy loam, pH 6.3
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Rzeszyn, prov. Kujawsko - Pomorskie

The trial was set up in the central part of Poland. The level of infection on the Zenek winter barley seedlings caused by *Pyrenophora graminea*, type of fungi, which are the agents of barley leaf stripe, was at a quite high level in the control and reached 5.7%. The level of *Pyrenophora graminea* winter barley was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the Zenek variety. There were no statistical difference in the case of moisture content as well as weight of 1000 grains.. In the case of yield there were statistical differences between control and treatment fields, especially in the highest rate of FLUDIO 025 GF seed treatment, as well as reference product – MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Pyrenophora graminea* genus and demonstrated efficacy of 73.38 – 89.45 %. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high (89.25%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 160 - 200 mL/100kg seeds provided high (80.96 – 89.45%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (88.48%).

TRIAL 334_01_F22_77

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomised complete block
	Plot size	10.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	Sandra
	Sowing period	18.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 12 02.12.2021 BBCH 22 25.03.2022 BBCH 59 15.05.2022 Assesment of weight of 1000 grains, yield BBCH 89 27.07.2022 BBCH 99 01.08.2022
Other relevant information	Soil type, pH	Sandy loam, pH 6.1
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Czempin, prov. Wielkopolskie

The trial was set up in the central part of Poland. The level of infection on the Sandra winter barley seedlings caused by *Pyrenophora graminea*, type of fungi, which are the agents of barley leaf stripe, was at a quite high level in the control and reached 10.63%. The level of *Pyrenophora graminea* winter barley was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the Sandra variety. There were no statistical difference in the case of

weight of 1000 grains.. In the case of yield and moisture content there were statistical differences between control and treatment fields, especially in the highest rate of FLUDIO 025 GF seed treatment, as well as reference product – MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Pyrenophora graminea* genus and demonstrated efficacy of 77.48 – 88.79 %. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high (89.97%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 160 - 200 mL/100kg seeds provided high (81.60 – 88.79%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (88.17%).

TRIAL 334_01_F22_78

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomised complete block
	Plot size	10.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	Kosmos
	Sowing period	27.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 12 22.11.2021 BBCH 22 01.04.2022 BBCH 59 17.05.2022 Assesment of weight of 1000 grains, yield BBCH 89 28.07.2022 BBCH 99 04.08.2022
Other relevant information	Soil type, pH	Sandy loam, pH 6.4
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Czempień, prov. Wielkopolskie

The trial was set up in the central part of Poland. The level of infection on the Kosmos winter barley seedlings caused by *Pyrenophora graminea*, type of fungi, which are the agents of barley leaf stripe, was at a quite high level in the control and reached 8.54%. The level of *Pyrenophora graminea* winter barley was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the Kosmos variety. There were no statistical difference in the case of weight of 1000 grains, yield and moisture content.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Pyrenophora graminea* genus and demonstrated efficacy of 74.72-88.83 %. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high (86.84%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 160 - 200 mL/100kg seeds provided high (82.68 – 88.83%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (87.45%).

The *Pyrenophora graminea* type of fungi, which are the agents of barley leaf stripe, occurred in two other reports presented in this dossier (19 F/2022 and 23 F/2022). However, due to low percentage of pest infestation of *Pyrenophora graminea* (19 F/2022 – 3.17%, 23 F/2022 – 2.61%), these reports were not presented in this section and were omitted in determining the minimum effective dose of FLUDIO 025 GF against barley leaf stripe.

Winter barley

Fusarium spp. (FUSASP)

A total 9 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of FUSASP in winter barley.

Efficacy data of PYRNGR are presented in 9 trials. All the trials were conducted in 2021 in Poland

TRIAL 19 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	Cakri
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, plant density assessment, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 22.10.2021 Plant density assessment BBCH 12-13 28.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. At the beginning of October 2021, the weather conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded properly and ended in the third decade of November. The winter barley crop entered the winter dormancy period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of March 2022. The plants overwintered in very good shape.

The level of infection on the Cakri winter barley seedlings caused by *Fusarium* spp., type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 16.5%. The level of *Fusarium* spp. winter barley was sufficient to perform efficacy assessment for the test treatments.

The trial used the Cakri barley grain from a plantation that had been infected with *Fusarium* spp. during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the Cakri variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium* spp. genus and demonstrated efficacy of 45.0-70.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL) with the addition of water (800 mL). The obtained efficacy was medium (73.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided medium (70.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (73.0%).

TRIAL 20 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	U-313
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Plant density assessment, phytotoxicity effects of fungicide on the crop,
	Assessment dates	Visual evaluation of phytotoxicity BBCH 11 18.10.2021 BBCH 11 22.10.2021 Plant density assessment BBCH 12-13 28.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. At the beginning of October 2021, the weather

conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded properly and ended in the third decade of November. The winter barley crop entered the winter dormancy period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of March 2022. The plants overwintered in very good shape.

The level of infection on the U-313 winter barley seedlings caused by *Fusarium* spp., type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 16.0%. The level of *Fusarium* spp. winter barley was sufficient to perform efficacy assessment for the test treatments. The trial used the U-313 barley grain from a plantation that had been infected with *Fusarium* spp. during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the U-313 variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium* spp. genus and demonstrated efficacy of 47.0-75.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL) with the addition of water (800 mL). The obtained efficacy was medium (78.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided medium (75.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (72.0%).

TRIAL 21 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	Igri
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Plant density assessment, phytotoxicity effects of fungicide on the crop,
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 22.10.2021 Plant density assessment BBCH 12-13 28.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. At the beginning of October 2021, the weather conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded

properly and ended in the third decade of November. The winter barley crop entered the winter dormancy period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of March 2022. The plants overwintered in very good shape.

The level of infection on the Igri winter barley seedlings caused by *Fusarium* spp., type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 18.0%. The level of *Fusarium* spp. winter barley was sufficient to perform efficacy assessment for the test treatments.

The trial used the Igri barley grain from a plantation that had been infected with *Fusarium* spp. during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the Igri variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium* spp. genus and demonstrated efficacy of 53.0-81.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL) with the addition of water (800 mL). The obtained efficacy was high (97.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (81.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (81.0%).

TRIAL 22 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	SY 216-464
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Plant density assessment, phytotoxicity effects of fungicide on the crop,
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 22.10.2021 Plant density assessment BBCH 12-13 29.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. At the beginning of October 2021, the weather conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded properly and ended in the third decade of November. The winter barley crop entered the winter dormancy

period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of March 2022. The plants overwintered in very good shape.

The level of infection on the SY 216-464 winter barley seedlings caused by *Fusarium spp.*, type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 12.0%. The level of *Fusarium spp.* winter barley was sufficient to perform efficacy assessment for the test treatments. The trial used the SY 216-464 barley grain from a plantation that had been infected with *Fusarium spp.* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the SY 216-464 variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium spp.* genus and demonstrated efficacy of 54.0-75.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL) with the addition of water (800 mL). The obtained efficacy was high (92.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (75.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (71.0%).

TRIAL 23 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	Titus
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Plant density assessment, phytotoxicity effects of fungicide on the crop,
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 22.10.2021 Plant density assessment BBCH 12-13 29.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. At the beginning of October 2021, the weather conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded properly and ended in the third decade of November. The winter barley crop entered the winter dormancy period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of

March 2022. The plants overwintered in very good shape.

The level of infection on the Titus winter barley seedlings caused by *Fusarium spp.*, type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 14.5%. The level of *Fusarium spp.* winter barley was sufficient to perform efficacy assessment for the test treatments.

The trial used the Titus barley grain from a plantation that had been infected with *Fusarium spp.* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the Titus variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium spp.* genus and demonstrated efficacy of 55.0-83.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high (97.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (83.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (86.0%).

TRIAL 24 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	C62
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop,
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 22.10.2021 Plant density assessment BBCH 12-13 29.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. At the beginning of October 2021, the weather conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded properly and ended in the third decade of November. The winter barley crop entered the winter dormancy period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of March 2022. The plants overwintered in very good shape.

The level of infection on the C62 winter barley seedlings caused by *Fusarium spp.* type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 14.0%. The level of *Fusarium spp.* winter barley was sufficient to perform efficacy assessment for the test treatments.

The trial used the C62 barley grain from a plantation that had been infected with *Fusarium spp.* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the C62 variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium spp.* genus and demonstrated efficacy of 61.0-82.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high (89.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (82.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (93.0%).

TRIAL 334_01_F22_76

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomised complete block
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	Zenek
	Sowing period	27.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 12 29.11.2021 BBCH 22 22.03.2022 BBCH 59 17.05.2022 Assesment of weight of 1000 grains, yield BBCH 89 22.07.2022 BBCH 99 01.08.2022
Other relevant information	Soil type, pH	Sandy loam, pH 6.3
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Rzeszyn, prov. Kujawsko - Pomorskie

The trial was set up in the central part of Poland. The level of infection on the Zenek winter barley seedlings caused by *Fusarium spp.* type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 9.5%. The level of *Fusarium spp.* winter barley was sufficient to perform

efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the Zenek variety. There were no statistical difference in the case of moisture content as well as weight of 1000 grains.. In the case of yield there were statistical differences between control and treatment fields, especially in the highest rate of FLUDIO 025 GF seed treatment, as well as reference product – MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium* spp. genus and demonstrated efficacy of 58.85 – 89.20 %. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high (91.74%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (89.20%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (89.49%).

TRIAL 334_01_F22_77

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomised complete block
	Plot size	10.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	Sandra
	Sowing period	18.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 12 02.12.2021 BBCH 22 25.03.2022 BBCH 59 15.05.2022 Assesment of weight of 1000 grains, yield BBCH 89 27.07.2022 BBCH 99 01.08.2022
Other relevant information	Soil type, pH	Sandy loam, pH 6.1
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Czempin, prov. Wielkopolskie

The trial was set up in the central part of Poland. The level of infection on the Sandra winter barley seedlings caused by *Fusarium* spp. type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 10.88%. The level of *Fusarium* spp. winter barley was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect

the development of winter barley of the Sandra variety. There were no statistical difference in the case of weight of 1000 grains.. In the case of yield and moisture content there were statistical differences between control and treatment fields, especially in the highest rate of FLUDIO 025 GF seed treatment, as well as reference product – MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium* spp. genus and demonstrated efficacy of 51.60 – 90.55 %. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high (88.32%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (90.55%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (90.86%).

TRIAL 334_01_F22_78

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomised complete block
	Plot size	10.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	Kosmos
	Sowing period	27.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 12 22.11.2021 BBCH 22 01.04.2022 BBCH 59 17.05.2022 Assesment of weight of 1000 grains, yield BBCH 89 28.07.2022 BBCH 99 04.08.2022
Other relevant information	Soil type, pH	Sandy loam, pH 6.4
	Natural / artificial inoculation	natural
	Field / Greenhouse	Fields, Czempień, prov. Wielkopolskie

The trial was set up in the central part of Poland. The level of infection on the Kosmos winter barley seedlings caused by *Fusarium* spp. type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 8.7%. The level of *Pyrenophora graminea* winter barley was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the Kosmos variety. There were no statistical difference in the case of weight of 1000 grains, yield and moisture content.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Pyrenophora graminea* genus and demonstrated efficacy of 65.59 – 90.53 %. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high (91.87%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (90.53%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (90.74%).

Winter barley

Monographella nivalis (MONGNI)

A total 6 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of MONGNI in winter barley.

Efficacy data of MONGNI are presented in 6 trials. All the trials were conducted in 2021 in Poland

TIRAL 19 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	Cakri
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Plant density assessment, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 22.10.2021 Plant density assessment BBCH 12-13 28.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. At the beginning of October 2021, the weather conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded properly and ended in the third decade of November. The winter barley crop entered the winter dormancy period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of March 2022. The plants overwintered in very good shape.

The level of infection on the Cakri winter barley seedlings caused by *Monographella nivalis*, type of fun-

gi, which are the agents of snow mould, was at a quite high level in the control and reached 28.0%. The level of *Monographella nivalis* winter barley was sufficient to perform efficacy assessment for the test treatments.

The trial used the Cakri barley grain from a plantation that had been infected with *Monographella nivalis* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the Cakri variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium spp.* genus and demonstrated efficacy of 82.0-93.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL) with the addition of water (800 mL). The obtained efficacy was high (96.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 120 - 200 mL/100kg seeds provided high (82.0-93.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (96.0%).

TRIAL 20 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	U-313
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 applications
Assessment	Assessment types	Plant density assessment, phytotoxicity effects of fungicide on the crop,
	Assessment dates	Visual evaluation of phytotoxicity BBCH 11 18.10.2021 BBCH 11 22.10.2021 Plant density assessment BBCH 12-13 28.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. At the beginning of October 2021, the weather conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded properly and ended in the third decade of November. The winter barley crop entered the winter dormancy period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of March 2022. The plants overwintered in very good shape.

The level of infection on the U-313 winter barley seedlings caused by *Monographella nivalis*, type of

fungi, which are the agents of snow mould, was at a quite high level in the control and reached 46.0%. The level of *Monographella nivalis* winter barley was sufficient to perform efficacy assessment for the test treatments.

The trial used the U-313 barley grain from a plantation that had been infected with *Monographella nivalis* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the U-313 variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Monographella nivalis* genus and demonstrated efficacy of 78.0-89.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL) with the addition of water (800 mL). The obtained efficacy was high (91.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 160 - 200 mL/100kg seeds provided high (85.0-89.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (91.0%).

TRIAL 21 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	Igri
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Plant density assessment, phytotoxicity effects of fungicide on the crop,
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 22.10.2021 Plant density assessment BBCH 12-13 28.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. At the beginning of October 2021, the weather conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded properly and ended in the third decade of November. The winter barley crop entered the winter dormancy period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of March 2022. The plants overwintered in very good shape.

The level of infection on the Igri winter barley seedlings caused by *Monographella nivalis*, type of fungi, which are the agents of snow mould, was at a quite high level in the control and reached 24.0%. The level of *Monographella nivalis*. winter barley was sufficient to perform efficacy assessment for the test treatments.

The trial used the Igri barley grain from a plantation that had been infected with *Monographella nivalis* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the Igri variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Monographella nivalis* genus and demonstrated efficacy of 79.0-83.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL) with the addition of water (800 mL). The obtained efficacy was high (88.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 160-200 mL/100kg seeds provided high (83.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (92.0%).

TRIAL 22 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	SY 216-464
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Plant density assessment, phytotoxicity effects of fungicide on the crop,
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 22.10.2021 Plant density assessment BBCH 12-13 29.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. At the beginning of October 2021, the weather conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded properly and ended in the third decade of November. The winter barley crop entered the winter dormancy

period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of March 2022. The plants overwintered in very good shape.

The level of infection on the SY 216-464 winter barley seedlings caused by *Monographella nivalis*, type of fungi, which are the agents of snow mould, was at a quite high level in the control and reached 12.0%. The level of *Monographella nivalis* winter barley was sufficient to perform efficacy assessment for the test treatments.

The trial used the SY 216-464 barley grain from a plantation that had been infected with *Monographella nivalis* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the SY 216-464 variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Monographella nivalis* genus and demonstrated efficacy of 50.0-67.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL) with the addition of water (800 mL). The obtained efficacy was high (75.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided medium (67.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (83.0%).

TRIAL 23 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	Titus
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Plant density assessment, phytotoxicity effects of fungicide on the crop,
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 22.10.2021 Plant density assessment BBCH 12-13 29.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. At the beginning of October 2021, the weather conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded

properly and ended in the third decade of November. The winter barley crop entered the winter dormancy period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of March 2022. The plants overwintered in very good shape.

The level of infection on the Titus winter barley seedlings caused by *Monographella nivalis*, type of fungi, which are the agents of snow mould, was at a quite high level in the control and reached 38.0%. The level of *Monographella nivalis* winter barley was sufficient to perform efficacy assessment for the test treatments.

The trial used the Titus barley grain from a plantation that had been infected with *Monographella nivalis* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the Titus variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium spp.* genus and demonstrated efficacy of 55.0-83.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high (97.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (83.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (86.0%).

TRIAL 24 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter barley
	Varieties per crop	C62
	Sowing period	04.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop,
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 22.10.2021 Plant density assessment BBCH 12-13 29.10.2021
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. At the beginning of October 2021, the weather conditions were favourable for proper emergence of winter barley plants. Fall active growth proceeded

properly and ended in the third decade of November. The winter barley crop entered the winter dormancy period in good condition at the stage of BBCH 25. Winter was snowless. Plant growth resumed on 27 of March 2022. The plants overwintered in very good shape.

The level of infection on the C62 winter barley seedlings caused by *Monographella nivalis*, type of fungi, which are the agents of snow mould, was at a quite high level in the control and reached 20.0%. The level of *Monographella nivalis* winter barley was sufficient to perform efficacy assessment for the test treatments.

The trial used the C62 barley grain from a plantation that had been infected with *Monographella nivalis* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter barley of the C62 variety. Plant emergence were homogeneous across the trial. Winter barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Monographella nivalis* genus and demonstrated efficacy of 70.0-80.0%. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high (85.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 160.0 - 200 mL/100kg seeds provided high (80.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (90.0%).

Spring barley

Fusarium spp. (FUSASP)

A total 3 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of FUSASP in spring barley.

Efficacy data of FUSASP are presented in 3 trials. All the trials were conducted in 2021 in Poland.

TRIAL 91 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	15.0 m ²
	Number of replications	4
Crop	Trials per crop	Spring barley
	Varieties per crop	Xanthe
	Sowing period	29.03.2022
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop,
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 19.04.2022 BBCH 11 22.04.2022

		Plant density assessment BBCH 12-13 28.04.2022
Other relevant information	Soil type, pH	Sandy loam, pH 6.3
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. The weather conditions in March 2022 were favourable for proper emergence of spring barley plants.

The level of infection on the Xanthe spring barley seedlings caused by *Fusarium spp.* type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 48.5%. The level of *Fusarium spp.* spring barley was sufficient to perform efficacy assessment for the test treatments. The trial used the Xanthe barley grain from a plantation that had been infected with *Fusarium spp.* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of spring barley of the Xanthe variety. Plant emergence were homogeneous across the trial. Spring barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium spp.* genus and demonstrated efficacy of 62.0-76.0 %. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high (92.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided medium (76.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (82.0%).

TRIAL 92 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	15.0 m ²
	Number of replications	4
Crop	Trials per crop	Spring barley
	Varieties per crop	Finish
	Sowing period	29.03.2022
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop,
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 19.04.2022 BBCH 11 22.04.2022 Plant density assessment BBCH 12-13 28.04.2022

Other relevant information	Soil type, pH	Sandy loam, pH 6.3
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. The weather conditions in March 2022 were favourable for proper emergence of spring barley plants.

The level of infection on the Finish spring barley seedlings caused by *Fusarium spp.* type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 59.5%. The level of *Fusarium spp.* spring barley was sufficient to perform efficacy assessment for the test treatments.

The trial used the Finish barley grain from a plantation that had been infected with *Fusarium spp.* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of spring barley of the Finish variety. Plant emergence were homogeneous across the trial. Spring barley plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium spp.* genus and demonstrated efficacy of 70.0-87.0 %. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high (96.0%), but these results were not taken into account. The test treatment FLUDIO 025 GF applied at rate of 160 - 200 mL/100kg seeds provided high (82.0-87.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (95.0%).

TRIAL 28_01_F22_053

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	10.5 m ²
	Number of replications	4
Crop	Trials per crop	Spring barley
	Varieties per crop	Ella
	Sowing period	12.04.2022
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of phytotoxicity effects of fungicide on the crop, yield, moisture, TGW
	Assessment dates	Visual evaluation of phytotoxicity BBCH 12 06.05.2022 BBCH 22 11.05.2022 BBCH 59 03.06.2022 Yield, moisture, TGW BBCH 89 10.08.2022 BBCH 89 15.08.2022

Other relevant information	Soil type, pH	Sandy loam, pH 6.3
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Rąbiń / prov. Wielkopolskie (Poland)

The trial was set up in the central part of Poland. The level of infection on the Ella spring barley seedlings caused by *Tilletia caries* type of fungi, which are the agents of stinking smut, was at a quite high level in the control and reached 6.7%. In this trials the assessments of efficacy were performed twice, for this reason the level of infection is presented as the average value of two assessment (I assessment 11.75%, II assessment 1.57%, the average level of infection by *Tilletia caries* fungi is 6.7%).

The tested product FLUDIO 025 GF and the reference product MAXIM 025 FS did not adversely affect the development of spring cereals of the Ella variety. There were no statistical difference in the case of weight of 1000 grains, yield and moisture content.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Tilletia caries* genus and demonstrated efficacy of 75.1-89.4%. The test treatment FLUDIO 025 GF applied at rate of 160 - 200 mL/100kg seeds provided high (82.9 – 89.4%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (89.4%). As it was mentioned, the assessment of efficacy was performed twice in this trials. For this reason, the value of presented efficacy are the average value of two assessment of efficacy of applied seed treatment (for FLUDIO 025 GF and reference product).

The *Pyrenophora graminea* type of fungi, which are the agents of barley leaf stripe, occurred in three described reports presented in this dossier (91 F/2022, 92 F/2022 and 28_01_F22_053). However, due to low percentage of pest infestation of *Pyrenophora graminea* (91 F/2022 – 1.38%, 92 F/2022 – 2.45% and 28_01_F22_053 – 1.22%), these reports were not presented in this section and were omitted in determining the minimum effective dose of FLUDIO 025 GF against barley leaf stripe.

Spring wheat

Fusarium spp. (FUSASP)

TRIAL 78F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	8.1 m ²
	Number of replications	4
Crop	Trials per crop	Spring wheat
	Varieties per crop	MHR Jutrzenka
	Sowing period	29.03.2022
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop,

	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 21.04.2022 BBCH 11 26.04.2022 Plant density assessment BBCH 12 02.05.2022
Other relevant information	Soil type, pH	Sandy loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. Atmospheric conditions in March favoured proper emergence of spring wheat MHR Jutrzenka cultivar.

The level of infection on the MHR Jutrzenka spring wheat seedlings caused by *Fusarium spp.* type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 32.0%. The level of *Fusarium spp.* spring wheat was sufficient to perform efficacy assessment for the test treatments.

The trial used the MHR Jutrzenka wheat grain from a plantation that had been infected with *Fusarium spp.* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of spring wheat of the MHR Jutrzenka variety. Plant emergence were homogeneous across the trial. Spring wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium spp.* genus and demonstrated efficacy of 65.6-81.3 %. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (81.3%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (87.5%).

TRIAL 79F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	8.1 m ²
	Number of replications	4
Crop	Trials per crop	Spring wheat
	Varieties per crop	Rusałka
	Sowing period	29.03.2022
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop,
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 21.04.2022 BBCH 11 25.04.2022 Plant density assessment BBCH 12-13 02.05.2022

Other relevant information	Soil type, pH	Sandy loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. Atmospheric conditions in March favoured proper emergence of spring wheat Rusalka cultivar.

The level of infection on the Rusalka spring wheat seedlings caused by *Fusarium spp.* type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 19.5%. The level of *Fusarium spp.* spring wheat was sufficient to perform efficacy assessment for the test treatments.

The trial used the Rusalka wheat grain from a plantation that had been infected with *Fusarium spp.* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of spring wheat of the Rusalka variety. Plant emergence were homogeneous across the trial. Spring wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium spp.* genus and demonstrated efficacy of 68.4-92.1 %. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (92.1%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (92.1%).

The *Fusarium spp.* fungus were also assessed in trial 29_01_F22_055. The assessments were performed twice, the first pest severity of *Fusarium spp.* was 5.63%, the second assessment the pest infestation was 2.88%. The average infestation of pest was 4.3% - this value is below 5%. Hence this report was omitted from this disease, it was not used to determine the minimum effective dose.

Spring wheat

Tilletia caries (TILLCA)

TRIAL 78F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	8.1 m ²
	Number of replications	4
Crop	Trials per crop	Spring wheat
	Varieties per crop	MHR Jutrzenka
	Sowing period	29.03.2022
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop,
	Assessment dates	Visual evaluation of phytotoxicity

		BBCH 10 21.04.2022 BBCH 11 26.04.2022 Plant density assessment BBCH 12 02.05.2022
Other relevant information	Soil type, pH	Sandy loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. Atmospheric conditions in March favoured proper emergence of spring wheat MHR Jutrzenka cultivar. Before planting, the MHR Jutrzenka spring wheat grain was artificially infected with spores of *Tilletia caries* at the rate of 2 g spores per 1 kg of grain. Prevailing weather conditions during spring wheat drilling and germination contributed to proper infection with spores of *Tilletia caries*. The level of infection on the MHR Jutrzenka spring wheat seedlings caused by *Tilletia caries*. type of fungi, which are the agents of stinking smut, was at a quite high level in the control and reached 23.47%. The level of *Tilletia caries* spring wheat was sufficient to perform efficacy assessment for the test treatments.

The trial used the MHR Jutrzenka wheat grain from a plantation that had been infected with *Tilletia caries* during the prior growing season

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of spring wheat of the MHR Jutrzenka variety. Plant emergence were homogeneous across the trial. Spring wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Tilletia caries* genus and demonstrated efficacy of 89.0-96.0 %. The test treatment FLUDIO 025 GF applied at rate of 120-200 mL/100kg seeds provided high (89.0-96.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (97.0%).

TRIAL 79F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	8.1 m ²
	Number of replications	4
Crop	Trials per crop	Spring wheat
	Varieties per crop	Rusałka
	Sowing period	29.03.2022
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop,
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 21.04.2022 BBCH 11 25.04.2022

		Plant density assessment BBCH 12-13 02.05.2022
Other relevant information	Soil type, pH	Sandy loam, pH 6.2
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. Atmospheric conditions in March favoured proper emergence of spring wheat Rusałka cultivar. Before planting, the Rusałka spring wheat grain was artificially infected with spores of *Tilletia caries* at the rate of 2 g spores per 1 kg of grain.

Prevailing weather conditions during spring wheat drilling and germination contributed to proper infection with spores of *Tilletia caries*. The level of infection on the Rusałka spring wheat seedlings caused by *Tilletia caries*. type of fungi, which are the agents of stinking smut, was at a quite high level in the control and reached 9.43%. The level of *Tilletia caries* spring wheat was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of spring wheat of the Rusałka variety. Plant emergence were homogeneous across the trial. Spring wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Tilletia caries* genus and demonstrated efficacy of 85.0-100.0 %. The test treatment FLUDIO 025 GF applied at rate of 120.0-200 mL/100kg seeds provided high (85.0-100.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (100.0%).

TRIAL 29_01_F22_055

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized complete blocks
	Plot size	10.5 m ²
	Number of replications	4
Crop	Trials per crop	Spring wheat
	Varieties per crop	Atrakcja
	Sowing period	12.04.2022
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assessment phytotoxicity effects of fungicide on the crop, yield, moisture and TGW
	Assessment dates	Visual evaluation of phytotoxicity BBCH 12 26.04.2022 BBCH 22 15.04.2022 BBCH 85 22.07.2022 Yield, BBCH 89 11.08.2022 BBCH 99 15.08.2022

Other relevant information	Soil type, pH	Sandy loam, pH 6.3
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Rąbiń / prov. Wielkopolskie (Poland)

The trial was set up in the central part of Poland. The level of infection on the Atrakcja spring wheat seedlings caused by *Tilletia caries* type of fungi, which are the agents of stinking smut, was at a quite high level in the control and reached 4.3%. In the case of stinking smut, according to Harmonization Meeting about effectiveness, in the seed treatment a threshold of harmfulness equal to 1% of the affected plants is allowed. For this reason, the level of *Tilletia caries* spring wheat was sufficient to perform efficacy assessment for the test treatments. Moreover, in this trials the assessments of efficacy were performed twice, for this reason the level of infection is presented as the average value of two assessment (I assessment 5.63%, II assessment 2.88%, the average level of infection by *Tilletia caries* fungi is 4.3%). The tested product FLUDIO 025 GF and the reference product MAXIM 025 FS did not adversely affect the development of spring cereals of the Atrakcja variety. There were no statistical difference in the case of weight of 1000 grains, yield and moisture content.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Tilletia caries* genus and demonstrated efficacy of 56.9-87.8 %. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (87.8%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (87.3%). As it was mentioned, the assessment of efficacy was performed twice in this trials. For this reason, the value of presented efficacy are the average value of two assessment of efficacy of applied seed treatment (for FLUDIO 025 GF and reference product).

TRIAL 29_01_F22_056

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized complete blocks
	Plot size	10.5 m ²
	Number of replications	4
Crop	Trials per crop	Spring wheat
	Varieties per crop	Quintus
	Sowing period	12.04.2022
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assessment phytotoxicity effects of fungicide on the crop, yield, moisture and TGW
	Assessment dates	Visual evaluation of phytotoxicity BBCH 13 29.04.2022 BBCH 23 15.04.2022 BBCH 85 25.07.2022 Yield, moisture, TGW BBCH 89 09.08.2022 BBCH 99 15.08.2022

Other relevant information	Soil type, pH	Sandy loam, pH 6.3
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Józefów / prov. Lubelskie (Poland)

The trial was set up in the south-east part of Poland. The level of infection on the Quintus spring wheat seedlings caused by *Tilletia caries* type of fungi, which are the agents of stinking smut, was at a quite high level in the control and reached 3.8%. In the case of stinking smut, according to Harmonization Meeting about effectiveness, in the seed treatment a threshold of harmfulness equal to 1% of the affected plants is allowed. For this reason, the level of *Tilletia caries* spring wheat was sufficient to perform efficacy assessment for the test treatments. Moreover, in this trials the assessments of efficacy were performed twice, for this reason the level of infection is presented as the average value of two assessment (I assessment 4.4%, II assessment 3.25%, the average level of infection by *Tilletia caries* fungi is 3.8%). The tested product FLUDIO 025 GF and the reference product MAXIM 025 FS did not adversely affect the development of spring cereals of the Quintus variety. There were no statistical difference in the case of weight of 1000 grains and moisture content. In the case of yield, there was statistical difference between yield in control and treatments groups.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Tilletia caries* genus and demonstrated efficacy of 68.6-88.8 %. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (88.8%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (88.7%). As it was mentioned, the assessment of efficacy was performed twice in this trials. For this reason, the value of presented efficacy are the average value of two assessment of efficacy of applied seed treatment (for FLUDIO 025 GF and reference product).

Winter wheat FUSASP

TRIAL: 306/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	16.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Plejada
	Sowing period	12.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 03.11.2021 BBCH 10-11 08.11.2021 BBCH 11 15.11.2021

		Plant emergence BBCH 12 25.11.2021 Harvest, moisture BBCH 92 25.07.2022 Assessment of weight of 1000 grains BBCH 99 26.08.2022
Other relevant information	Soil type, pH	Sandy loam, pH 6.9
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Winna Góra / prov. Wielkopolskie (Poland)

The trial was set up in the central part of Poland.

The level of infection of the Plejada winter wheat seedlings caused by *Fusarium* spp.. Type of fungi, which are the agents of seedling blight was at a quite high level in the control and reached 64.1%.

The level of *Fusarium* spp. infection present on the Plejada winter wheat was sufficient to perform efficacy assessment for the test treatment.

The experiment found that the tested product had no effect on other harmful organisms and non target organisms.

Neither the test treatment FLUDIO 025 GF applied at any of the test rates nor the reference product had any adverse effect on the Plejada winter wheat crop. No adverse effect of seed treatment FLUDIO 025 GF as well as standard product MAXIM 025 FS on the number of emergence under field conditions was found. The number of emergence did not differ statistically significantly between the experimental objects. After the application of seed treatment FLUDIO 025 GF as well as standard product MAXIM 025 FS, the grain yield was significantly higher as compared to untreated object. After the application of seed treatment FLUDIO 025 GF as well as standard product MAXIM 025 FS, the weight of 1000 grains did not differ statistically significantly as compared to untreated object.

After the application of product FLUDIO 025 GF in a dose of 200, 160 and 120 mL as well as standard product MAXIM 025 FS, the average percent of plants with symptoms of snow mould was significantly lower as compared to untreated object. The test treatment FLUDIO 025 GF demonstrated efficacy of 29.0-49.0. The test treatment FLUDIO 025 GF applied at the rate of 200 mL/100 kg seeds provided medium (49.0 %) efficacy against disease, which was at the same level as efficacy of the standard product MAXIM 025 FS (42.0%).

TRIAL: 63 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Arkadia
	Sowing period	05.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop

	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 29.10.2021 Plant density assessment BBCH 12 04.11.2021
Other relevant information	Soil type, pH	Sandy loam, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. Weather conditions in autumn 2021 were favourable for proper emergence and development of winter crops. Active plant growth stopped in the third decade of November. Winter was mild with occasional snowfall. Vegetation started again in the third decade of March. The level of infection on the Arkadia winter wheat seedlings caused by *Fusarium* spp. type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 20.0%. The level of *Fusarium* spp. winter wheat was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter wheat of the Arkadia variety. Plant emergence were homogeneous across the trial. Winter wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium* spp. genus and demonstrated efficacy of 64.0-80.0 %. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (80.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (82.0%).

TRIAL: 64 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Zyta
	Sowing period	05.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 30.10.2021 Plant density assessment BBCH 12 04.11.2021

Other relevant information	Soil type, pH	Sandy loam, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. Weather conditions in autumn 2021 were favourable for proper emergence and development of winter crops. Active plant growth stopped in the third decade of November. Winter was mild with occasional snowfall. Vegetation started again in the third decade of March. The level of infection on the Zyta winter wheat seedlings caused by *Fusarium* spp. type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 30.39%. The level of *Fusarium* spp winter wheat was sufficient to perform efficacy assessment for the test treatments. The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter wheat of the Zyta variety. Plant emergence were homogeneous across the trial. Winter wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium* spp genus and demonstrated efficacy of 80.0-92.0 %. The test treatment FLUDIO 025 GF applied at rate of 120 200 mL/100kg seeds provided high (80.0-92.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (92.0%).

TRIAL: 65 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Opoka
	Sowing period	05.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 29.10.2021 Plant density assessment BBCH 12-13 08.11.2021
Other relevant information	Soil type, pH	Sandy loam, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. Weather conditions in autumn 2021 were favourable

for proper emergence and development of winter crops. Active plant growth stopped in the third decade of November. Winter was mild with occasional snowfall. Vegetation started again in the third decade of March. The level of infection on the Opoka winter wheat seedlings caused by *Fusarium* spp. type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 15.0%. The level of *Fusarium* spp winter wheat was sufficient to perform efficacy assessment for the test treatments. The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter wheat of the Opoka variety. Plant emergence were homogeneous across the trial. Winter wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium* spp. genus and demonstrated efficacy of 40.0-80.0 %. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (80.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (83.0%).

TRIAL: 66 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Fidelius
	Sowing period	05.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 29.10.2021 Plant density assessment BBCH 12-13 08.11.2021
Other relevant information	Soil type, pH	Sandy loam, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. Weather conditions in autumn 2021 were favourable for proper emergence and development of winter crops. Active plant growth stopped in the third decade of November. Winter was mild with occasional snowfall. Vegetation started again in the third decade of March. The level of infection on the Fidelius winter wheat seedlings caused by *Fusarium* spp. type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 30.91%. The level of *Fusarium* spp winter wheat was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect

the development of winter wheat of the Fidelius variety. Plant emergence were homogeneous across the trial. Winter wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium* spp genus and demonstrated efficacy of 53.0-81.0 %. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (81.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (81.0%).

TRIAL: 67 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Tobak
	Sowing period	05.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 30.10.2021 Plant density assessment BBCH 12-13 09.11.2021
Other relevant information	Soil type, pH	Sandy loam, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. Weather conditions in autumn 2021 were favourable for proper emergence and development of winter crops. Active plant growth stopped in the third decade of November. Winter was mild with occasional snowfall. Vegetation started again in the third decade of March. The level of infection on the Tobak winter wheat seedlings caused by *Fusarium* spp. type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 41.59%. The level of *Fusarium* spp. winter wheat was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter wheat of the Tobak variety. Plant emergence were homogeneous across the trial. Winter wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium* spp genus and demonstrated efficacy of 65.0-90.0 %. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (90.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (91.0%).

TRIAL 333_01_F21_72

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized complete blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Arkadia
	Sowing period	27.10.2022
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assessment phytotoxicity effects of fungicide on the crop, yield, moisture and TGW
	Assessment dates	Visual evaluation of phytotoxicity BBCH 12 29.11.2021 BBCH 22 22.03.2022 BBCH 85 12.07.2022 Yield, moisture, TGW BBCH 89 08.08.2022 BBCH 99 11.08.2022
Other relevant information	Soil type, pH	Sandy loam, pH 6.3
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Rzeszyn / prov. Kujawsko-Pomorskie (Poland)

The trial was set up in the central part of Poland. The level of infection on the Arkadia winter wheat seedlings caused by *Fusarium spp.* type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 10.88%. The level of *Fusarium spp.* winter wheat was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 025 FS did not adversely affect the development of winter cereals of the Arkadia variety. There were no statistical difference in the case of moisture content. In the case of yield, weight of 1000 grains there was statistical difference between yield in control and treatments groups.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Fusarium spp.* genus and demonstrated efficacy of 58.31 – 89.68%. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (89.68%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (87.41%).

Winter wheat

Monographella nivalis (MONGNI)

TRIAL: 306/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	16.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Plejada
	Sowing period	12.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 03.11.2021 BBCH 10-11 08.11.2021 BBCH 11 15.11.2021 Plant emergence BBCH 12 25.11.2021 Harvest, moisture BBCH 92 25.07.2022 Assessment of weight of 1000 grains BBCH 99 26.08.2022
Other relevant information	Soil type, pH	Sandy loam, pH 6.9
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Winna Góra / prov. Wielkopolskie (Poland)

The trial was set up in the central part of Poland.

The level of infection of the Plejada winter wheat seedlings caused by *Monographella nivalis*. Type of fungi, which are the agents of snow mould was at a quite high level in the control and reached 14.8%.

The level of *Monographella nivalis* infection present on the Plejada winter wheat was sufficient to perform efficacy assessment for the test treatment.

The experiment found that the tested product had no effect on other harmful organisms and non target organisms.

Neither the test treatment FLUDIO 025 GF applied at any of the test rates nor the reference product had any adverse effect on the Plejada winter wheat crop. No adverse effect of seed treatment FLUDIO 025 GF as well as standard product MAXIM 025 FS on the number of emergence under field conditions was found. The number of emergence did not differ statistically significantly between the experimental objects. After the application of seed treatment FLUDIO 025 GF as well as standard product MAXIM 025 FS, the grain yield was significantly higher as compared to untreated object. After the application of seed treatment FLUDIO 025 GF as well as standard product MAXIM 025 FS, the weight of 1000 grains did

not differ statistically significantly as compared to untreated object.
 After the application of product FLUDIO 025 GF in a dose of 200, 160 and 120 mL as well as standard product MAXIM 025 FS, the average percent of plants with symptoms of snow mould was significantly lower as compared to untreated object. The test treatment FLUDIO 025 GF demonstrated efficacy of 60-87.0%. The test treatment FLUDIO 025 GF applied at the rate of 200 mL/100 kg seeds provided high (87.0 %) efficacy against disease, which was at the same level as efficacy of the standard product MAXIM 025 FS (78.0%).

TRIAL: 63 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Arkadia
	Sowing period	05.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 29.10.2021 Plant density assessment BBCH 12 04.11.2021
Other relevant information	Soil type, pH	Sandy loam, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. Weather conditions in autumn 2021 were favourable for proper emergence and development of winter crops. Active plant growth stopped in the third decade of November. Winter was mild with occasional snowfall. Vegetation started again in the third decade of March. Snow cover didn't last long, however mild temperatures, near 0 degree Celsius and occasional snowfall or rainfall provided conditions sufficient for infection by *Monographella nivalis*. The level of infection on the Arkadia winter wheat seedlings caused by *Monographella nivalis*. type of fungi, which are the agents of snow mould, was at a quite high level in the control and reached 22.54%. The level of *Monographella nivalis* winter wheat was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter wheat of the Arkadia variety. Plant emergence were homogeneous across the trial. Winter wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the

Monographella nivalis genus and demonstrated efficacy of 46.0-81.0 %. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (81.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (92.0%).

TRIAL: 64 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Zyta
	Sowing period	05.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 30.10.2021 Plant density assessment BBCH 12 04.11.2021
Other re-levant infor-mation	Soil type, pH	Sandy loam, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. Weather conditions in autumn 2021 were favourable for proper emergence and development of winter crops. Active plant growth stopped in the third decade of November. Winter was mild with occasional snowfall. Vegetation started again in the third decade of March. Snow cover didn't last long, however mild temperatures, near 0 degree Celsius and occasional snowfall or rainfall provided conditions sufficient for infection by *Monographella nivalis*. The level of infection on the Zyta winter wheat seedlings caused by *Monographella nivalis*. type of fungi, which are the agents of snow mould, was at a quite high level in the control and reached 36.36%. The level of *Monographella nivalis* winter wheat was sufficient to perform efficacy assessment for the test treatments. The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter wheat of the Zyta variety. Plant emergence were homogeneous across the trial. Winter wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Monographella nivalis* genus and demonstrated efficacy of 51.0-78.0.0 %. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided medium (78.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (82.0%).

TRIAL: 65 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Opoka
	Sowing period	05.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 29.10.2021 Plant density assessment BBCH 12-13 08.11.2021
Other relevant information	Soil type, pH	Sandy loam, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. Weather conditions in autumn 2021 were favourable for proper emergence and development of winter crops. Active plant growth stopped in the third decade of November. Winter was mild with occasional snowfall. Vegetation started again in the third decade of March. Snow cover didn't last long, however mild temperatures, near 0 degree Celsius and occasional snowfall or rainfall provided conditions sufficient for infection by *Monographella nivalis*. The level of infection on the Opoka winter wheat seedlings caused by *Monographella nivalis*. type of fungi, which are the agents of snow mould, was at a quite high level in the control and reached 27.38%. The level of *Monographella nivalis* winter wheat was sufficient to perform efficacy assessment for the test treatments. The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter wheat of the Opoka variety. Plant emergence were homogeneous across the trial. Winter wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Monographella nivalis* genus and demonstrated efficacy of 46.0-76.0.0 %. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided medium (76.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (86.0%).

TRIAL: 66 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental	Plot design	Randomized blocks

design	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Fidelius
	Sowing period	05.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 29.10.2021 Plant density assessment BBCH 12-13 08.11.2021
Other re-levant infor-mation	Soil type, pH	Sandy loam, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. Weather conditions in autumn 2021 were favourable for proper emergence and development of winter crops. Active plant growth stopped in the third decade of November. Winter was mild with occasional snowfall. Vegetation started again in the third decade of March. Snow cover didn't last long, however mild temperatures, near 0 degree Celsius and occasional snowfall or rainfall provided conditions sufficient for infection by *Monographella nivalis*. The level of infection on the Fidelius winter wheat seedlings caused by *Monographella nivalis*. type of fungi, which are the agents of snow mould, was at a quite high level in the control and reached 51.01%. The level of *Monographella nivalis* winter wheat was sufficient to perform efficacy assessment for the test treatments. The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter wheat of the Fidelius variety. Plant emergence were homogeneous across the trial. Winter wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Monographella nivalis* genus and demonstrated efficacy of 67.0-85.0 %. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (85.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (89.0%).

TRIAL: 67 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat

	Varieties per crop	Tobak
	Sowing period	05.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 30.10.2021 Plant density assessment BBCH 12-13 09.11.2021
Other re-levant infor-mation	Soil type, pH	Sandy loam, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. Weather conditions in autumn 2021 were favourable for proper emergence and development of winter crops. Active plant growth stopped in the third decade of November. Winter was mild with occasional snowfall. Vegetation started again in the third decade of March. Snow cover didn't last long, however mild temperatures, near 0 degree Celsius and occasional snowfall or rainfall provided conditions sufficient for infection by *Monographella nivalis*. The level of infection on the Tobak winter wheat seedlings caused by *Monographella nivalis* type of fungi, which are the agents of snow mould, was at a quite high level in the control and reached 41.59%. The level of *Monographella nivalis* winter wheat was sufficient to perform efficacy assessment for the test treatments. The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter wheat of the Tobak variety. Plant emergence were homogeneous across the trial. Winter wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Monographella nivalis* genus and demonstrated efficacy of 57.0-76.0 %. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided medium (76.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (81.0%).

Winter wheat

Tilletia tritici (TILLCA)

TRIAL: 306/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	16.5 m ²
	Number of replications	4

Crop	Trials per crop	Winter wheat
	Varieties per crop	Plejada
	Sowing period	12.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant emergence, phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 03.11.2021 BBCH 10-11 08.11.2021 BBCH 11 15.11.2021 Plant emergence BBCH 12 25.11.2021 Harvest, moisture BBCH 92 25.07.2022 Assessment of weight of 1000 grains BBCH 99 26.08.2022
Other re-levant infor-mation	Soil type, pH	Sandy loam, pH 6.9
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Winna Góra / prov. Wielkopolskie (Poland)

The trial was set up in the central part of Poland. In this trials, there was a mixed infection of fungi belonging to the same genus (*Tilletia*), i.e. *Tilletia tritici* (which is synonymous with *Tilletia caries*) - the fungus responsible for stinking smut and *Tilletia foetida* - the fungus responsible for common bunt. These diseases are closely related. It is very difficult to distinguish fungi at the species level and usually is only possible with the use of advanced molecular methods. Moreover, in accordance with literature common bunts could be caused by *Tilletia leavis* and *Tilletia caries* are also known as stinking smuts. For this reason, this trail is classified as a stinking smut together with other trials, where only one fungi (*Tilletia caries*) were described.

The level of infection of the Plejada winter wheat seedlings caused by *Tilletia tritici* and *Tilletia foetida*, type of fungi, which are the agents of stinking smut was at a quite high level in the control and reached 27.5%.

The level of *Tilletia tritici* and *Tilletia foetida* infection present on the Plejada winter wheat was sufficient to perform efficacy assessment for the test treatment.

The experiment found that the tested product had no effect on other harmful organisms and non target organisms.

Neither the test treatment FLUDIO 025 GF applied at any of the test rates nor the reference product had any adverse effect on the Plejada winter wheat crop. No adverse effect of seed treatment FLUDIO 025 GF as well as standard product MAXIM 025 FS on the number of emergence under field conditions was found. The number of emergence did not differ statistically significantly between the experimental objects. After the application of seed treatment FLUDIO 025 GF as well as standard product MAXIM 025 FS, the grain yield was significantly higher as compared to untreated object. After the application of seed treatment FLUDIO 025 GF as well as standard product MAXIM 025 FS, the weight of 1000 grains did not differ statistically significantly as compared to untreated object.

After the application of product FLUDIO 025 GF in a dose of 200, 160 and 120 mL as well as standard product MAXIM 025 FS, the average percent of plants with symptoms of snow mould was significantly lower as compared to untreated object. The test treatment FLUDIO 025 GF demonstrated efficacy of

98.2-100.0%. The test treatment FLUDIO 025 GF applied at the rate of 120 - 200 mL/100 kg seeds provided high (98.2 – 100.0 %) efficacy against disease, which was at the same level as efficacy of the standard product MAXIM 025 FS (100.0%).

TRIAL: 63 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Arkadia
	Sowing period	05.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 29.10.2021 Plant density assessment BBCH 12 04.11.2021
Other relevant information	Soil type, pH	Sandy loam, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-western part of Poland. Weather conditions in autumn 2021 were favourable for proper emergence and development of winter crops. Active plant growth stopped in the third decade of November. Winter was mild with occasional snowfall. Vegetation started again in the third decade of March. Before planting, the Arkadia winter wheat grain was artificially infected with spores of *Tilletia caries* at the rate of 2 g of spores per 1 kg of grain. The weather conditions at the time of planting the winter wheat crop, including moist soil and temperatures of 5-10°C at the time of germination, facilitated the infection with *Tilletia caries*. The level of infection on the Arkadia winter wheat seedlings caused by *Tilletia caries* type of fungi, which are the agents of stinking smut, was at a quite high level in the control and reached 76.25%. The level of *Tilletia caries* winter wheat was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter wheat of the Arkadia variety. Plant emergence were homogeneous across the trial. Winter wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Tilletia caries* genus and demonstrated efficacy of 94.0-99.0%. The test treatment FLUDIO 025 GF applied at rate of 120 - 200 mL/100kg seeds provided high (94.0-99.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (99.0%).

TRIAL: 64 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Zyta
	Sowing period	05.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 30.10.2021 Plant density assessment BBCH 12 04.11.2021
Other relevant information	Soil type, pH	Sandy loam, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. Weather conditions in autumn 2021 were favourable for proper emergence and development of winter crops. Active plant growth stopped in the third decade of November. Winter was mild with occasional snowfall. Vegetation started again in the third decade of March. Before planting, the Zyta winter wheat grain was artificially infected with spores of *Tilletia caries* at the rate of 2 g of spores per 1 kg of grain. The weather conditions at the time of planting the winter wheat crop, including moist soil and temperatures of 5-10°C at the time of germination, facilitated the infection with *Tilletia caries*. The level of infection on the Zyta winter wheat seedlings caused by *Tilletia caries* type of fungi, which are the agents of stinking smut, was at a quite high level in the control and reached 69.71%. The level of *Tilletia caries* winter wheat was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter wheat of the Zyta variety. Plant emergence were homogeneous across the trial. Winter wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Tilletia caries* genus and demonstrated efficacy of 87.0-96.0 %. The test treatment FLUDIO 025 GF applied at rate of 120 - 200 mL/100kg seeds provided high (87.0-96.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (99.0%).

TRIAL: 65 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
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	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Opoka
	Sowing period	05.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 29.10.2021 Plant density assessment BBCH 12-13 08.11.2021
Other relevant information	Soil type, pH	Sandy loam, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. Weather conditions in autumn 2021 were favourable for proper emergence and development of winter crops. Active plant growth stopped in the third decade of November. Winter was mild with occasional snowfall. Vegetation started again in the third decade of March. Before planting, the Opoka winter wheat grain was artificially infected with spores of *Tilletia caries* at the rate of 2 g of spores per 1 kg of grain. The weather conditions at the time of planting the winter wheat crop, including moist soil and temperatures of 5-10°C at the time of germination, facilitated the infection with *Tilletia caries*. The level of infection on the Opoka winter wheat seedlings caused by *Tilletia caries*. type of fungi, which are the agents of stinking smut, was at a quite high level in the control and reached 60.26%. The level of *Tilletia caries* winter wheat was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter wheat of the Opoka variety. Plant emergence were homogeneous across the trial. Winter wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Tilletia caries* genus and demonstrated efficacy of 91.0-99.0 %. The test treatment FLUDIO 025 GF applied at rate of 120 - 200 mL/100kg seeds provided medium (91.0-99.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (99.0%).

TRIAL: 66 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental	Plot design	Randomized blocks

design	Plot size	7.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Fidelius
	Sowing period	05.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 29.10.2021 Plant density assessment BBCH 12-13 08.11.2021
Other re-levant infor-mation	Soil type, pH	Sandy loam, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. Weather conditions in autumn 2021 were favourable for proper emergence and development of winter crops. Active plant growth stopped in the third decade of November. Winter was mild with occasional snowfall. Vegetation started again in the third decade of March. Before planting, the Fidelius winter wheat grain was artificially infected with spores of *Tilletia caries* at the rate of 2 g of spores per 1 kg of grain. The weather conditions at the time of planting the winter wheat crop, including moist soil and temperatures of 5-10°C at the time of germination, facilitated the infection with *Tilletia caries*. The level of infection on the Fidelius winter wheat seedlings caused by *Tilletia caries*. type of fungi, which are the agents of stinking smut, was at a quite high level in the control and reached 74.44%. The level of *Tilletia caries* winter wheat was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter wheat of the Fidelius variety. Plant emergence were homogeneous across the trial. Winter wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Tilletia caries* genus and demonstrated efficacy of 83.0-95.0 %. The test treatment FLUDIO 025 GF applied at rate of 120 - 200 mL/100kg seeds provided high (83.0 - 95.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (99.0%).

TRIAL: 67 F/2022

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized blocks
	Plot size	7.5 m ²

	Number of replications	4
Crop	Trials per crop	Winter wheat
	Varieties per crop	Tobak
	Sowing period	05.10.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of plant density, phytotoxicity effects of fungicide on the crop
	Assessment dates	Visual evaluation of phytotoxicity BBCH 10 18.10.2021 BBCH 11 30.10.2021 Plant density assessment BBCH 12-13 09.11.2021
Other relevant information	Soil type, pH	Sandy loam, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Sośnicowice / prov. Silesian (Poland)

The trial was set up in the south-west part of Poland. Weather conditions in autumn 2021 were favourable for proper emergence and development of winter crops. Active plant growth stopped in the third decade of November. Winter was mild with occasional snowfall. Vegetation started again in the third decade of March. Before planting, the Tobak winter wheat grain was artificially infected with spores of *Tilletia caries* at the rate of 2 g of spores per 1 kg of grain. The weather conditions at the time of planting the winter wheat crop, including moist soil and temperatures of 5-10°C at the time of germination, facilitated the infection with *Tilletia caries*. The level of infection on the Tobak winter wheat seedlings caused by *Tilletia caries* type of fungi, which are the agents of stinking smut, was at a quite high level in the control and reached 75.71%. The level of *Tilletia caries* winter wheat was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter wheat of the Tobak variety. Plant emergence were homogeneous across the trial. Winter wheat plant density after the application of the tested FLUDIO 025 GF product did not differ significantly from the stocking in the control object or with the use of the reference product MAXIM 025 FS.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Tilletia caries* genus and demonstrated efficacy of 84.0-98.0 %. The test treatment FLUDIO 025 GF applied at rate of 120 - 200 mL/100kg seeds provided high (84.0-98.0%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (98.0%).

TRIAL 333_01_F21_72

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized complete blocks
	Plot size	7.5 m ²
	Number of replications	4

Crop	Trials per crop	Winter wheat
	Varieties per crop	Arkadia
	Sowing period	27.10.2022
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assessment phytotoxicity effects of fungicide on the crop, yield, moisture and TGW
	Assessment dates	Visual evaluation of phytotoxicity BBCH 12 29.11.2021 BBCH 22 22.03.2022 BBCH 85 12.07.2022 Yield, moisture, TGW BBCH 89 08.08.2022 BBCH 99 11.08.2022
Other relevant information	Soil type, pH	Sandy loam, pH 6.3
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Rzeszyn / prov. Kujawsko-Pomorskie (Poland)

The trial was set up in the central part of Poland. The level of infection on the Arkadia winter wheat seedlings caused by *Tilletia caries* type of fungi, which are the agents of stinking smut, was at a quite high level in the control and reached 5.7%. The level of *Tilletia caries* winter wheat was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 025 FS did not adversely affect the development of winter cereals of the Arkadia variety. There were no statistical difference in the case of moisture content. In the case of yield, weight of 1000 grains there was statistical difference between yield in control and treatments groups.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Tilletia caries* genus and demonstrated efficacy of 70.79-90.32%. The test treatment FLUDIO 025 GF applied at rate of 160 - 200 mL/100kg seeds provided high (83.03-90.32%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (90.07%).

Winter triticales

Fusarium spp. (FUSASP)

TRIAL: 332_02_F21_71

Guidelines	General guidelines	EPPO PP 1/135 (4), PP 1/152(4), PP 1/181(4)
	Specific guidelines	EPPO PP 1/19 (5)
Experimental design	Plot design	Randomized complete blocks
	Plot size	10.5 m ²
	Number of replications	4
Crop	Trials per crop	Winter triticales

	Varieties per crop	Gringo
	Sowing period	07.11.2021
Application	Crop stage (BBCH)* at application	BBCH 00
	Number of applications Intervals between applications	1 application
Assessment	Assessment types	Assesment of phytotoxicity effects of fungicide on the crop, yield and grains moisture, weight of 1000 grains
	Assessment dates	Visual evaluation of phytotoxicity BBCH 12 01.12.2021 BBCH 22 04.04.2022 Yield BBCH 89 10.08.2022
Other relevant information	Soil type, pH	Sandy clay, pH 6.6
	Natural / artificial inoculation	natural
	Field / Greenhouse	Field, Józefów / prov. lubelskie (Poland)

The trial was set up in the east part of Poland. The level of infection on the Gringo winter triticale seedlings caused by *Fusarium* spp. type of fungi, which are the agents of seedling blight, was at a quite high level in the control and reached 10.88%. The level of *Fusarium* spp winter triticale was sufficient to perform efficacy assessment for the test treatments.

The tested product FLUDIO 025 GF and the reference product MAXIM 035 FS did not adversely affect the development of winter triticale of the Gringo variety. There were no statistical difference in the case of moisture content as well as weight of 1000 grains.

Under the conditions of the experiment, the tested FLUDIO 025 GF product, applied in doses of 200, 160 and 120 mL per 100 kg of grain, significantly reduced the infestation of plants by fungi of the *Tilletia caries* genus and demonstrated efficacy of 62.94-90.91 %. The test treatment FLUDIO 025 GF applied at rate of 200 mL/100kg seeds provided high (90.91%) efficacy against disease, which was at the similar level as the efficacy of the standard product MAXIM 025 FS (90.67%).

The summarize of all results (efficacy) in each trials, as well as, the average efficacy calculate based on available results for each doses for all pests as well as crop are presented in the table 3.2.9 – 3.2.20

Winter rye UROCOC

Table 3.2-9: Efficacy of FLUDIO 025 GF in all trials (UROCO in winter rye)

test report	assessed part and varieta- ble	untreated	efficacy treatment			
			FLUDIO 025 GF			MAXIM 025 FS
			dose product and water per 100 kg seeds			
			200 ml	160 ml	120 ml	200 +800 ml
313/2022	infected plant (efficacy %)	21.2	0.0 (100.0)	0.0 (100.0)	1.6 (92.5)	0.0(100.0)
50F/2022	infected plant (efficacy %)	9.92	0.0 (100.0)	0.0 (100.0)	0.0 (100.0)	0.0 (100.0)
51F/2022	infected plant (efficacy %)	5.24	0.0 (100.0)	0.0 (100.0)	0.1 (98.09)	0.0 (100.0)
52F/2022	infected plant (efficacy %)	6.58	0.0 (100.0)	0.0 (100.0)	0.16 (97.56)	0.0 (100.0)
53F/2022	infected plant (efficacy %)	5.16	0.0 (100.0)	0.0 (100.0)	0.0 (100.0)	0.0 (100.0)
54F/2022	infected plant (efficacy %)	5.05	0.0 (100.0)	0.0 (100.0)	0.0 (100.0)	0.0 (100.0)

334_01_F22_74	infected plant (efficacy %)	6.06	0.53 (91.24)	1.04 (82.63)	1.74 (70.86)	0.55 (90.71)
Average efficacy			98.7	97.5	94.1	98.7

A total of 7 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of *Urocystis occulta* on winter rye. Trials were conducted in different regions in Poland. Trials were of randomized block design with a minimum of four replicates. FLUDIO 025 GF was applied at dose rates: 200 ml of product/100 kg seeds, 160 ml od product/100 kg seeds and 120 ml od product/100 kg seeds. MAXIM 025 FS in rates: 200 ml of product + 800 ml of water/ 100 kg seeds was used as a standard. The highest rates in FLUDIO 025 GF and MAXIM 025 FS was used to phytotoxicity tests.

Statistical methods and observation dates were applied. The trials included the fungal diseases are common and typical for the crops fields all over Poland. The active substances – fludioxonil is well known and has been commonly used all over the world for many years.

In all trials the disease pressure was high. MAXIM 025 GF showed similar efficacy as standard product MAXIM 025 FS. Recommended dose to control UROCOC in winter rye is 200 ml of product/100 kg seeds.

Winter rye FUSASP

Table 3.2-10: Efficacy of FLUDIO 025 GF in all trials (FUSASP in winter rye)

test report	assessed part and varietal	untreated	efficacy treatment			
			FLUDIO 025 GF			MAXIM 025 FS
			dose product and water per 100 kg seeds			
			200 ml	160 ml	120 ml	200 +800 ml
313/2022	infected plant (efficacy %)	63.6	10.1 (84.0)	18.6 (71.0)	17.4 (73.0)	17.6 (72.0)
334_01_F22_74	infected plant (efficacy %)	10.63	1.38 (86.98)	3.63 (65.74)	6.38 (39.24)	1.38 (87.08)
50 F/2022	infected plant (efficacy %)	11.5	1.0 (91.0)	1.5 (87.0)	2.5 (53.0)	1.5 (87.0)
51 F/2022	infected plant (efficacy %)	5.5	1.0 (82.0)	1.5 (73.0)	2.5 (55.0)	1.0 (82.0)
52 F/2022	infected plant (efficacy %)	6.5	1.0 (85.0)	2.0 (69.0)	3.0 (54.0)	1.0 (85.0)
53 F/2022	infected plant (efficacy %)	5	0.5 (90.0)	1.0 (80.0)	2.0 (60.0)	1.0 (80.0)
54 F/2022	infected plant (efficacy %)	5	1.0 (80.0)	1.5 (70.0)	2.5 (50.0)	1.0 (80.0)
Average efficacy			85.6	68.4	56.1	79.5

A total of 7 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of *Fusarium spp.* on winter rye. Trials were conducted in different regions in Poland. Trials were of randomized block design with a minimum of four replicates. FLUDIO 025 GF was applied at dose rates: 200 ml of product/100 kg seeds, 160 ml od product/100 kg seeds and 120 ml od product/100 kg seeds. MAXIM 025 FS in rates: 200 ml of product + 800 ml of water/ 100 kg seeds was used as a standard. The highest rates in FLUDIO 025 GF and MAXIM 025 FS was used to phytotoxicity tests.

Statistical methods and observation dates were applied. The trials included the fungal diseases are common and typical for the crops fields all over Poland. The active substances – fludioxonil is well known and has been commonly used all over the world for many years.

In all trials the disease pressure was high. MAXIM 025 GF showed higher efficacy than standard product MAXIM 025 FS. Recommended dose to control UROCOC in winter rye is 200 ml of product/100 kg seeds.

Winter barley PYRNGR

Table 3.2-11: Efficacy of FLUDIO 025 GF in all trials (PYRNGR in winter barley)

test report	assessed part and varietable	untreated	efficacy treatment				
			FLUDIO 025 GF				MAXIM 025 FS
			dose product and water per 100 kg seeds				
			200 ml	160 ml	120 ml	200 ml + 800 ml water	200 + 800 ml
335_01_F21_76	infected plant (efficacy %)	5.7	0.6 (89.45)	1.09 (80.96)	1.52 (73.38)	0.61 (82.25)	0.66 (88.48)
335_02_F21_77	infected plant (efficacy %)	10.63	1.19 (88.79)	1.96 (81.60)	2.39 (77.48)	1.06 (89.97)	1.26 (88.17)
335_03_F21_78	infected plant (efficacy %)	8.54	0.95 (88.83)	1.48 (82.68)	2.16 (74.72)	1.12 (86.84)	1.07 (87.45)
20F /2022	infected plant (efficacy %)	15.57	2.24 (86.0)	2.58 (83.0)	3.49 (78.0)	1.59 (90.0)	1.98 (87.0)
21F /2022	infected plant (efficacy %)	19.28	2.73 (86.0)	3.15 (84.0)	4.01 (79.0)	2.94 (85.0)	2.75 (86.0)
22F /2022	infected plant (efficacy %)	10.81	1.50 (86.0)	1.72 (84.0)	2.26 (79.0)	1.59 (85.0)	1.47 (86.0)
24F /2022	infected plant (efficacy %)	9.87	1.60 (84.0)	1.84 (81.0)	2.58 (74.0)	1.30 (87.0)	1.25 (87.0)
Average efficacy			87.0	82.5	76.5	86.6	87.2

A total of 7 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of *Pyrenophora graminea* on winter barley. Trials were conducted in different regions in Poland. Trials were of randomized block design with a minimum of four replicates. FLUDIO 025 GF was applied at dose rates: 200 ml of product/100 kg seeds, 160 ml of product/100 kg seeds and 120 ml of product/100 kg seeds. MAXIM 025 FS in rates: 200 ml of product + 800 ml of water/ 100 kg seeds was used as a standard. The highest rates in FLUDIO 025 GF and MAXIM 025 FS was used to phytotoxicity tests. Statistical methods and observation dates were applied. The trials included the fungal diseases are common and typical for the crops fields all over Poland. The active substances – fludioxonil is well known and has been commonly used all over the world for many years.

In all trials the disease pressure was high. MAXIM 025 GF showed similar efficacy as standard product MAXIM 025 FS. Recommended dose to control PYRNGR in winter barley is 200 ml of product/100 kg seeds. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high, but these results were not taken into account.

Winter barley FUSASP

Table 3.2-12: Efficacy of FLUDIO 025 GF in all trials (FUSASP in winter barley)

test report	assessed part and varietable	untreated	efficacy treatment				
			FLUDIO 025 GF				MAXIM 025 FS
			dose product and water per 100 kg seeds				
			200 ml	160 ml	120 ml	200 ml + 800 ml water	200 + 800 ml
335_01_F21_76	infected plant (efficacy %)	9.5	1.00 (89.20)	2.30 (75.77)	3.90 (58.85)	0.80 (91.74)	1.00 (89.49)

335_02_F21_77	infected plant (efficacy %)	10.88	1.00 (90.55)	3.13 (70.89)	5.25 (51.60)	1.25 (88.32)	1.00 (90.86)
335_03_F22_78	infected plant (efficacy %)	8.7	0.80 (90.53)	2.20 (74.40)	2.90 (65.59)	0.70 (91.87)	0.80 (90.74)
19 F/2022	infected plant (efficacy %)	16.5	5.0 (70.0)	5.50 (67.0)	9.0 (45.0)	4.50 (73.0)	4.50 (73.0)
20 F/2022	infected plant (efficacy %)	16	4.0 (75.0)	6.0 (63.0)	8.50 (47.0)	3.50 (78.0)	4.50 (72.0)
21 F/2022	infected plant (efficacy %)	18	3.50 (81.0)	6.50 (64.0)	8.50 (53.0)	0.50 (97.0)	3.50 (81.0)
22 F/2022	infected plant (efficacy %)	12	3.0 (75.0)	4.50 (63.0)	5.50 (54.0)	1.0 (92.0)	3.50 (71.0)
23 F/2022	infected plant (efficacy %)	14.5	2.50 (83.0)	4.50 (69.0)	6.50 (55.0)	0.50 (97.0)	2.0 (86.0)
24 F/2022	infected plant (efficacy %)	14	2.50 (82.0)	4.50 (68.0)	5.50 (61.0)	1.50 (89.0)	1.0 (93.0)
Average efficacy			83.3	68.4	55.9	89.7	84.0

A total of 9 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of *Fusarium* spp. on winter barley. Trials were conducted in different regions in Poland. Trials were of randomized block design with a minimum of four replicates. FLUDIO 025 GF was applied at dose rates: 200 ml of product/100 kg seeds, 160 ml of product/100 kg seeds and 120 ml of product/100 kg seeds. MAXIM 025 FS in rates: 200 ml of product + 800 ml of water/ 100 kg seeds was used as a standard. The highest rates in FLUDIO 025 GF and MAXIM 025 FS was used to phytotoxicity tests.

Statistical methods and observation dates were applied. The trials included the fungal diseases are common and typical for the crops fields all over Poland. The active substances – fludioxonil is well known and has been commonly used all over the world for many years.

In all trials the disease pressure was high. MAXIM 025 GF showed similar efficacy than standard product MAXIM 025 FS. Recommended dose to control PYRNGR in winter barley is 200 ml of product/100 kg seeds. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high, but these results were not taken into account.

Winter barley MONGNI

Table 3.2-13: Efficacy of FLUDIO 025 GF in all trials (MONGNI in winter barley)

test report	assessed part and varietable	untreated	efficacy treatment				
			FLUDIO 025 GF				MAXIM 025 FS
			dose product and water per 100 kg seeds				
			200 ml	160 ml	120 ml	200 ml + 800 ml water	200 +800 ml
19 F/2022	infected plant (efficacy %)	28	2.0 (93.0)	3.0 (89.0)	5.0 (82.0)	1.0 (96.0)	1.0 (96.0)
20 F/2022	infected plant (efficacy %)	46	5.0 (89.0)	7.0 (85.0)	10.0 (78.0)	4.0 (91.0)	4.0 (91.0)
21 F/2022	infected plant (efficacy %)	24	4.0 (83.0)	4.0 (83.0)	5.0 (79.0)	3.0 (88.0)	2.0 (92.0)
22 F/2022	infected plant (efficacy %)	12	4.0 (67.0)	5.0 (58.0)	6.0 (50.0)	3.0 (75.0)	2.0 (83.0)
23 F/2022	infected plant (efficacy %)	38	5.0 (87.0)	6.0 (84.0)	8.0 (79.0)	4.0 (89.0)	4.0 (89.0)
24 F/2022	infected plant (efficacy %)	20	4.0 (80.0)	4.0 (80.0)	6.0 (70.0)	3.0 (85.0)	2.0 (90.0)

Average efficacy	83.2	79.8	73.0	87.3	90.2
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A total of 6 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of *Monographella nivalis* on winter barley. Trials were conducted in different regions in Poland. Trials were of randomized block design with a minimum of four replicates. FLUDIO 025 GF was applied at dose rates: 200 ml of product/100 kg seeds, 160 ml of product/100 kg seeds and 120 ml of product/100 kg seeds. MAXIM 025 FS in rates: 200 ml of product + 800 ml of water/ 100 kg seeds was used as a standard. The highest rates in FLUDIO 025 GF and MAXIM 025 FS was used to phytotoxicity tests. Statistical methods and observation dates were applied. The trials included the fungal diseases are common and typical for the crops fields all over Poland. The active substances – fludioxonil is well known and has been commonly used all over the world for many years.

In all trials the disease pressure was high. MAXIM 025 GF showed similar efficacy than standard product MAXIM 025 FS. Recommended dose to control MONGNI in winter barley is 200 ml of product/100 kg seeds. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high, but these results were not taken into account.

Spring barley FUSASP

Table 3.2-14: Efficacy of FLUDIO 025 GF in all trials (FUSASP in spring barley)

test report	assessed part and varieta-ble	untreated		efficacy treatment									
				FLUDIO 025 GF								MAXIM 025 FS	
				dose product and water per 100 kg seeds									
				200 ml		160 ml		120 ml		200 ml + 800 ml wody		200 +800 ml	
I as-sess-ment	II as-sess-ment	I as-sess-ment	II as-sess-ment	I as-sess-ment	II as-sess-ment	I as-sess-ment	II as-sess-ment	I as-sess-ment	II as-sess-ment	I as-sess-ment	II as-sess-ment		
91 F/2022	infected plant (efficacy %)	48.5	-	11.50 (76.0)	-	15.0 (69.0)	-	18.50 (62.0)	-	4.0 (92.0)	-	8.50 (82.0)	-
92 F/2022	infected plant (efficacy %)	59.5	-	8.0 (87.0)	-	11.0 (82.0)	-	18.0 (70.0)	-	2.5 (96.0)	-	3.0 (95.0)	-
28_01_F 22_053	infected plant (efficacy %)	11.75	1.57	1.0 (91.48)	0.2 (87.33)	1.88 (83.92)	0.29 (81.78)	1.50 (78.68)	0.45 (71.45)	0.75 (93.49)	0.18 (88.52)	1.0 (91.29)	0.2 (87.48)
Average efficacy				85.5		79.2		70.5		92.5		88.9	

A total of 3 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of *Fusarium* spp. on spring barley. Trials were conducted in different regions in Poland. Trials were of randomized block design with a minimum of four replicates. FLUDIO 025 GF was applied at dose rates: 200 ml of product/100 kg seeds, 160 ml of product/100 kg seeds and 120 ml of product/100 kg seeds. MAXIM 025 FS in rates: 200 ml of product + 800 ml of water/ 100 kg seeds was used as a standard. The highest rates in FLUDIO 025 GF and MAXIM 025 FS was used to phytotoxicity tests. Statistical methods and observation dates were applied. The trials included the fungal diseases are common and typical for the crops fields all over Poland. The active substances – fludioxonil is well known and has been commonly used all over the world for many years.

In all trials the disease pressure was high. MAXIM 025 GF showed similar efficacy than standard product MAXIM 025 FS. Recommended dose to control FUSASP in spring barley is 200 ml of product/100 kg seeds. Additionally, an experiment was performed for the product FLUDIO 025 GF at the maximum dose (200 mL/100kg seeds) with the addition of water (800 mL). The obtained efficacy was high, but these results were not taken into account.

In the case of spring barley, carried out 3 trials on spring barley and support it with 7 trials on winter wheat (according to Harmonization Meeting about effectiveness ‘Annex 2- Generic Extrapolation Tables’) give possibilities to extend use on spring barley against *Fusarium* spp. Recommended dose to control FUSASP in spring barley is 200 ml of product/ 100 kg seeds.

Winter wheat MONGNI

Table 3.2-15: Efficacy of FLUDIO 025 GF in all trials (MONGNI in winter wheat)

test report	assessed part and varieta- ble	untreated	efficacy treatment			
			FLUDIO 025 GF			MAXIM 025 FS
			dose product and water per 100 kg seeds			
			200 ml	160 ml	120 ml	200 +800 ml
306/2022	infected plant (efficacy %)	14.8	1.9 (87)	4.4 (70)	6.0 (60)	3.2 (78)
63 F/2022	infected plant (efficacy %)	22.54	4.33 (81.0)	6.85 (70.0)	12.27 (46.0)	1.89 (92.0)
64 F/2022	infected plant (efficacy %)	36.36	7.97 (78.0)	11.20 (69.0)	17.91 (51.0)	6.45 (82.0)
65 F/2022	infected plant (efficacy %)	27.38	6.61 (76.0)	8.95 (67.0)	14.76 (46.0)	3.78 (86.0)
66 F/2022	infected plant (efficacy %)	51.01	7.50 (85.0)	15.83 (69.0)	16.67 (67.0)	5.84 (89.0)
67 F/2022	infected plant (efficacy %)	41.59	10.11 (76.0)	15.20 (63.0)	17.99 (57.0)	7.83 (81.0)
Average efficacy			80.5	68.0	54.5	84.7

A total of 6 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of *Monographella nivalis* on winter wheat. Trials were conducted in different regions in Poland. Trials were of randomized block design with a minimum of four replicates. FLUDIO 025 GF was applied at dose rates: 200 ml of product/100 kg seeds, 160 ml od product/100 kg seeds and 120 ml od product/100 kg seeds. MAXIM 025 FS in rates: 200 ml of product + 800 ml of water/ 100 kg seeds was used as a stand-ard. The highest rates in FLUDIO 025 GF and MAXIM 025 FS was used to phytotoxicity tests. Statistical methods and observation dates were applied. The trials included the fungal diseases are com-mon and typical for the crops fields all over Poland. The active substances – fludioxonil is well known and has been commonly used all over the world for many years.

In all trials the disease pressure was high. MAXIM 025 GF showed similar efficacy than standard product MAXIM 025 FS. Recommended dose to control MONGNI in winter wheat is 200 ml of product/100 kg seeds.

Winter wheat FUSASP

Table 3.2-16: Efficacy of FLUDIO 025 GF in all trials (FUSASP in winter wheat)

test report	assessed part and varie- table	untreated	efficacy treatment			
			FLUDIO 025 GF			MAXIM 025 FS
			dose product and water per 100 kg seeds			
			200 ml	160 ml	120 ml	200 +800 ml
306/2022	infected plant (efficacy %)	64.1	32.8 (49)	35.1 (45)	45.7 (29)	37.5 (42)
333_01_F21_72	infected plant (efficacy %)	10.88	1.13 (89.68)	3.13 (71.12)	4.5 (58.31)	1.38 (87.41)
63 F/2022	infected plant (efficacy %)	20	4.09 (80.0)	4.55 (77.0)	7.27 (64.0)	3.64 (82.0)
64 F/2022	infected plant (efficacy %)	30.39	2.31 (92.0)	4.23 (86.0)	6.15 (80.0)	2.31 (92.0)

65 F/2022	infected plant (efficacy %)	15	3.00 (80.0)	7.00 (53.0)	9.00 (40.0)	2.50 (83.0)
66 F/2022	infected plant (efficacy %)	30.91	5.91 (81.0)	12.28 (60.0)	14.55 (53.0)	5.91 (81.0)
67 F/2022	infected plant (efficacy %)	22.86	2.28 (90.0)	4.72 (79.0)	8.00 (65.0)	2.03 (91.0)
Average efficacy			80.2	67.3	55.6	79.8

A total of 7 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of *Fusarium* spp. on winter wheat. Trials were conducted in different regions in Poland. Trials were of randomized block design with a minimum of four replicates. FLUDIO 025 GF was applied at dose rates: 200 ml of product/100 kg seeds, 160 ml of product/100 kg seeds and 120 ml of product/100 kg seeds. MAXIM 025 FS in rates: 200 ml of product + 800 ml of water/ 100 kg seeds was used as a standard. The highest rates in FLUDIO 025 GF and MAXIM 025 FS was used to phytotoxicity tests.

Statistical methods and observation dates were applied. The trials included the fungal diseases are common and typical for the crops fields all over Poland. The active substances – fludioxonil is well known and has been commonly used all over the world for many years.

In all trials the disease pressure was high. MAXIM 025 GF showed similar efficacy than standard product MAXIM 025 FS. Recommended dose to control FUSASP in winter wheat is 200 ml of product/100 kg seeds.

Winter wheat TILLCA

Table 3.2-17: Efficacy of FLUDIO 025 GF in all trials (TILLCA in winter wheat)

test report	assessed part and varietal	untreated	efficacy treatment			
			FLUDIO 025 GF			MAXIM 025 FS
			dose product and water per 100 kg seeds			
			200 ml	160 ml	120 ml	200 +800 ml
306/2022	infected plant (efficacy %)	27.5	0.0 (100.0)	0.5 (98.2)	0.0 (100.0)	0.0 (100.0)
333_01_F21_72	infected plant (efficacy %)	5.7	0.55 (90.32)	0.96 (83.03)	1.64 (70.79)	0.56 (90.07)
63 F/2022	infected plant (efficacy %)	76.25	1.00 (99.0)	1.50 (98.0)	4.50 (94.0)	0.50 (99.0)
64 F/2022	infected plant (efficacy %)	69.71	2.86 (96.0)	4.79 (93.0)	9.09 (87.0)	0.90 (99.0)
65 F/2022	infected plant (efficacy %)	60.26	0.46 (99.0)	1.38 (98.0)	5.57 (91.0)	0.00 (100.0)
66 F/2022	infected plant (efficacy %)	74.77	3.57 (95.0)	7.54 (90.0)	12.56 (83.0)	0.91 (99.0)
67 F/2022	infected plant (efficacy %)	75.71	1.32 (98.0)	3.84 (95.0)	12.25 (84.0)	1.35 (98.0)
Average efficacy			96.8	93.6	87.1	97.9

A total of 7 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of *Tilletia caries* on winter wheat. Trials were conducted in different regions in Poland. Trials were of randomized block design with a minimum of four replicates. FLUDIO 025 GF was applied at dose rates: 200 ml of product/100 kg seeds, 160 ml of product/100 kg seeds and 120 ml of product/100 kg seeds. MAXIM 025 FS in rates: 200 ml of product + 800 ml of water/ 100 kg seeds was used as a standard. The highest rates in FLUDIO 025 GF and MAXIM 025 FS was used to phytotoxicity tests.

Statistical methods and observation dates were applied. The trials included the fungal diseases are common and typical for the crops fields all over Poland. The active substances – fludioxonil is well known and has been commonly used all over the world for many years.

In all trials the disease pressure was high. MAXIM 025 GF showed similar efficacy than standard product MAXIM 025 FS. Recommended dose to control TILLCA in winter wheat is 200 ml of product/100 kg seeds.

Spring wheat FUSASP

Table 3.2-18: Efficacy of FLUDIO 025 GF in all trials (FUSASP in spring wheat)

test report	assessed part and varietable	untreated	efficacy treatment			
			FLUDIO 025 GF			MAXIM 025 FS
			dose product and water per 100 kg seeds			
			200 ml	160 ml	120 ml	200 +800 ml
78F/2022	infected plant (efficacy %)	32	5.0 (84.0)	9.0 (72.0)	11.0 (66.0)	4.0 (88.0)
79F/2022	infected plant (efficacy %)	19.5	1.50 (92.0)	4.0 (79.0)	6.0 (69.0)	1.5 (92.0)
Average efficacy			88.0	75.5	67.5	90.0

A total of 2 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of *Fusarium* spp. on spring wheat. Trials were conducted in different regions in Poland. Trials were of randomized block design with a minimum of four replicates. FLUDIO 025 GF was applied at dose rates: 200 ml of product/100 kg seeds, 160 ml of product/100 kg seeds and 120 ml of product/100 kg seeds. MAXIM 025 FS in rates: 200 ml of product + 800 ml of water/ 100 kg seeds was used as a standard. The highest rates in FLUDIO 025 GF and MAXIM 025 FS was used to phytotoxicity tests.

Statistical methods and observation dates were applied. The trials included the fungal diseases are common and typical for the crops fields all over Poland. The active substances – fludioxonil is well known and has been commonly used all over the world for many years.

In all trials the disease pressure was high. MAXIM 025 GF showed similar efficacy than standard product MAXIM 025 FS. Recommended dose to control FUSASP in spring wheat is 200 ml of product/100 kg seeds.

In the case of spring wheat, carried out 2 trials on spring wheat and support it with 7 trials on winter wheat (according to Harmonization Meeting about effectiveness ‘Annex 2- Generic Extrapolation Tables’) give possibilities to extend use on spring wheat against *Fusarium* spp. Recommended dose to control FUSASP in spring wheat is 200 ml of product/ 100 kg seeds.

Spring wheat TILLCA

Table 3.2-19: Efficacy of FLUDIO 025 GF in all trials (TILLCA in spring wheat)

test report	assessed part and varietable	untreated		efficacy treatment							
				FLUDIO 025 GF				MAXIM 025 FS			
				dose product and water per 100 kg seeds							
				200 ml		160 ml		120 ml		200 +800 ml	
I assessment	II assessment	I assessment	II assessment	I assessment	II assessment	I assessment	II assessment	I assessment	II assessment		
29_01_F2 2_055	infected plant (efficacy %)	5.63	2.88	0.69 (87.77)	0.34 (87.91)	1.31 (76.69)	0.75 (73.32)	2.50 (54.99)	1.19 (58.76)	0.69 (87.82)	0.38 (86.86)
29_02_F2 2_056	infected plant (efficacy %)	4.4	3.25	0.50 (88.73)	0.36 (88.82)	0.80 (81.77)	0.79 (75.51)	1.40 (67.91)	1.0 (69.32)	0.50 (88.73)	0.36 (88.67)
78 F/2022	infected	23.47		0.97 (96.0)		1.91 (92.0)		2.62 (89.0)		0.82 (97.0)	

	plant (efficacy %)									
79 F/2022	infected plant (efficacy %)	9.43		0.00 (100.0)		0.85 (91.0)		1.39 (85.0)		0.00 (100.0)
Average efficacy				91.5		81.7		70.8		91.5

A total of 3 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of *Tilletia caries* on spring wheat. Trials were conducted in different regions in Poland. Trials were of randomized block design with a minimum of four replicates. FLUDIO 025 GF was applied at dose rates: 200 ml of product/100 kg seeds, 160 ml of product/100 kg seeds and 120 ml of product/100 kg seeds. MAXIM 025 FS in rates: 200 ml of product + 800 ml of water/ 100 kg seeds was used as a standard. The highest rates in FLUDIO 025 GF and MAXIM 025 FS was used to phytotoxicity tests.

Statistical methods and observation dates were applied. The trials included the fungal diseases are common and typical for the crops fields all over Poland. The active substances – fludioxonil is well known and has been commonly used all over the world for many years.

In all trials the disease pressure was high. MAXIM 025 GF showed similar efficacy than standard product MAXIM 025 FS. Recommended dose to control TILLCA in spring wheat is 200 ml of product/100 kg seeds.

In the case of spring wheat, carried out 4 trials on spring wheat and support it with 7 trials on winter wheat (according to Harmonization Meeting about effectiveness ‘Annex 2- Generic Extrapolation Tables’) give possibilities to extend use on spring wheat against *Tilletia caries* Recommended dose to control FUSASP in spring wheat is 200 ml of product/ 100 kg seeds.

Winter triticale FUSASP

Table 3.2-20: Efficacy of FLUDIO 025 GF in all trials (FUSASP in winter triticale)

test report	assessed part and variable	untreated	efficacy treatment			
			FLUDIO 025 GF			MAXIM 025 FS
			dose product and water per 100 kg seeds			
			200 ml	160 ml	120 ml	200 +800 ml
332_01_F22_70	infected plant (efficacy %)	8.9	0.80 (91.14)	2.0 (77.11)	3.40 (61.18)	0.8 (90.7)
332_02_F22_71	infected plant (efficacy %)	10.88	1.0 (90.91)	2.88(73.90)	4.0 (62.94)	1.00 (90.67)
Average efficacy			91.0	75.5	62.1	90.7

A total of 2 trials were carried out to evaluate the efficacy of FLUDIO 025 GF for the control of *Fusarium* spp. on winter triticale. Trials were conducted in different regions in Poland. Trials were of randomized block design with a minimum of four replicates. FLUDIO 025 GF was applied at dose rates: 200 ml of product/100 kg seeds, 160 ml of product/100 kg seeds and 120 ml of product/100 kg seeds. MAXIM 025 FS in rates: 200 ml of product + 800 ml of water/ 100 kg seeds was used as a standard. The highest rates in FLUDIO 025 GF and MAXIM 025 FS was used to phytotoxicity tests.

Statistical methods and observation dates were applied. The trials included the fungal diseases are common and typical for the crops fields all over Poland. The active substances – fludioxonil is well known and has been commonly used all over the world for many years.

In all trials the disease pressure was high. MAXIM 025 GF showed similar efficacy than standard product MAXIM 025 FS. Recommended dose to control FUSASP in winter triticale is 200 ml of product/100 kg seeds.

In the case of winter triticale, carried out 2 trials on winter triticale and support it with 7 trials on winter wheat (according to Harmonization Meeting about effectiveness ‘Annex 2- Generic Extrapolation Tables’) give possibilities to extend use on winter triticale against *Fusarium* spp. Recommended dose to control FUSASP in spring wheat is 200 ml of product/ 100 kg seeds.

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

A total of 60 (32 efficacy and 28 selectivity) trials were carried out in 2021 in Poland. The annexes (5 reports for winter wheat, 5 for winter barley, 5 for winter rye and 5 for winter triticale) against impact on seed germination after 12 months storage to the selectivity trials were not counted as a new selectivity trials. Also, Applicant presented 14 quality trials against impact on protein content (winter wheat – 5 trials, winter rye – 5 trials, spring barley – 4 trials). Those quality trials were also not counted as a selectivity trials. The objective was to confirm the yield response of FLUDIO 025 GF in the presence of *Fusarium* spp., *Pyrenophora graminea*, *Tilletia caries*, *Urocystis occulata* and *Monographella nivalis*. FLUDIO 025 GF at all tested rates did not have a negative effect on the yield winter triticale, spring and winter barley, spring and winter wheat, winter rye.

Summary and conclusion

A total of 32 efficacy trials were carried out in 2021 in Poland. Tested product FLUDIO 025 GF showed high efficacy reduce the severity of FUSASP, PYRNGR, TILLCA, MONGNI and UROCOC on spring and winter cereals.

Recommended dose to control UROCOC in winter rye is 200 ml of product / 100 kg seeds.
Recommended dose to control FUSASP in winter rye is 200 ml of product / 100 kg seeds.
Recommended dose to control PYRNGR in winter barley is 200 ml of product / 100 kg seeds.
Recommended dose to control FUSASP in winter barley is 200 ml of product / 100 kg seeds.
Recommended dose to control MONGNI in winter barley is 200 ml of product / 100 kg seeds.
Recommended dose to control PYRNGR in spring barley is 200 ml of product / 100 kg seeds.
Recommended dose to control FUSASP in spring barley is 200 ml of product / 100 kg seeds.
Recommended dose to control FUSASP in spring wheat is 200 ml of product / 100 kg seeds.
Recommended dose to control TILLCA in spring wheat is 200 ml of product / 100 kg seeds.
Recommended dose to control FUSASP in winter wheat is 200 ml of product / 100 kg seeds.
Recommended dose to control MONGNI in winter wheat is 200 ml of product / 100 kg seeds.
Recommended dose to control TILLCA in winter wheat is 200 ml of product / 100 kg seeds.
Recommended dose to control FUSASP in winter triticale is 200 ml of product / 100 kg seeds.

Comments of zRMS:	<p>Details of experiment are presented above by Applicant. All used methodology is in accordance with GEP rules, in exception of EPPO 1/181 (4). However, Applicant has made the appropriate explanation for carrying out the survey only in one growing season, which was accepted by Evaluator.</p> <p>Applicant submitted in total 32 field trials showing the results in research into product efficacy carried out during one growing season (2021) in winter cereals (25 trials) and spring cereals (7 trials). Those efficacy trials were performed in North-East EPPO zone in Poland. The number of trials is sufficient and fulfil EPPO requirements for a major crop: winter wheat (7 trials), winter barley (9 trials), winter rye (7 trials). In the case of other cereals for which limited number of trials was presented: spring barley (3 trials), spring wheat (4 trials) and winter triticale (2 trials) the main case is the number of trials for each fungal disease. Only against</p>
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	<p>FUSASP in winter triticale and spring wheat not sufficient number of trials was presented. However, results against FUSASP on winter wheat can be extrapolate for winter triticale and spring wheat. So, all claimed uses in GAP table can be accepted. Detailed assessment will be presented later for each disease separately.</p> <p><u>Following varieties of winter and spring cereals were studied during field trials:</u></p> <ul style="list-style-type: none">• winter triticale – 2 varieties (Gringo, Grenado),• spring barley – 3 varieties (Xanthe, Finish, Ella),• winter barley – 9 varieties (Cakri, U-313, Igri, SY 216-464, Titus, C 62, Zenek, Sandra, Kosmos),• winter wheat – 7 varieties (Plejada, Arkadia-2 trials, Zyta, Opoka, Fidelius, Tobak),• winter rye – 7 varieties (Dańkowskie Hadron, Dukato, Dańkowskie Granat, Dańkowski Diament, Dańkowsie Rubin, Słowiańskie, Tur F1),• spring wheat – 4 varieties (MHR Jutrzenka, Rusałka, Atrakcja, Quintus). <p><u>The following efficacy scale was used:</u></p> <ul style="list-style-type: none">- L – limiting (0-60% efficacy)- ME – moderately efficiency (60-80%)- E – efficiently (>80%) <p>We are dealing with the active substances used commonly for many years in many countries. We must emphasize that each pest should be representative by sufficient number of field efficacy tests (at least 6 for major pest and at least 3 for minor pest).</p> <p>WINTER CEREALS:</p> <ul style="list-style-type: none">• winter wheat: <ul style="list-style-type: none">✓ TILLCA (śnieć cuchnąca) – 7 trials – major pest – number of trials is sufficient. All trials were characterized by sufficient level of infestation (at least 5% is required). It can be concluded that FLUDIO 025 GF effectively control (96,8%) TILLCA on winter wheat at recommended dose (200 ml/100 kg seed). Lower doses 120 ml/100 kg seed (eff. 87.1%) and 160 ml / 100 kg seed (eff. 93,6%) were also characterized by very good efficiency, comparable to st. ref product (eff. 97.9%). According to the proposal results, the dose of 120 mL /100 kg seed of FLUDIO 025 GF provided the optimum overall control and should be considered as effective against TILLCA, for which activity of FLUDIO 025 GF is claimed. However, in practice, farmer/user perform one treatment to protect crops during the growing season from a broader spectrum of seed borne and soil-borne disease. For this reason, 200 mL/100 kg seed is recommended. This dose is also recommended in plant protection products registered for today in Poland, that contain the tested active substance.✓ FUSASP (zgorzel siewek) – 7 trials – major pest – number of trials is sufficient. All trials were characterized by sufficient level of infestation (at least 5% is required). It can be concluded that FLUDIO 025 GF effectively control (80,2% eff.) FUSASP on winter wheat at recommended dose (200 ml/ 100 kg seed). Lower doses 120 ml/100 kg seed (eff. 55.6%) and 160 ml / 100 kg seed (eff. 67,3%) were characterized by worse efficiency than recommended dose and st. ref. product (79.8% eff.).✓ MONGNI (pleśń śniegowa) – 6 trials – major pest – number of trials is sufficient. All trials were characterized by sufficient level of infestation (at least 5% is required). It can be concluded that FLUDIO 025 GF effectively control (80,5% eff.) MONGNI at recommended dose (200 ml/100 kg seed) on winter wheat. Lower doses 120 ml/100 kg seed (eff. 54,5%) and 160 ml /
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	<p>100 kg seed (eff. 68,0%) were characterized by worse efficiency than recommended dose and st. ref. product (84,7% eff.).</p> <ul style="list-style-type: none">• winter triticale: <p>✓ FUSASP (zgorzel siewek) – 2 trials – major pest – number of trials is not sufficient. However, extrapolation results from winter wheat is possible. So, FUSASP in winter triticale can be accepted. All trials were characterized by sufficient level of infestation (at least 5% is required). It can be concluded that FLUDIO 025 GF effectively control (91,0% eff.) FUSASP at recommended dose (200 ml/100 kg seed) on winter triticale. Lower doses 120 ml/100 kg seed (eff. 62,1%) and 160 ml / 100 kg seed (eff. 75,5%) were characterized by worse efficiency than recommended dose and st. ref. product (90,7% eff.).</p> <ul style="list-style-type: none">• winter barley: <p>✓ PYRNGR (pasiastość liści jęczmienia) – 7 trials – major pest – number of trials is sufficient. All trials were characterized by sufficient level of infestation (at least 5% is required). It can be concluded that FLUDIO 025 GF effectively control (87,0% eff.) PYRNGR at recommended dose (200 ml/100 kg seed) on winter barley. Lower doses 120 ml/100 kg seed (eff. 76,5%) and 160 ml / 100 kg seed (eff. 82,5%) were also characterized by very good efficiency, comparable to st. ref product (eff. 87,2%). According to the proposal results, the dose of 160 ml / 100 kg seed of FLUDIO 025 GF provided the optimum overall control and should be considered as effective against PYRNGR, for which activity of FLUDIO 025 GF is claimed. However, in practice, farmer/user perform one treatment to protect crops during the growing season from a broader spectrum of seed borne and soil-borne disease. For this reason, 200 mL/100 kg seed is recommended. This dose is also recommended in plant protection products registered for today in Poland, that contain the tested active substance.</p> <p>✓ MONGNI (pleśń śniegowa) – 6 trials – minor major pest – number of trials is sufficient. All trials were characterized by sufficient level of infestation (at least 5% is required). It can be concluded that FLUDIO 025 GF effectively control (83,2% eff.) MONGNI at recommended dose (200 ml/100 kg seed) on winter barley. Lower doses 120 ml/100 kg seed (eff. 73,0%) and 160 ml / 100 kg seed (eff. 79,8%) were characterized by worse efficiency than recommended dose and st. ref. product (90,2% eff.).</p> <p>✓ FUSASP (zgorzel siewek) – 7 trials – major pest – number of trials is sufficient. All trials were characterized by sufficient level of infestation (at least 5% is required). It can be concluded that FLUDIO 025 GF effectively control (83,3% eff.) FUSASP at recommended dose (200 ml/100 kg seed) on winter barley. Lower doses 120 ml/100 kg seed (eff. 55,9%) and 160 ml / 100 kg seed (eff. 68,4%) were characterized by worse efficiency than recommended dose and st. ref. product (84,0% eff.).</p> <ul style="list-style-type: none">• winter rye: <p>✓ UROCOG (głownia żdźbłowa) – 7 trials – minor pest – number of trials is sufficient. All trials were characterized by sufficient level of infestation (at least 5% is required). It can be concluded that FLUDIO 025 GF effectively control (98,7% eff.) UROCOG on winter rye at recommended dose (200 ml/ 100 kg seed). Lower doses 120 ml/100 kg seed (eff. 94,1%) and 160 ml / 100 kg seed (eff. 97,5%) were also characterized by very good efficiency, comparable to st. ref product (eff. 98,7%). According to the proposal results, the dose of 120 mL /100 kg seed of FLUDIO 025 GF provided the optimum</p>
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overall control and should be considered as effective against UROCOC, for which activity of FLUDIO 025 GF is claimed. However, in practice, farmer/user perform one treatment to protect crops during the growing season from a broader spectrum of seed borne and soil-borne disease. For this reason, 200 mL/100 kg seed is recommended. This dose is also recommended in plant protection products registered for today in Poland, that contain the tested active substance.

- ✓ **FUSASP (zgorzel siewek)** – 7 trials – major pest – number of trials is sufficient. All trials were characterized by sufficient level of infestation (at least 5% is required). **It can be concluded that FLUDIO 025 GF effectively control (85,6% eff.) FUSASP on winter rye at recommended dose (200 ml / 100 kg seed).** Lower doses 120 ml/100 kg seed (eff. 56,1%) and 160 ml / 100 kg seed (eff. 68,4%) were characterized by worse efficiency than recommended dose and st. ref. product (79,5% eff.).

SPRING CEREALS:

- **spring wheat:**

- ✓ **TILLCA (śnieć cuchnąca)** – 4 trials – minor pest – number of trials is sufficient. **It can be concluded, on the basis on 4 valid trials, that FLUDIO 025 GF effectively control (91,5% eff.) TILLCA on spring wheat at recommended dose (200 ml/100 kg seed).** Lower doses 120 ml/100 kg seed (eff. 70,8%) and 160 ml / 100 kg seed (eff. 81,7%) were also characterized by very good efficiency, comparable to st. ref product (eff. 91,5%). According to the proposal results, the dose of 160 ml / 100 kg seed of FLUDIO 025 GF provided the optimum overall control and should be considered as effective against TILLCA, for which activity of FLUDIO 025 GF is claimed. However, in practice, farmer/user perform one treatment to protect crops during the growing season from a broader spectrum of seed borne and soil-borne disease. For this reason, 200 mL/100 kg seed is recommended. This dose is also recommended in plant protection products registered for today in Poland, that contain the tested active substance.

- ✓ **FUSASP (zgorzel siewek)** – 2 trials - minor pest – number of trials is not sufficient. However, extrapolation results from winter wheat are possible. Level of infestation was at acceptable level (>5%) in all trials. **It can be concluded that FLUDIO 025 GF effectively control (88,0% eff.) FUSASP on spring wheat at recommended dose (200 ml / 100 kg seed).** Lower doses 120 ml/100 kg seed (eff. 67,5%) and 160 ml / 100 kg seed (eff. 75,5%) were characterized by worse efficiency than recommended dose and st. ref. product (90,0% eff.).

- **spring barley:**

- ✓ **FUSASP (zgorzel siewek)** – 3 trials - ~~minor~~ **major** pest – number of trials is **not** sufficient. All trials were characterized by sufficient level of infestation (at least 5% is required). **Extrapolation results from winter wheat is possible. Winter wheat was represented by sufficient number of trials against FUSASP, so extrapolation results to spring barley is possible on the basis on 3 trials carried out on spring barley against this disease. It can be concluded that FLUDIO 025 GF effectively control (85,5% eff.) FUSASP on spring barley at recommended dose (200 ml / 100 kg seed).** Lower doses 120 ml/100 kg seed (eff. 70,5%) and 160 ml / 100 kg seed (eff. 79,2%) were characterized by worse efficiency than recommended dose and st. ref. product (88,9% eff.).

In all efficacy trials standard reference products were used. The efficacy of the tested seed treatment was comparable or even slightly higher than the standard

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

According to FRAC Code List (Fungicides sorted by FRAC Code) fludioxonil belongs to PP-fungicides (phenylpyrroles) and resistance is found sporadically.

Fludioxonil is a non-systemic phenylpyrrole based chemical derived from the natural product pyrrolnitrin and is classified in group 12 of FRAC. Fludioxonil blocks a protein kinase that catalyses phosphorylation of a regulatory enzyme of glycerol synthesis. This inhibits spore germination and growth of germ tubes and mycelia before penetration of the plant tissues. The mechanism of action is not fully resolved, however, mutations in the histidine kinase (Os-2 MAP kinase) involved in osmosensing mediate resistance to phenylpyrroles. Possibly also additional genes or mechanisms are involved. Phenylpyrrole fungicides as fludioxonil are classified by FRAC as ‘low to medium resistance’ risk.

The resistance risk of PP-fungicide in the case of seed treatment is classified as low.

There are no additional recommendations to manage resistance development in the case of seed treatment for fludioxonil in accordance with FRAC guidelines.

General strategy against developing resistance, in accordance with the general FRAC recommendations are proposed as follow:

- Use in alternation with fungicides with a different mode of action,
- Use as recommended on the label, do not use reduce doses,
- Application should be as a protective application,
- Use other measures such as resistant varieties, good agronomic practice

Comments of zRMS:	<p>Fludioxonil, is used as a seed treatment or sprayed against foliar diseases or as post-harvest fungicide against a broad variety of fungi. Fludioxonil is usually applied as a mixture with the AP cyprodinil, which is considered the most effective fungicide against <i>Botrytis</i>. Like the dicarboximides, fludioxonil interferes with the Bos1- and MAP kinase-dependent osmoregulation pathway, but cross-resistance between these fungicides is rarely observed in the field. In sensitive cells, fludioxonil hyperactivates the pathway, which leads to a futile hyperosmolarity response, followed by glycerol accumulation and growth inhibition. Laboratory-induced mutations in the Bos1 histidine kinase confer high levels of resistance against both fludioxonil and iprodione; however, these mutants show poor growth and are hypersensitive to high osmolarity, and such strains usually do not survive in the field. In fact, fludioxonil is exceptional among the site-specific fungicides used against <i>Botrytis</i> because highly resistant field strains are very rarely found. In contrast, strains with resistance to fludioxonil and iprodione have been observed in field populations of <i>Alternaria brassicicola</i> and <i>Penicillium spp.</i></p> <p>The proportion of <i>Botrytis cinerea</i> field isolates resistant to fludioxonil and other phenylpyrroles is very low. Very few resistant isolates have been detected in Switzerland and France. Thanks to the low resistance frequency and the fact that fludioxonil is mostly used a formulated combination with cyprodinil (Switch) efficacy is very high. In regions where fludioxonil is used by itself (Champagne) a strict alternation with botrycides of other chemical groups is in place in order to manage resistance development and gram efficacy.</p> <p><u>Applicant proposed strategy against developing resistance, in accordance with the general recommendations made by FRAC:</u></p> <ul style="list-style-type: none">- Use in alternation with fungicides with a different mode of action- Use as recommended on the label. Do not use reduced doses.
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<p>- <i>Application should be as a protective application.</i></p> <p>- <i>Use other measures such as resistant varieties, good agronomic practice</i></p> <p>The abundance of the requirements within the good agricultural practice is necessary. The resistance management should be coordinated by FRAC recommendations. Applying the anti-resistance use recommendations, development of resistance can be considerably decreased or avoided. The restriction should be put on the label.</p> <p>Since the agronomic factors influencing the risk of resistance development tend to vary between the member states, the individual and detailed assessment of the resistance risk (Evaluation of the Agronomic risk of resistance, Management of resistance) should be decided on national level.</p> <p>The Applicant should provide a resistance risk assessment in accordance with EPPO PP 1/213. The zRMS would consider that inherent risk of resistance developing to fludioxonil is quite low. To minimize occurrence of resistance product should be used strictly in accordance with the instructions on the label. Therefore, in the opinion of Evaluator the product should be applied in recommended dosage and (if possible) fungicides of other chemical structure and different mode of action should be also applied.</p>
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3.4 Adverse effects on treated crops (KCP 6.4)

Information on trials submitted (3.4: Adverse effects on treated crops)

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	5	2021	GEP	Assessment of phytotoxicity, count of plants emergence of winter wheat, germination energy and rate, of winter wheat after 1 and 12 months, grain yield and thousand grain weight of winter wheat, content of protein in winter wheat . All trials were performed with dose 1N and 1.5N of tested and reference products.
	Poland	Q	5	2021	GEP	Assessment of seed weight of 1000 grains protein content in seeds of wheat in all tested doses of FLUDIO 025 GF in comparison with reference product and control
TOTAL	-	-	10	-	-	
Winter rye	Poland	S + Y + Q	5	2021	GEP	Assessment of phytotoxicity, count of plants emergence of winter rye, germination energy and rate, of winter rye after 1 and 12 months, grain yield and thousand grain weight of winter rye, content of protein in winter rye . All trials were performed with dose 1N and 1.5N of tested and reference products.
	Poland	Q	5	2021	GEP	Assessment of seed weight of 1000 grains protein content in seeds of rye in all tested doses of FLUDIO 025 GF in comparison with reference product and control
TOTAL	-	-	10	-	-	
Winter	Poland	S + Y + Q	5	2021	GEP	Assessment of phytotoxicity, count of plants

Crop*	Country	Type of trial**	Number of trials	Years	GEP, non-GEP, official***	Comments (any other relevant information)
			North-East Zone			
barley						emergence of winter barley, germination energy and rate, of winter barley after 1 and 12 months, grain yield and thousand grain weight of winter barley, content of protein in seeds of barley. All trials were performed with dose 1N and 1.5N of tested and reference products.
						Assessment of yield, weight of 1000 grains in all tested doses of FLUDIO 025 GF in comparison with reference product and control
TOTAL	-	-	5	-	-	
Winter triticale	Poland	S + Y + Q	5	2021	GEP	Assessment of phytotoxicity, count of plants emergence of winter triticale, germination energy and rate, of winter triticale after 1 and 12 months, grain yield and thousand grain weight of winter triticale, content of protein in seeds of triticale. All trials were performed with dose 1N and 1.5N of tested and reference products.
						Assessment of yield, weight of 1000 grains in all tested doses of FLUDIO 025 GF in comparison with reference product and control
TOTAL	-	-	5	-	-	
Spring wheat	Poland	S + Y + Q	4	2021	GEP	Assessment of phytotoxicity, count of plants emergence of spring wheat, germination energy and rate, of spring wheat after 1 month, grain yield and thousand grain weight of spring wheat, content of protein in seeds of wheat. All trials were performed with dose 1N and 1.5N of tested and reference products.
						Assessment of yield, weight of 1000 grains in all tested doses of FLUDIO 025 GF in comparison with reference product and control
TOTAL	-	-	4	-	-	
Spring barley	Poland	S + Y + Q	4	2021	GEP	Assessment of phytotoxicity, count of plants emergence of spring barley, germination energy and rate, of spring barley after 1 month, grain yield and thousand grain weight of spring barley, content of protein in seeds of barley. All trials were performed with dose 1N and 1.5N of tested and reference products.
	Poland	-Q	4	2021	GEP	Assessment of yield, weight of 1000 grains protein content in seeds of barley in all tested doses of FLUDIO 025 GF in comparison with reference product and control
TOTAL	-	-	8	-	-	

* 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 trials (selectivity trials)

Crop(s)	Reference standards	Country(ies) where the product is registered ⁽¹⁾	Authorization number	Active substance(s) (a.s)	Formulation		Registered application rate ⁽³⁾	Application rate in trials (per treatment)	Remark ⁽⁴⁾
					Type ⁽²⁾	Concentration of a.s.			
Winter wheat, winter rye, winter barley, winter triticale, spring wheat, spring barley	MAXIM 025 GF	Poland	R-38/2007	Fludioxonil	FS	25 g/L	200 mL/100 kg seeds	In selectivity trials – 1N: 200 mL/100 kg seeds, 1.5N: 300 mL/100 kg seeds	1 application per season; 0-800 mL of water / 100 kg seeds

(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)

Phytotoxicity assessment of the tested product – FLUDIO 025 GF was made at the same time as studies of its effectiveness. Moreover, additional studies of selectivity were performed to check the influence of testes seed treatment on crop grains. Phytotoxicity assessment was carried out with the use of different cultivars (commercially grown varieties) which is compliant with PP 1/135 Phytotoxicity assessment.

A total of 60 phytotoxicity trials (32 efficacy trials and 28 selectivity trials) were carried out in 2021 in different regions in Poland on different cultivars of winter wheat (7 efficacy trials and 5 selectivity trials), winter rye (7 efficacy trials and 5 selectivity trials), winter barley (9 efficacy trials and 5 selectivity trials), winter triticale (2 efficacy trials and 5 selectivity trials), spring wheat (4 efficacy trials and 4 selectivity trials), spring barley (3 efficacy trials and 4 selectivity trials).

In efficacy trials FLUDIO 025 GF was tested in three doses: 1N (200 mL/100 kg seeds), 0.8N (160 mL/100 kg seeds), 0.6N (120 mL/100 kg seeds) and reference product – MAXIM 025 FS at the rate 200 mL/100 kg seeds with 800 mL of water. In selectivity trials, two doses of tested product were examined: 1N (200 mL/100 kg seeds) and 1.5N (300 mL/100 kg seeds), as well as, two doses of the reference product: 1N (200 mL/100 kg seeds+800 mL of water), and 1.5N (300 mL/100 kg seeds + 800 mL of water). During the research, the visual observation, there were no impact on the measure of cultivation of spring and winter wheat, spring and winter barley, winter rye and winter triticale. No signs of phytotoxicity effect were observed in all trials. Phytotoxicity in all tested samples was 0%. All results are presented in Table 3.4-3 to Table 3.4.8.

Table 3.4-3: Phytotoxicity of product to winter wheat

Number of trials with...		Selectivity trials (5 trials)				Efficacy trials (7 trials)	
		FLUDIO 025 GF		MAXIM 025 FS		FLUDIO 025 GF	MAXIM 025 FS
		1N	1.5 N	1N	1.5 N	1N, 0.8N, 0.6 N	1N
Maximum of phytotoxicity recorded during the trials	0% to 5%	5	5	5	5	7	7
	>5% to 10%	-	-	-	-	-	-
	>10% to 15%	-	-	-	-	-	-
	>15 %	-	-	-	-	-	-

Number of trials with...		Selectivity trials (5 trials)				Efficacy trials (7 trials)	
		FLUDIO 025 GF		MAXIM 025 FS		FLUDIO 025 GF	MAXIM 025 FS
		1N	1.5 N	1N	1.5 N	1N, 0.8N, 0.6 N	1N
Level of symptoms at the last assessments	0% to 5%	5	5	5	5	7	7
	>5% to 10%	-	-	-	-	-	-
	>10% to 15%	-	-	-	-	-	-
	>15 %	-	-	-	-	-	-

5 trials of selectivity and 7 trials of efficacy were carried out on winter wheat in Poland in 2021 on different varieties. No phytotoxicity symptoms caused by FLUDIO 025 GF at proposed rates 200 mL/100 kg seeds as well as in 300 mL/100 kg seeds (1.5N dose) was recorded in all efficacy and selectivity trials.

Table 3.4-4: Phytotoxicity of product to winter rye

Number of trials with...		Selectivity trials (5 trials)				Efficacy trials (7 trials)	
		FLUDIO 025 GF		MAXIM 025 FS		FLUDIO 025 GF	MAXIM 025 FS
		1N	1.5 N	1N	1.5 N	1N, 0.8N, 0.6 N	1N
Maximum of phytotoxicity recorded during the trials	0% to 5%	5	5	5	5	7	7
	>5% to 10%	-	-	-	-	-	-
	>10% to 15%	-	-	-	-	-	-
	>15 %	-	-	-	-	-	-
Level of symptoms at the last assessments	0% to 5%	5	5	5	5	7	7
	>5% to 10%	-	-	-	-	-	-
	>10% to 15%	-	-	-	-	-	-
	>15 %	-	-	-	-	-	-

5 trials of selectivity and 7 trials of efficacy were carried out on winter rye in Poland in 2021 on different varieties. No phytotoxicity symptoms caused by FLUDIO 025 GF at proposed rates 200 mL/100 kg seeds as well as in 300 mL/100 kg seeds (1.5N dose) was recorded in all efficacy and selectivity trials.

Table 3.4-5: Phytotoxicity of product to winter barley

Number of trials with...		Selectivity trials (5 trials)				Efficacy trials (9 trials)	
		FLUDIO 025 GF		MAXIM 025 FS		FLUDIO 025 GF	MAXIM 025 FS
		1N	1.5 N	1N	1.5 N	1N, 0.8N, 0.6 N	1N
Maximum of phytotoxicity recorded during the trials	0% to 5%	5	5	5	5	9	9
	>5% to 10%	-	-	-	-	-	-
	>10% to 15%	-	-	-	-	-	-
	>15 %	-	-	-	-	-	-
Level of symptoms at the last assessments	0% to 5%	5	5	5	5	9	9
	>5% to 10%	-	-	-	-	-	-

Number of trials with...		Selectivity trials (5 trials)				Efficacy trials (9 trials)	
		FLUDIO 025 GF		MAXIM 025 FS		FLUDIO 025 GF	MAXIM 025 FS
		1N	1.5 N	1N	1.5 N	1N, 0.8N, 0.6 N	1N
	>10% to 15%	-	-	-	-	-	-
	>15 %	-	-	-	-	-	-

5 trials of selectivity and 9 trials of efficacy were carried out on winter barley in Poland in 2021 on different varieties. No phytotoxicity symptoms caused by FLUDIO 025 GF at proposed rates 200 mL/100 kg seeds as well as in 300 mL/100 kg seeds (1.5N dose) was recorded in all efficacy and selectivity trials.

Table 3.4-6: Phytotoxicity of product to winter triticale

Number of trials with...		Selectivity trials (5 trials)				Efficacy trials (2 trials)	
		FLUDIO 025 GF		MAXIM 025 FS		FLUDIO 025 GF	MAXIM 025 FS
		1N	1.5 N	1N	1.5 N	1N, 0.8N, 0.6 N	1N
Maximum of phytotoxicity recorded during the trials	0% to 5%	5	5	5	5	2	2
	>5% to 10%	-	-	-	-	-	-
	>10% to 15%	-	-	-	-	-	-
	>15 %	-	-	-	-	-	-
Level of symptoms at the last assessments	0% to 5%	5	5	5	5	2	2
	>5% to 10%	-	-	-	-	-	-
	>10% to 15%	-	-	-	-	-	-
	>15 %	-	-	-	-	-	-

5 trials of selectivity and 9 trials of efficacy were carried out on winter triticale in Poland in 2021 on different varieties. No phytotoxicity symptoms caused by FLUDIO 025 GF at proposed rates 200 mL/100 kg seeds as well as in 300 mL/100 kg seeds (1.5N dose) was recorded in all efficacy and selectivity trials.

Table 3.4-7: Phytotoxicity of product to spring wheat

Number of trials with...		Selectivity trials (4 trials)				Efficacy trials (4 trials)	
		FLUDIO 025 GF		MAXIM 025 FS		FLUDIO 025 GF	MAXIM 025 FS
		1N	1.5 N	1N	1.5 N	1N, 0.8N, 0.6 N	1N
Maximum of phytotoxicity recorded during the trials	0% to 5%	4	4	4	4	4	4
	>5% to 10%	-	-	-	-	-	-
	>10% to 15%	-	-	-	-	-	-
	>15 %	-	-	-	-	-	-
Level of symptoms at the last assessments	0% to 5%	4	4	4	4	4	4
	>5% to 10%	-	-	-	-	-	-
	>10% to 15%	-	-	-	-	-	-

Number of trials with...		Selectivity trials (4 trials)				Efficacy trials (4 trials)	
		FLUDIO 025 GF		MAXIM 025 FS		FLUDIO 025 GF	MAXIM 025 FS
		1N	1.5 N	1N	1.5 N	1N, 0.8N, 0.6 N	1N
	>15 %	-	-	-	-	-	-

4 trials of selectivity and 4 trials of efficacy were carried out on spring wheat in Poland in 2021 on different varieties. No phytotoxicity symptoms caused by FLUDIO 025 GF at proposed rates 200 mL/100 kg seeds as well as in 300 mL/100 kg seeds (1.5N dose) was recorded in all efficacy and selectivity trials.

Table 3.4-8: Phytotoxicity of product to spring barley

Number of trials with...		Selectivity trials (4 trials)				Efficacy trials (4 trials)	
		FLUDIO 025 GF		MAXIM 025 FS		FLUDIO 025 GF	MAXIM 025 FS
		1N	1.5 N	1N	1.5 N	1N, 0.8N, 0.6 N	1N
Maximum of phytotoxicity recorded during the trials	0% to 5%	4	4	4	4	3	3
	>5% to 10%	-	-	-	-	-	-
	>10% to 15%	-	-	-	-	-	-
	>15 %	-	-	-	-	-	-
Level of symptoms at the last assessments	0% to 5%	4	4	4	4	3	3
	>5% to 10%	-	-	-	-	-	-
	>10% to 15%	-	-	-	-	-	-
	>15 %	-	-	-	-	-	-

4 trials of selectivity and 3 trials of efficacy were carried out on spring barley in Poland in 2021 on different varieties. No phytotoxicity symptoms caused by FLUDIO 025 GF at proposed rates 200 mL/100 kg seeds as well as in 300 mL/100 kg seeds (1.5N dose) was recorded in all efficacy and selectivity trials.

Comments of zRMS:	<p>The phytotoxicity trials about tested plant protection product (seed treatment) have been carried out in accordance with EPPO Guidelines (in exception of EPPO 1/181 (4). However, this exception was accepted by Evaluator. The conduct of the field work is principally compliant with “Good Agricultural Practice” and in accordance with EPPO Guidelines PP 1/135.</p> <p>The trials were performed with the use of different agricultural practice in Poland (North-East EPPO zone). Those trials were performed with the use of cultivars, differing in growth strength as well as soil and water requirements. The appropriate experimental design was applied. In all trials studied product was compared to the standard reference products. Statistical analysis of the data was performed. Also, quality of yield was evaluated in some trials.</p> <p>Both EU Directive 91/414 (EU, 1991) and EPPO PP 1/226 (3) – Number of efficacy trials requires testing phytotoxicity at normal (N) and double (2N) recommended dose. However, EPPO 1/135 (3) – Phytotoxicity assessment states: ‘EPPO Standards on fungicides, insecticides and plant growth regulators or seed treatments, on the other hand, include only a relatively simple special section on phytotoxicity assessment, because, for these types of plant protection products, phytotoxic effects will be less frequent’. Selectivity trials were not required, which is in accordance with EPPO 1/135 (3).</p>
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	<p>In efficacy trials FLUDIO 025 GF was tested in three doses: 1N (200 mL/100 kg seeds), 0.8N (160 mL/100 kg seeds), 0.6N (120 mL/100 kg seeds) and reference product – MAXIM 025 FS at the rate 200 mL/100 kg seeds with 800 mL of water.</p> <p>In selectivity trials, two doses of tested product were examined: 1N (200 mL/100 kg seeds) and 1.5N (300 mL/100 kg seeds), as well as two doses of the reference product: 1N (200 mL/100 kg seeds+800 mL of water), and 1.5N (300 mL/100 kg seeds + 800 mL of water).</p> <p>Applicant submitted in total 32 efficacy trials in which phytotoxicity effect was assessed:</p> <ul style="list-style-type: none"> • winter cereals (25 trials): winter wheat (7 trials), winter rye (7 trials), winter barley (9 trials), winter triticale (2 trials) • spring cereals (7 trials): spring wheat (4 trials) and spring barley (3 trials). <p>Applicant submitted in total 28 selectivity trials in which phytotoxicity effect was assessed at N and 1.5 N dose:</p> <ul style="list-style-type: none"> • winter cereals (20 trials): winter wheat (5 trials), winter rye (5 trials), winter barley (5 trials), winter triticale (5 trials) • spring cereals (8 trials): spring wheat (4 trials) and spring barley (4 trials) <p>During the research, the visual observation, there were no impact on the measure of cultivation of spring and winter wheat, spring and winter barley, winter rye and winter triticale. No signs of phytotoxicity effect were observed in all trials.</p> <p>Submitted documentation is acceptable. There were not observed any phytotoxicity symptoms caused by FLUDIO 025 GF at the highest dose rate of 300 ml of product + 800 ml of water/ 100 kg seeds was recorded in all trials. No signs of phytotoxicity effects were observed in all trials.</p>
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3.4.2 Effect on the yield of treated plants or plant product (KCP 6.4.2)

FLUDIO 025 GF at all tested rates did not have a negative effect on the yield of winter wheat in the presence of *Fusarium spp.*, *Monographella nivalis*, *Tilletia caries*

FLUDIO 025 GF at all tested rates did not have a negative effect on the yield of winter rye in the presence of *Fusarium spp.*, *Pyrenophora graminea* and *Urocystis occulata*.

FLUDIO 025 GF at all tested rates did not have a negative effect on the yield of winter barley in the presence of *Fusarium spp.*, *Monographella nivalis*, *Pyrenophora graminea*

FLUDIO 025 GF at all tested rates did not have a negative effect on the yield of winter triticale in the presence of *Fusarium spp.*, *Monographella nivalis*

FLUDIO 025 GF at all tested rates did not have a negative effect on the yield of spring wheat in the presence of *Fusarium spp.*, *Tilletia caries*.

FLUDIO 025 GF at all tested rates did not have a negative effect on the yield of spring barley in the presence of *Fusarium spp.*

In all trials there was no effect of the test preparations on the quality parameters of yield

Com-ments of zRMS:	<p>ZRMs agree with Applicant.</p> <p>FLUDIO ŽEL 025 FS / FUNABEN ŽEL (product code: FLUDIO 025 GF) containing fludioxonil (25 g/L) applied at dose rates higher than the recommended rate did not significantly affect the crop yield.</p> <p>The data obtained in trials harvested demonstrate that FLUDIO ŽEL 025 FS / FUNABEN ŽEL (product code: FLUDIO 025 GF) containing fludioxonil (25 g/L) is as safe to the crop as the reference products used in the trials.</p>
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Below, ZRMs presented detailed results from field trials about impact of FLUDIO ŻEL 025 FS / FUNABEN ŻEL (product code: FLUDIO 025 GF) on the yield (on the basis on 28 selectivity trials):

✓ **Winter wheat**

Trial ID	Country	Year	Variety	Ass. Type	Unit	Untreated Mean	Fludio Żel 025 FS		Maxim 025 FA	
							200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds			
							% rel.	% rel.	% rel.	% rel.
58 F/2022	PL	2021	Zyta	Yield	t/ha	4,77	5,86	5,69	5,67	5,66
59 F/2022	PL	2021	Opoka	Yield	t/ha	6,10	6,70	6,50	6,73	6,63
60 F/2022	PL	2021	Arkadia	Yield	t/ha	5,88	6,21	6,29	6,35	6,33
61 F/2022	PL	2021	Fidelius	Yield	t/ha	5,56	5,50	6,39	6,36	6,28
62 F/2022	PL	2021	Tobak	Yield	t/ha	6,19	7,09	7,45	7,45	7,44

Impact on the yield was assessed in 5 trials carried out on winter wheat in PL (N-E). No negative effect was observed during trials.

✓ **Winter barley**

Trial ID	Country	Year	Variety	Ass. Type	Unit	Untreated Mean	Fludio Żel 025 FS		Maxim 025 FA	
							200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds			
							% rel.	% rel.	% rel.	% rel.
301_SYNTH_FF22JZ301W	PL	2021	Bażant	Yield	t/ha	5,56	5,64	6,58	5,98	6,10
302_SYNTH_FF22JZ302W	PL	2021	Bartosz	Yield	t/ha	6,01	6,12	7,08	6,67	6,78
303_SYNTH_FF22JZ303W	PL	2021	Brosza	Yield	t/ha	5,56	5,64	6,58	5,98	6,10
327_SYNTH_FF22JZ304W	PL	2021	Kosmos	Yield	t/ha	4,36	4,58	5,09	4,44	4,57
328_SYNTH_FF22JZ305W	PL	2021	Gloria	Yield	t/ha	4,18	5,12	4,35	4,27	4,73

Impact on the yield was assessed in 5 trials carried out on winter barley in PL (N-E). No negative effect was observed during trials.

✓ **Winter triticale**

Trial ID	Country	Year	Variety	Ass. Type	Unit	Untreated Mean	Fludio Żel 025 FS		Maxim 025 FA	
							200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds			
							% rel.	% rel.	% rel.	% rel.
307_SYNTH_FF22TZ301W	PL	2021	Avokado	Yield	t/ha	7,53	8,56	8,09	8,37	7,87
308_SYNTH_FF22TZ303W	PL	2021	Rotondo	Yield	t/ha	6,39	6,80	6,81	6,78	6,75
309_SYNTH_FF22TZ304W	PL	2021	Grenado	Yield	t/ha	6,28	6,34	6,47	6,70	6,86
341_SYNTH_FF22TZ305W	PL	2021	Trapero	Yield	t/ha	4,55	4,85	4,99	5,04	4,70
342_SYNTH_FF22TZ306W	PL	2021	Kasyno	Yield	t/ha	4,72	5,42	5,53	5,67	5,67

Impact on the yield was assessed in 5 trials carried out on winter triticale in PL (N-E). No negative effect was observed during trials.

✓ **Winter rye**

Trial ID	Country	Year	Variety	Ass. Type	Unit	Untreated Mean	Fludio Żel 025 FS		Maxim 025 FA	
							200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds			
							% rel.	% rel.	% rel.	% rel.
35 F/2022	PL	2021	Dukato	Yield	t/ha	8,15	8,38	8,27	8,15	8,08
36 E/2022	PL	2021	SU Forsetti	Yield	t/ha	9,08	9,43	9,00	8,89	9,22

37F/2022	PL	2021	Dańkowskie Rubin	Yield	t/ha	6,39	6,63	6,23	6,57	6,33
38F/2022	PL	2021	Dańkowskie Granat	Yield	t/ha	6,97	6,85	6,85	6,98	6,89
39F/2022	PL	2021	Dańkowskie Diament	Yield	t/ha	6,49	6,73	6,97	6,65	6,65
Impact on the yield was assessed in 5 trials carried out on winter rye in PL (N-E). No negative effect was observed during trials.										
✓ Spring wheat										
						Untreated	Fludio Żel 025 FS		Maxim 025 FA	
						Mean	200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds			
Trial ID	Country	Year	Variety	Ass. Type	Unit		% rel.	% rel.	% rel.	% rel.
314_SYNTH_FF22PJ301W	PL	2021	Telimena	Yield	t/ha	6,32	6,53	6,61	6,47	6,69
315_SYNTH_FF22PJ302W	PL	2021	Ostka Smolicka	Yield	t/ha	5,87	6,25	6,14	6,42	6,33
343_SYNTH_FF22PJ303W	PL	2021	Arabella	Yield	t/ha	3,24	3,55	3,24	3,5	3,55
344_SYNTH_FF22PJ304W	PL	2021	Jarlanka	Yield	t/ha	2,98	3,87	4,19	3,91	4,04
Impact on the yield was assessed in 4 trials carried out on spring wheat in PL (N-E). No negative effect was observed during trials.										
✓ Spring barley										
						Untreated	Fludio Żel 025 FS		Maxim 025 FA	
						Mean	200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds			
Trial ID	Country	Year	Variety	Ass. Type	Unit		% rel.	% rel.	% rel.	% rel.
80 F_2022	PL	2021	Ella	Yield	t/ha	5,05	5,18	5,05	5,08	5,19
81 F_2022	PL	2021	Stratus	Yield	t/ha	5,39	5,43	5,47	5,39	5,41
82 F_2022	PL	2021	MHR Krajan	Yield	t/ha	4,79	4,81	4,84	4,82	5,04
83 F_2022	PL	2021	Pausitan	Yield	t/ha	4,87	4,89	5,03	4,81	4,82
Impact on the yield was assessed in 4 trials carried out on spring barley in PL (N-E). No negative effect was observed during trials.										

3.4.3 Effects on the quality of plants or plant products (KCP 6.4.3)

4 studies conducted in 2021 and 4 quality studies (protein content) in Poland on spring barley revealed no negative impact of FLUDIO 025 GF on quality of plants. The test treatment FLUDIO 025 GF applied at the rate of 200 ml/ 100 kg of grain had no effect on the protein content in spring barley grain in relation to the untreated control.

5 studies conducted in 2021 in Poland on winter barley revealed no negative impact of FLUDIO 025 GF on quality of plants. The grain treatment used in trials were found to have no effect on the protein content in winter barley.

5 studies conducted in 2021 and 5 quality studies (protein content) in Poland on winter wheat revealed no negative impact of FLUDIO 025 GF on quality of plants. The grain treatment used in trials were found to have no effect on the protein content in winter wheat.

5 studies conducted in 2021 in Poland on winter triticale revealed no negative impact of FLUDIO 025 GF on quality of plants. The test treatment FLUDIO 025 GF applied at the rate of 200 ml/ 100 kg of grain had no effect on the protein content in winter triticale grain in relation to the untreated control.

5 studies conducted in 2021 and 5 quality studies (protein content) in Poland on winter rye revealed no negative impact of FLUDIO 025 GF on quality of plants. The grain treatment used in trials were found to

have no effect on the protein content in winter rye.
 4 studies conducted in 2021 in Poland on spring **barley** **wheat** revealed no negative impact of FLUDIO 025 GF on quality of plants. The grain treatment used in trials were found to have no effect on the protein content in spring **barley** **wheat**.

Comments of ZRMS:	ZRMs agree with Applicant.																																																																																														
	Applicant submitted in total 28 selectivity trials in which phytotoxicity effect was assessed at N and 1.5 N dose:																																																																																														
	<ul style="list-style-type: none"> winter cereals (20 trials): winter wheat (5 trials), winter rye (5 trials), winter barley (5 trials), winter triticale (5 trials) spring cereals (8 trials): spring wheat (4 trials) and spring barley (4 trials). 																																																																																														
	FLUDIO ŻEL 025 FS / FUNABEN ŻEL (product code: FLUDIO 025 GF) containing fludioxonil (25 g/L) applied at dose rates higher than the recommended rate did not significantly affect the quality of crop yield.																																																																																														
	The data obtained in trials harvested demonstrate that FLUDIO ŻEL 025 FS / FUNABEN ŻEL (product code: FLUDIO 025 GF) containing fludioxonil (25 g/L) is as safe to the crop as the reference products used in the trials.																																																																																														
	Below, ZRMs presented detailed results from field trials about impact of FLUDIO ŻEL 025 FS / FUNABEN ŻEL (product code: FLUDIO 025 GF) on the quality yield (on the basis on 28 selectivity trials and 14 quality trials about impact on protein content):																																																																																														
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301_SYNTH_FF22JZ301W	PL	2021	Bażant	TGW	g		43,2	43,10	42,71	42,95	43,45
302_SYNTH_FF22JZ302W	PL	2021	Bartosz	TGW	g		51,85	52,81	49,08	53,58	51,60
303_SYNTH_FF22JZ303W	PL	2021	Brosza	TGW	g		43,32	43,10	42,71	42,95	43,45
327_SYNTH_FF22JZ304W	PL	2021	Kosmos	TGW	g		51,55	51,97	50,88	51,76	50,75
328_SYNTH_FF22JZ305W	PL	2021	Gloria	TGW	g		55,39	57,47	55,98	55,35	54,91

No negative impact on protein content (%) – 5 trials and TGW (g) – 5 trials was observed during trials carried out on winter barley.

✓ **Winter triticale**

Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated		Fludio Żel 025 FS		Maxim 025 FA	
							%	%	%	%	%	%
307_SYNTH_FF22TZ301W	PL	2021	Avokado	protein	%DM	11,63	11,65	11,85	11,68	11,65		
308_SYNTH_FF22TZ303W	PL	2021	Rotondo	protein	%DM	12,20	12,05	12,38	12,00	12,30		
309_SYNTH_FF22TZ304W	PL	2021	Grenado	protein	%DM	11,08	11,15	11,13	10,95	11,20		
341_SYNTH_FF22TZ305W	PL	2021	Trapero	protein	%DM	13,95	13,95	14,23	13,90	14,38		
342_SYNTH_FF22TZ306W	PL	2021	Kasyno	protein	%DM	11,75	11,43	11,40	11,73	11,43		

Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated		Fludio Żel 025 FS		Maxim 025 FA	
							%	%	%	%	%	%
307_SYNTH_FF22TZ301W	PL	2021	Avokado	TGW	g	51,56	49,85	50,57	51,58	51,52		
308_SYNTH_FF22TZ303W	PL	2021	Rotondo	TGW	g	44,41	45,96	43,40	44,97	42,26		
309_SYNTH_FF22TZ304W	PL	2021	Grenado	TGW	g	38,76	38,21	39,15	38,09	38,68		
341_SYNTH_FF22TZ305W	PL	2021	Trapero	TGW	g	39,37	39,64	41,12	39,78	40,09		
342_SYNTH_FF22TZ306W	PL	2021	Kasyno	TGW	g	46,96	45,58	45,48	45,72	47,05		

No negative impact on protein content (%) – 5 trials and TGW (g) – 5 trials was observed during trials carried out on winter triticale.

✓ **Winter rye**

Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated		Fludio Żel 025 FS		Maxim 025 FA	
							%	%	%	%	%	%
18J/2022	PL	2021	Dukato	protein	%DM	7,91	8,27	8,61	8,26	8,41		
19J/2022	PL	2021	SU Forsetti	protein	%DM	7,23	7,68	7,49	7,13	7,53		
20J/2022	PL	2021	Dańkowskie Rubin	protein	%DM	8,28	8,11	8,24	8,33	8,25		
21J/2022	PL	2021	Dańkowskie Granat	protein	%DM	8,74	8,33	8,38	8,55	8,46		
22J/2022	PL	2021	Dańkowskie Diament	protein	%DM	8,80	8,68	8,89	9,46	8,58		

Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated		Fludio Żel 025 FS		Maxim 025 FA	
							%	%	%	%	%	%
35 F/2022	PL	2021	Dukato	TGW	g	31,83	31,45	30,81	31,97	30,74		
36 F/2022	PL	2021	SU Forsetti	TGW	g	29,74	27,92	29,53	30,41	28,94		
37 F/2022	PL	2021	Dańkowskie Rubin	TGW	g	28,02	29,10	29,95	29,30	27,74		
38 F/2022	PL	2021	Dańkowskie Granat	TGW	g	28,64	27,74	29,40	28,65	28,05		
39 F/2022	PL	2021	Dańkowskie Diament	TGW	g	n.a	n.a	n.a	n.a	n.a		

No negative impact on protein content (%) – 5 trials and TGW (g) – 5 trials was observed during trials carried out on winter rye.

✓ Spring wheat										
Trial ID	Country	Year	Variety	Ass. Type	Unit	Untreated Mean	Fludio Žel 025 FS		Maxim 025 FA	
							200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds			
							% rel.	% rel.	% rel.	% rel.
314_SYNTH_FF22PJ301 W	PL	2021	Telimena	protein	%DM	12,78	12,93	12,90	13,13	13,08
315_SYNTH_FF22PJ302 W	PL	2021	Ostka Smolicka	protein	%DM	12,85	12,63	12,68	12,83	12,80
343_SYNTH_FF22PJ303 W	PL	2021	Arabella	protein	%DM	11,45	11,60	11,13	11,48	11,20
344_SYNTH_FF22PJ304 W	PL	2021	Jarlanka	protein	%DM	14,15	14,10	13,98	14,08	14,08

Trial ID	Country	Year	Variety	Ass. Type	Unit	Untreated Mean	Fludio Žel 025 FS		Maxim 025 FA	
							200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds			
							% rel.	% rel.	% rel.	% rel.
314_SYNTH_FF22PJ301 W	PL	2021	Telimena	TGW	g	42,63	41,94	41,93	42,37	42,66
315_SYNTH_FF22PJ302 W	PL	2021	Ostka Smolicka	TGW	g	39,13	39,74	40,63	42,54	38,93
343_SYNTH_FF22PJ303 W	PL	2021	Arabella	TGW	g	36,48	36,87	36,58	36,75	36,99
344_SYNTH_FF22PJ304 W	PL	2021	Jarlanka	TGW	g	37,95	37,54	37,18	37,10	36,11

No negative impact on protein content (%) – 4 trials and TGW (g) – 4 trials was observed during trials carried out on spring wheat.

✓ **Spring barley**

Trial ID	Country	Year	Variety	Ass. Type	Unit	Untreated Mean	Fludio Žel 025 FS		Maxim 025 FA	
							200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds			
							% rel.	% rel.	% rel.	% rel.
7J/2022	PL	2021	Ella	protein	%DM	11,73	11,69	11,30	11,10	11,39
8J/2022	PL	2021	Stratus	protein	%DM	11,77	12,16	12,11	11,52	11,84
9J/2022	PL	2021	MHR Krajan	protein	%DM	11,82	11,71	12,08	12,11	12,33
10J/2022	PL	2021	Pausitan	protein	%DM	11,72	11,58	11,64	11,52	11,70

Trial ID	Country	Year	Variety	Ass. Type	Unit	Untreated Mean	Fludio Žel 025 FS		Maxim 025 FA	
							200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds			
							% rel.	% rel.	% rel.	% rel.
80 F_2022	PL	2021	Ella	TGW	g	43,60	43,47	44,01	44,78	45,63
81 F_2022	PL	2021	Stratus	TGW	g	41,13	40,66	41,25	42,11	40,12
82 F_2022	PL	2021	MHR Krajan	TGW	g	37,99	36,80	37,08	36,88	35,90
83 F_2022	PL	2021	Pausitan	TGW	g	38,52	38,28	38,83	38,22	38,38

No negative impact on protein content (%) – 4 trials and TGW (g) – 4 trials was observed during trials carried out on spring barley.

3.4.4 Effects on transformation processes (KCP 6.4.4)

Details concerning the remains of the active substances fludioxonil and difenoconazole are contained in Part B section 7.

Comments of zRMS:	EPPO PP 1/243 (1) states that the absence of detectable residues could form the basis of an argument to address this aspect. The remains of FLUDIO ŽEL 025 FS / FUNABEN ŽEL (product code: FLUDIO 025 GF) containing fludioxonil (25
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	<p>g/L) should be presented in Part B, Section 7.</p> <p>In this dossier, the information provided by the Applicant are limited. No residues above the LOD are expected because of the application regime – seed treatment – and based on the results of the residue trials provided. Still, no phytotoxicity symptoms occurring during the field trials suggest that product application in accordance with label recommendation has no negative impact on parts of plant used for propagating purposes. Also, this active compound –fludioxonil is known and commercially used in Poland (zRMS) and other countries from EU. Therefore, it is not expected to adversely affect the processing operations in the opinion of Evaluator.</p>
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3.4.5 Impact on treated plants or plant products to be used for propagation (KCP 6.4.5)

60 studies (efficacy – 32 trials and selectivity – 28 trials) conducted in 2021 in Poland on spring and winter wheat, spring and winter barley, winter triticale, winter rye revealed no negative impact of FLUDIO 025 GF on propagation material cereal seeds.

No phytotoxicity symptoms occurring during the field trials suggest that product application in accordance with label recommendation has no negative impact on parts of plant used for propagating purposes.

Summary and conclusion

A total of 28 phytotoxicity trials were carried out in 2021 in different regions in Poland on different cultivars of winter triticale (5 trials), spring barley (4 trials), winter barley (5 trials), spring wheat (4 trials), winter wheat (5 trials), winter rye (5 trials). No signs of phytotoxicity effects were observed in all trials. Phytotoxicity in all test-ed samples was 0%.

In all trials there was no effect of the test preparations on the quality parameters of yield.

The grain treatment used in trials were found to have no effect on the protein content in spring barley, winter barley, spring wheat, winter wheat, winter rye and winter triticale.

28 studies conducted in 2021 in Poland on winter triticale, spring and winter barley, spring and winter wheat, winter rye revealed no negative impact of FLUDIO 025 GF on propagation material cereal seeds.

Comments of zRMS:	Information provided by the Applicant was limited due to fact that there is no information of available pointing to presence of any limitations to using fludioxonil. Also, no phytotoxicity symptoms occurring during the field trials suggested that product (FLUDIO 025 GF) application in accordance with label recommendation has no negative impact on parts of plant used for propagating purposes.										
	Applicant presented results for impact of FLUDIO ŻEL 025 FS / FUNABEN ŻEL (product code: FLUDIO 025 GF) on the germination rate and energy after 1 month after the treatment under laboratory conditions.										
	Below, ZRMs presented results carried out on winter and spring cereals.										
	✓ Winter wheat										
							Untreated	Fludio Żel 025 FS		Maxim 025 FA	
								200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds				
	Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	% rel.	% rel.	% rel.	% rel.
	58 F/2022	PL	2021	Zyta	Germination energy	%	98,50	96,50	97,00	97,00	97,50
	59 F/2022	PL	2021	Opoka	Germination energy	%	96,00	97,50	95,50	98,00	99,50
60 F/2022	PL	2021	Arkadia	Germination energy	%	93,50	97,00	95,50	95,50	96,50	
61 F/2022	PL	2021	Fidelius	Germination energy	%	98,00	96,50	94,50	97,00	95,50	
62 F/2022	PL	2021	Tobak	Germination energy	%	98,00	97,50	95,00	98,00	96,00	

Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated	Fludio Żel 025 FS		Maxim 025 FA	
								200 ml	300 ml	200 ml	300 ml
								of product per 100 kg seeds			
								% rel.	% rel.	% rel.	% rel.
58 F/2022	PL	2021	Zyta	Germination rate	%	98,50a		97,00a	98,00a	98,00a	97,50a
59 F/2022	PL	2021	Opoka	Germination rate	%	97,50a		97,50a	97,00a	98,00a	99,50a
60 F/2022	PL	2021	Arkadia	Germination rate	%	98,50a		98,00a	99,00a	97,50a	98,00a
61 F/2022	PL	2021	Fidelius	Germination rate	%	99,00a		98,00a	98,00a	98,00a	97,00a
62 F/2022	PL	2021	Tobak	Germination rate	%	98,00a		99,00a	97,50a	98,00a	99,00a
✓ Winter barley											
Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated	Fludio Żel 025 FS		Maxim 025 FA	
								200 ml	300 ml	200 ml	300 ml
								of product per 100 kg seeds			
								% rel.	% rel.	% rel.	% rel.
301_SYNTH_FF22JZ301W	PL	2021	Bażant	Germination energy	%	82,3		73,8	67,3	25,8	22,3
302_SYNTH_FF22JZ302W	PL	2021	Bartosz	Germination energy	%	74,5		47,5	49,3	19,5	12,8
303_SYNTH_FF22JZ303W	PL	2021	Brosza	Germination energy	%	83,5		53,3	45,0	47,5	22,0
327_SYNTH_FF22JZ304W	PL	2021	Kosmos	Germination energy	%	n.a.		n.a.	n.a.	n.a.	n.a.
328_SYNTH_FF22JZ305W	PL	2021	Gloria	Germination energy	%	92,8		87,0	82,5	45,3	42,5
Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated	Fludio Żel 025 FS		Maxim 025 FA	
								200 ml	300 ml	200 ml	300 ml
								of product per 100 kg seeds			
								% rel.	% rel.	% rel.	% rel.
301_SYNTH_FF22JZ301W	PL	2021	Bażant	Germination rate	%	89,8		85,0	82,5	72,0	60,3
302_SYNTH_FF22JZ302W	PL	2021	Bartosz	Germination rate	%	84,8		73,8	76,3	57,5	47,0
303_SYNTH_FF22JZ303W	PL	2021	Brosza	Germination rate	%	88,0		65,8	60,0	67,3	44,3
327_SYNTH_FF22JZ304W	PL	2021	Kosmos	Germination rate	%	n.a.		n.a.	n.a.	n.a.	n.a.
328_SYNTH_FF22JZ305W	PL	2021	Gloria	Germination rate	%	98,0		95,5	95,8	77,0	72,5
✓ Winter triticale											
Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated	Fludio Żel 025 FS		Maxim 025 FA	
								200 ml	300 ml	200 ml	300 ml
								of product per 100 kg seeds			
								% rel.	% rel.	% rel.	% rel.
307_SYNTH_FF22TZ301W	PL	2021	Avokado	Germination energy	%	96,5		96,3	94,0	88,3	91,3
308_SYNTH_FF22TZ303W	PL	2021	Rotondo	Germination energy	%	99,3		98,5	99,0	93,5	91,3
309_SYNTH_FF22TZ304W	PL	2021	Grenado	Germination energy	%	96,3		94,5	94,0	91,3	89,3
341_SYNTH_FF22TZ305W	PL	2021	Trapero	Germination energy	%	97,5		96,3	92,0	80,3	70,0
342_SYNTH_FF22TZ306W	PL	2021	Kasyno	Germination energy	%	94,5		88,5	86,3	58,5	37,8
Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated	Fludio Żel 025 FS		Maxim 025 FA	
								200 ml	300 ml	200 ml	300 ml
								of product per 100 kg seeds			
								% rel.	% rel.	% rel.	% rel.
307_SYNTH_FF22TZ301W	PL	2021	Avokado	Germination rate	%	98,0		97,8	95,5	94,8	94,5
308_SYNTH_FF22TZ303W	PL	2021	Rotondo	Germination rate	%	99,8		99,5	99,8	98,0	98,0
309_SYNTH_FF22TZ304W	PL	2021	Grenado	Germination rate	%	96,3		95,3	94,5	94,0	93,0
341_SYNTH_FF22TZ305W	PL	2021	Trapero	Germination rate	%	98,0		96,8	94,3	88,3	88,0
342_SYNTH_FF22TZ306W	PL	2021	Kasyno	Germination rate	%	97,0		89,5	89,8	65,5	51,8
✓ Winter rye											
Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated	Fludio Żel 025 FS		Maxim 025 FA	
								200 ml	300 ml	200 ml	300 ml
								of product per 100 kg seeds			
								% rel.	% rel.	% rel.	% rel.
35 F/2022	PL	2021	Dukato	Germination energy	%	81,5		86,5	82,0	77,0	73,0
36 F/2022	PL	2021	SU Forsetti	Germination energy	%	90,0		88,5	86,0	83,5	84,5
37F/2022	PL	2021	Dańkowskie Rubin	Germination energy	%	92,5		85,0	80,5	83,0	81,0
38F/2022	PL	2021	Dańkowskie Granat	Germination energy	%	87,0		82,5	84,5	80,0	80,0
39F/2022	PL	2021	Dańkowskie Diament	Germination energy	%	69,0		71,0	70,5	54,5	51,5
Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated	Fludio Żel 025 FS		Maxim 025 FA	
								200 ml	300 ml	200 ml	300 ml
								of product per 100 kg seeds			
								% rel.	% rel.	% rel.	% rel.
35 F/2022	PL	2021	Dukato	Germination rate	%	93,5		94,5	92,5	89,0	84,0
36 F/2022	PL	2021	SU Forsetti	Germination rate	%	90,5		89,3	89,0	86,5	87,0

37F/2022	PL	2021	Dańkowskie Rubin	Germination rate	%	94,0	89,0	84,5	85,0	87,0
38F/2022	PL	2021	Dańkowskie Granat	Germination rate	%	88,5	84,0	87,0	84,0	84,0
39F/2022	PL	2021	Dańkowskie Diament	Germination rate	%	73,5	80,0	74,0	61,0	62,0

✓ **Spring wheat**

Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated		Fludio Żel 025 FS		Maxim 025 FA	
							200 ml	300 ml	200 ml	300 ml		
							of product per 100 kg seeds					
						% rel.	% rel.	% rel.	% rel.			
314_SYNTH_FF22PJ301W	PL	2021	Telimena	Germination energy	%	96,5	95,5	94,5	93,3	88,3		
315_SYNTH_FF22PJ302W	PL	2021	Ostka Smolicka	Germination energy	%	95,8	92,0	91,3	89,3	89,8		
343_SYNTH_FF22PJ303W	PL	2021	Arabella	Germination energy	%	98,5	97,5	97,5	83,5	82,0		
344_SYNTH_FF22PJ304W	PL	2021	Jarlanka	Germination energy	%	97,5	96,8	98,3	96,0	95,3		

Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated		Fludio Żel 025 FS		Maxim 025 FA	
							200 ml	300 ml	200 ml	300 ml		
							of product per 100 kg seeds					
						% rel.	% rel.	% rel.	% rel.			
314_SYNTH_FF22PJ301W	PL	2021	Telimena	Germination rate	%	97,0	96,3	96,5	95,5	94,0		
315_SYNTH_FF22PJ302W	PL	2021	Ostka Smolicka	Germination rate	%	96,3	92,8	92,8	91,3	90,8		
343_SYNTH_FF22PJ303W	PL	2021	Arabella	Germination rate	%	98,8	97,8	98,8	88,5	89,8		
344_SYNTH_FF22PJ304W	PL	2021	Jarlanka	Germination rate	%	97,8	97,3	98,8	97,8	97,3		

✓ **Spring barley**

Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated		Fludio Żel 025 FS		Maxim 025 FA	
							200 ml	300 ml	200 ml	300 ml		
							of product per 100 kg seeds					
						% rel.	% rel.	% rel.	% rel.			
80 F_2022	PL	2021	Ella	Germination energy	%	66,00	67,50	53,50	60,00	41,50		
81 F_2022	PL	2021	Stratus	Germination energy	%	73,00	65,00	60,50	75,50	73,00		
82 F_2022	PL	2021	MHR Krajan	Germination energy	%	86,50	78,00	68,00	76,50	68,50		
83 F_2022	PL	2021	Pausitan	Germination energy	%	80,50	74,00	66,50	64,00	71,00		

Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated		Fludio Żel 025 FS		Maxim 025 FA	
							200 ml	300 ml	200 ml	300 ml		
							of product per 100 kg seeds					
						% rel.	% rel.	% rel.	% rel.			
80 F_2022	PL	2021	Ella	Germination rate	%	90,50	88,00	82,00	83,00	81,50		
81 F_2022	PL	2021	Stratus	Germination rate	%	91,00	88,00	82,00	86,50	84,50		
82 F_2022	PL	2021	MHR Krajan	Germination rate	%	90,00	88,00	85,00	86,00	83,50		
83 F_2022	PL	2021	Pausitan	Germination rate	%	84,50	86,50	82,50	83,50	81,50		

Also, plant emergence was assessed during those trials. No negative effects was observed. Below, ZRMs presented detailed results about plant emergence rate. In some trials, the average emergency rate was higher as compared to untreated object.

✓ **Winter wheat**

Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated		Fludio Żel 025 FS		Maxim 025 FA	
							200 ml	300 ml	200 ml	300 ml		
							of product per 100 kg seeds					
						% rel.	% rel.	% rel.	% rel.			
58 F/2022	PL	2021	Zyta	rel. check	%	100	102	106	111	101		
59 F/2022	PL	2021	Opoka	rel. check	%	100	94	98	92	99		
60 F/2022	PL	2021	Arkadia	rel. check	%	100	99	101	99	97		
61 F/2022	PL	2021	Fidelius	rel. check	%	100	97	97	97	101		
62 F/2022	PL	2021	Tobak	rel. check	%	100	96	102	99	104		

✓ **Winter barley**

Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	Untreated		Fludio Żel 025 FS		Maxim 025 FA	
							200 ml	300 ml	200 ml	300 ml		
							of product per 100 kg seeds					
						% rel.	% rel.	% rel.	% rel.			
301_SYNTH_FF22JZ301W	PL	2021	Bazant	rel. check	%	100	99,8	100,5	99,8	94,1		
302_SYNTH_FF22JZ302W	PL	2021	Bartosz	rel. check	%	100	100,3	103,6	96,0	97,2		
303_SYNTH_FF22JZ303W	PL	2021	Brosza	rel. check	%	100	100,8	103,4	105,1	101,5		
327_SYNTH_FF22JZ304W	PL	2021	Kosmos	rel. check	%	n.a.	n.a.	n.a.	n.a.	n.a.		
328_SYNTH_FF22JZ305W	PL	2021	Gloria	rel. check	%	100	112,1	116,5	119,9	124,1		

✓ Winter triticale												
Trial ID							Untreated		Fludio Żel 025 FS		Maxim 025 FA	
									200 ml	300 ml	200 ml	300 ml
							Country	Year	Variety	Ass. Type	Unit	Mean
307_SYNTH_FF22TZ301W	PL	2021	Avokado	rel. check	%	100	106.7	107.6	106.3	105.3		
308_SYNTH_FF22TZ303W	PL	2021	Rotondo	rel. check	%	100	101.7	101.2	107.6	102.3		
309_SYNTH_FF22TZ304W	PL	2021	Grenado	rel. check	%	100	101.3	101.5	106.5	104.8		
341_SYNTH_FF22TZ305W	PL	2021	Trapero	rel. check	%	100	97.7	99.5	90.1	106.4		
342_SYNTH_FF22TZ306W	PL	2021	Kasyno	rel. check	%	100	112.1	116.5	119.9	124.1		
✓ Winter rye												
Trial ID							Untreated		Fludio Żel 025 FS		Maxim 025 FA	
									200 ml	300 ml	200 ml	300 ml
							Country	Year	Variety	Ass. Type	Unit	Mean
35 F/2022	PL	2021	Dukato	rel. check	%	100	112	84	77	82		
36 F/2022	PL	2021	SU Forsetti	rel. check	%	100	98	100	104	104		
37F/2022	PL	2021	Dańkowskie Rubin	rel. check	%	100	91	90	80	90		
38F/2022	PL	2021	Dańkowskie Granat	rel. check	%	100	116	112	104	112		
39F/2022	PL	2021	Dańkowskie Diament	rel. check	%	100	111	105	106	102		
✓ Spring wheat												
Trial ID							Untreated		Fludio Żel 025 FS		Maxim 025 FA	
									200 ml	300 ml	200 ml	300 ml
							Country	Year	Variety	Ass. Type	Unit	Mean
314_SYNTH_FF22PJ301W	PL	2021	Telimena	rel. check	%	100	96.8	100.6	103.3	95.8		
315_SYNTH_FF22PJ302W	PL	2021	Ostka Smolicka	rel. check	%	100	109.1	103.4	111.5	108.3		
343_SYNTH_FF22PJ303W	PL	2021	Arabella	rel. check	%	100	98.7	98.4	97.6	102.1		
344_SYNTH_FF22PJ304W	PL	2021	Jarlanka	rel. check	%	100	109.2	100.9	92.0	100.5		
✓ Spring barley												
Trial ID							Untreated		Fludio Żel 025 FS		Maxim 025 FA	
									200 ml	300 ml	200 ml	300 ml
							Country	Year	Variety	Ass. Type	Unit	Mean
80 F_2022	PL	2021	Ella	rel. check	%	100	101	102	101	96.0		
81 F_2022	PL	2021	Stratus	rel. check	%	100	94.0	98.0	94.0	97.0		
82 F_2022	PL	2021	MHR Krajan	rel. check	%	100	104	100	108	106		
83 F_2022	PL	2021	Pausitan	rel. check	%	100	105	104	105	106		
Applicant presented in the annexes to selectivity trials for winter cereals the results for grain germinability or germination rate and energy after 12 months after seed treatments. Below, ZRMs presented detailed results for grain germinability or germination rate and germination energy after 12 months after the treatments under laboratory conditions.												
✓ Winter wheat												
379 days after application												
Trial ID							Untreated		Fludio Żel 025 FS		Maxim 025 FA	
									200 ml	300 ml	200 ml	300 ml
							Country	Year	Variety	Ass. Type	Unit	Mean
Aneks_58 F/2022	PL	2021	Zyta	Germination rate	%	80.0	83.0	74.0	80.0	70.0		
Aneks_59 F/2022	PL	2021	Opoka	Germination rate	%	98.0	91.0	93.0	91.0	96.0		
Aneks_60 F/2022	PL	2021	Arkadia	Germination rate	%	96.0	98.0	96.0	93.0	89.0		
Aneks_61 F/2022	PL	2021	Fidelius	Germination rate	%	97.0	97.0	98.0	95.0	88.0		
Aneks_62 F/2022	PL	2021	Tobak	Germination rate	%	98.0	99.0	98.0	98.0	99.0		
375 days after application												

							Untreated	Fludio Żel 025 FS		Maxim 025 FA	
								200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds				
Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	% rel.	% rel.	% rel.	% rel.	
Aneks_58 F/2022	PL	2021	Zyta	Germination energy	%	67,0	72,0	67,0	75,0	65,0	
Aneks_59 F/2022	PL	2021	Opoka	Germination energy	%	94,0	86,0	76,0	82,0	89,0	
Aneks_60 F/2022	PL	2021	Arkadia	Germination energy	%	88,0	90,0	88,0	85,0	81,0	
Aneks_61 F/2022	PL	2021	Fidelius	Germination energy	%	92,0	93,0	90,0	82,0	82,0	
Aneks_62 F/2022	PL	2021	Tobak	Germination energy	%	93,0	97,0	91,0	83,0	90,5	
✓ Winter barley											
Grain germinability after 4 days after sowing											
							Untreated	Fludio Żel 025 FS		Maxim 025 FA	
								200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds				
Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	% rel.	% rel.	% rel.	% rel.	
Aneks_301_SYNTH_FF22JZ301W	PL	2021	Bažant	Grain germinability	%	62,5	57,0	43,8	22,0	11,8	
Aneks_302_SYNTH_FF22JZ302W	PL	2021	Bartosz	Grain germinability	%	37,8	33,8	29,0	12,5	7,5	
Aneks_303_SYNTH_FF22JZ303W	PL	2021	Brosza	Grain germinability	%	74,8	64,5	64,3	38,8	36,5	
Aneks_327_SYNTH_FF22JZ304W	PL	2021	Kosmos	Grain germinability	%	98,8	98,0	96,0	81,5	93,0	
Aneks_328_SYNTH_FF22JZ305W	PL	2021	Gloria	Grain germinability	%	95,5	86,0	66,0	81,3	82,5	
Grain germinability after 7 days after sowing											
							Untreated	Fludio Żel 025 FS		Maxim 025 FA	
								200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds				
Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	% rel.	% rel.	% rel.	% rel.	
Aneks_301_SYNTH_FF22JZ301W	PL	2021	Bažant	Grain germinability	%	80,3	75,5	65,3	54,3	45,0	
Aneks_302_SYNTH_FF22JZ302W	PL	2021	Bartosz	Grain germinability	%	57,3	49,3	43,8	35,3	31,0	
Aneks_303_SYNTH_FF22JZ303W	PL	2021	Brosza	Grain germinability	%	83,5	77,3	77,5	64,3	59,5	
Aneks_327_SYNTH_FF22JZ304W	PL	2021	Kosmos	Grain germinability	%	100	98,5	98,8	95,5	97,0	
Aneks_328_SYNTH_FF22JZ305W	PL	2021	Gloria	Grain germinability	%	98,5	95,8	72,5	94,5	96,5	
✓ Winter triticale											
Grain germinability after 4 days after sowing											
							Untreated	Fludio Żel 025 FS		Maxim 025 FA	
								200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds				
Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	% rel.	% rel.	% rel.	% rel.	
Aneks_307_SYNTH_FF22TZ301W	PL	2021	Avokado	Grain germinability	%	94,5	94,5	90,3	79,8	80,8	
Aneks_308_SYNTH_FF22TZ303W	PL	2021	Rotondo	Grain germinability	%	99,5	98,8	97,5	94,3	92,8	
Aneks_309_SYNTH_FF22TZ304W	PL	2021	Grenado	Grain germinability	%	92,5	87,3	91,8	89,5	84,5	
Aneks_341_SYNTH_FF22TZ305W	PL	2021	Trapero	Grain germinability	%	98,8	97,5	96,5	97,5	90,8	
Aneks_342_SYNTH_FF22TZ306W	PL	2021	Kasyno	Grain germinability	%	85,8	90,0	78,5	84,5	82,8	
Grain germinability after 8 days after sowing											
							Untreated	Fludio Żel 025 FS		Maxim 025 FA	
								200 ml	300 ml	200 ml	300 ml
							of product per 100 kg seeds				
Trial ID	Country	Year	Variety	Ass. Type	Unit	Mean	% rel.	% rel.	% rel.	% rel.	
Aneks_307_SYNTH_FF22TZ301W	PL	2021	Avokado	Grain germinability	%	95,8	97,0	93,5	88,0	88,5	
Aneks_308_SYNTH_FF22TZ303W	PL	2021	Rotondo	Grain germinability	%	99,5	99,5	98,0	96,8	96,8	
Aneks_309_SYNTH_FF22TZ304W	PL	2021	Grenado	Grain germinability	%	94,3	90,5	92,5	92,8	89,3	

Aneks_341_SYNTH_FF22TZ305W	PL	2021	Trapero	Grain germinability	%	99,0	98,3	98,5	98,8	93,5																																																																																																																																																																								
Aneks_342_SYNTH_FF22TZ306W	PL	2021	Kasyno	Grain germinability	%	87,8	92,0	83,5	85,8	84,8																																																																																																																																																																								
<p>✓ Winter rye</p> <p>375 days after application</p> <table border="1"> <thead> <tr> <th rowspan="3">Trial ID</th> <th rowspan="3">Country</th> <th rowspan="3">Year</th> <th rowspan="3">Variety</th> <th rowspan="3">Ass. 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In the case of winter barley, it was found that the germination capacity of the grains after 4 and 7 days in the facility using Fludio 025 GF at the recommended dose of 200 ml did not differ significantly compared to the control. For winter rye, in two studies (36 F/2022 and 37 F/2022), after 12 months from treatment, a significant reduction in germination parameters was observed after applying the tested Fludio 025 GF as well as the comparator Maxim 025 FS. The negative effect was higher with the st. ref. product. In the case of winter triticale, after applying Fludio 025 GF at doses of 200 ml and 300 ml, germination capacity under laboratory conditions did not differ significantly from the control. For winter wheat, after 12 months from treatment, no negative impact of the tested Fludio 025 GF fungicide on germination parameters (energy and capacity) was observed.</p> <p>Given that reduced germination capacity of treated seeds after prolonged storage (12 months) was observed in some studies, and there are no relevant studies for spring cereals, it seems justified not to change the proposed label wording of the product: <i>'If there is a need to store seed grain for the next season, germination capacity should be tested before sowing'</i> in the opinion of ZRMs.</p>											Trial ID	Country	Year	Variety	Ass. Type	Unit	Untreated Mean	Fludio Żel 025 FS		Maxim 025 FA		200 ml	300 ml	200 ml	300 ml	of product per 100 kg seeds										% rel.	% rel.	% rel.	% rel.	Aneks_35 F/2022	PL	2021	Dukato	Germination rate	%	64,5	76,0	69,0	45,5	28,0	Aneks_36 F/2022	PL	2021	SU Forsetti	Germination rate	%	86,0	68,0	66,5	50,0	53,5	Aneks_37F/2022	PL	2021	Dańkowskie Rubin	Germination rate	%	89,0	75,0	74,0	42,0	43,0	Aneks_38F/2022	PL	2021	Dańkowskie Granat	Germination rate	%	67,5	61,0	61,5	41,5	26,5	Aneks_39F/2022	PL	2021	Dańkowskie Diament	Germination rate	%	60,0	62,5	47,0	32,0	26,0	Trial ID	Country	Year	Variety	Ass. Type	Unit	Untreated Mean	Fludio Żel 025 FS		Maxim 025 FA		200 ml	300 ml	200 ml	300 ml	of product per 100 kg seeds										% rel.	% rel.	% rel.	% rel.	Aneks_35 F/2022	PL	2021	Dukato	Germination energy	%	48,5	53,0	46,5	24,0	16,0	Aneks_36 F/2022	PL	2021	SU Forsetti	Germination energy	%	88,5	58,0	56,0	43,0	37,5	Aneks_37F/2022	PL	2021	Dańkowskie Rubin	Germination energy	%	83,5	59,5	61,5	30,0	26,0	Aneks_38F/2022	PL	2021	Dańkowskie Granat	Germination energy	%	58,0	52,0	56,5	25,5	15,5	Aneks_39F/2022	PL	2021	Dańkowskie Diament	Germination energy	%	57,0	57,0	41,0	25,0	21,5
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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)

At the moment there was no danger in the application of difenoconazole and fludioxonil on neighboring plants. Moreover, strict adherence to all the rules during the fungicide techniques treatments as well as observance of GEP rules, it can protect the neighboring plants from poten-

tial adverse effects relating to the protection of the crop. It is crucial to take care when carrying the liquid spray drift during spraying as well as to keep the appropriate buffer-zone.

Comments of zRMS:	<p>The Applicant initially did not provide a sufficient level of information to address the impact on succeeding crops in accordance with EPPO PP 1/207. Predicted concentration of fludioxonil in soil (PECsoil) should be shown in report B, Section 5.</p> <p>The submitted data and lack of phytotoxicity symptoms recorded during the field trials suggested that product (FLUDIO 025 GF) application in accordance with label recommendation shall not adversely impact on succeeding crops.</p> <p>Also, the Applicant did not submit the results of the trials on possible impact on adjacent crops. The information collected in previous section and lack of phytotoxicity symptoms recorded during the field trials suggested that product application in accordance with label recommendation has no negative impact on adjacent crops.</p> <p>Lack of any information's and submitted data against impact on succeeding and adjacent crops was accepted by ZRMs. Normally no special data for fungicides or PPP for seed treatment are prepared and submitted for that point if no persistence of the product is known or in discussion.</p>
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3.5.2 Effects on beneficial and other non-target organisms (KCP 6.5.3)

60 studies (efficacy and selectivity) conducted in 2021 in Poland on winter triticale, spring and winter barley, spring and winter wheat, winter rye revealed that the tested product had no effect on other harmful organisms and non-target organisms.

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

Summary and conclusion

It is considered that the proposed use of FLUDIO 025 GF is unlikely to have an adverse effect on succeeding crops.

At the moment there was no danger in the application of fludioxonil on neighboring plants.

The tested product FLUDIO 025 GF had no effect on other harmful organisms and non-target organisms.

Comments of zRMS:	Efficacy evaluator did not evaluate the studies to beneficial and other non-target organisms presented by the applicant. Reference should be made to the Ecotoxicology assessment. Moreover, for details concerning adverse effects on beneficial and other non-target organisms see Part B9 of the dossier (ecotoxicological data).
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3.6 Other/special studies

No additional information is considered relevant.

Comments of zRMS:	Statement accepted.
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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)
Institute of Plant Protection – National Research Institute. Research Centre for Registration of Agrochemicals. Fungicide Research Team	Władysława Węgorka 20 Street, 60 – 318 Poznań, Poland	Yes
Institute of Plant Protection – National Research Institute, Sosnowice Branch, Pesticide Efficacy Testing Department	Gliwicka 29 Street, 44-153 Sosnowice, Poland	Yes
Fertico Sp. z o. o.	Goliany 43 Street, 05-620 Błędów, Poland	Yes

Appendix 1 Lists of data considered in support of the evaluation

Tables considered not relevant can be deleted as appropriate.
 MS to blacken authors of vertebrate studies in the version made available to third parties/public.

List of data submitted by the applicant and relied on

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 6.2	Barbara Krzyzińska	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium</i> spp., <i>Pyrenophora graminea</i> control in spring barley 91 F/2022 Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Published/Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Barbara Krzyzińska	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium</i> spp., <i>Pyrenophora graminea</i> control in spring barley 92 F/2022 Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Published/Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Cecylia Dreja	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in spring barley 80 F/2022 Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Published/Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Cecylia Dreja	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in spring barley 81 F/2022 Institute of Plant Protection – National Research Institute, Sosnowice Branch	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			GEP Published/Unpublished		
KCP 6.2	Cecylia Dreja	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in spring barley 82 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Published/Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Cecylia Dreja	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in spring barley 83 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Published/Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Cecylia Dreja	2021	Analysis of quality parameters of spring barley seeds application of Fludio 025 GF 7 J/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Published/Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Cecylia Dreja	2021	Analysis of quality parameters of spring barley seeds application of Fludio 025 GF 8 J/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Published/Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Cecylia Dreja	2021	Analysis of quality parameters of spring barley seeds application of Fludio 025 GF 9 J/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Published/Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Cecylia Dreja	2021	Analysis of quality parameters of spring barley seeds application of Fludio 025 GF 10 J/2022	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Published/Unpublished		
KCP 6.2	Patrycja Płonka	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium spp. Tilletia caries</i> control in spring wheat. 78 F/2022 Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Published/Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Patrycja Płonka	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium spp. Tilletia caries</i> control in spring wheat. 79 F/2022 Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Published/Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Krzysztof Kubiak	2021	Expertise of phytotoxicity of product Fludio 025 GF in spring wheat (Field studies – for registration purpose). 314/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Published/Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Krzysztof Kubiak	2021	Expertise of phytotoxicity of product Fludio 025 GF in spring wheat (Field studies – for registration purpose). 315/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agata Korbas	2021	Expertise of phytotoxicity of product Fludio 025 GF in spring wheat (Field studies – for registration pur-	N	Synthos Agro

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			pose). 343/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished		Sp. z o. o.
KCP 6.2	Agata Korbas	2021	Expertise of phytotoxicity of product Fludio 025 GF in spring wheat (Field studies – for registration purpose). 344/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Barbara Krzyzińska	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Pyrenophora graminea</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>) control in winter barley. 19 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Barbara Krzyzińska	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Pyrenophora graminea</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>) control in winter barley. 20 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Barbara Krzyzińska	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Pyrenophora graminea</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>) control in winter barley. 21 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Unpublished		
KCP 6.2	Barbara Krzyzińska	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Pyrenophora graminea</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>) control in winter barley. 22 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Barbara Krzyzińska	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Pyrenophora graminea</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>) control in winter barley. 23 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Barbara Krzyzińska	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Pyrenophora graminea</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>) control in winter barley. 24 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Krzysztof Kubiak	2021	Expertise of phytotoxicity of product Fludio 025 GF in winter barley (Field studies – for registration purpose). 301/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Krzysztof Kubiak	2021	Expertise of phytotoxicity of product FLUDIO 025 GF in winter barley (Field studies – for registration purpose). Annex to the report No. 301/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemi-	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			cals Fungicide Research Team GEP Unpublished		
KCP 6.2	Krzysztof Kubiak	2021	Expertise of phytotoxicity of product Fludio 025 in winter barley (Field studies – for registration purpose) 302/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Krzysztof Kubiak	2021	Expertise of phytotoxicity of product Fludio 025 in winter barley (Field studies – for registration purpose) Annex to the report No. 302/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Krzysztof Kubiak	2021	Expertise of phytotoxicity of product Fludio 025 in winter barley (Field studies – for registration purpose) 303/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Krzysztof Kubiak	2021	Expertise of phytotoxicity of product Fludio 025 in winter barley (Field studies – for registration purpose) Annex to the report No. 303/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agata Korbas	2021	Expertise on the phytotoxic effects of Fludio 025 GF in the cultivation of winter barley. (Field studies – for registration purpose). 327/2022	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished		
KCP 6.2	Agata Korbas	2021	Expertise on the phytotoxic effects of Fludio 025 GF in the cultivation of winter barley. (Field studies – for registration purpose). Annex to the report No. 327/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agata Korbas	2021	Expertise on the phytotoxic effects of Fludio 025 GF in the cultivation of winter barley. (Field studies – for registration purpose). 328/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agata Korbas	2021	Expertise on the phytotoxic effects of Fludio 025 GF in the cultivation of winter barley. (Field studies – for registration purpose). Annex to the report No. 328/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Joanna Pietryga	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>), <i>Urocystis occulta</i> control in winter rye. 50 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Unpublished		
KCP 6.2	Joanna Pietryga	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>), <i>Urocystis occulta</i> control in winter rye. 51 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Joanna Pietryga	2021	Biological efficacy expertise on fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>), <i>Urocystis occulta</i> control in winter rye. 52 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Joanna Pietryga	2021	Biological efficacy expertise on fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>), <i>Urocystis occulta</i> control in winter rye. 53 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Joanna Pietryga	2021	Biological efficacy expertise on fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>), <i>Urocystis occulta</i> control in winter rye. 54 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Krzysztof Kubiak	2021	Expertise of efficacy of product Fludio 025 GF in the control of fungal diseases in rye (Field studies – for registration purpose) 313/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			GEP Unpublished		
KCP 6.2	Agnieszka Mączyńska	2021	Analysis of quality parameters of winter rye seeds application of Fludio 025 GF 18 J/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agnieszka Mączyńska	2021	Analysis of quality parameters of winter rye seeds application of Fludio 025 GF 19 J/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agnieszka Mączyńska	2021	Analysis of quality parameters of winter rye seeds application of Fludio 025 GF 20 J/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agnieszka Mączyńska	2021	Analysis of quality parameters of winter rye seeds application of Fludio 025 GF 21 J/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agnieszka Mączyńska	2021	Analysis of quality parameters of winter rye seeds application of Fludio 025 GF 22 J/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agnieszka Mączyńska	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter rye. 35 F/2022	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Unpublished		
KCP 6.2	Agnieszka Mączyńska	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter rye. Annex to trial report No. 35 F/2022 Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agnieszka Mączyńska	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter rye. 36 F/2022 Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agnieszka Mączyńska	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter rye. Annex to trial report No. 36 F/2022 Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agnieszka Mączyńska	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter rye. 37 F/2022 Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agnieszka Mączyńska	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter rye. Annex to trial report No. 37 F/2022 Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agnieszka	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter rye.	N	Synthos Agro

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
	Mączyńska		38 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished		Sp. z o. o.
KCP 6.2	Agnieszka Mączyńska	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter rye. Annex to trial report No. 38 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agnieszka Mączyńska	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter rye. 39 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agnieszka Mączyńska	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter rye. Annex to trial report No. 39 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Patrycja Płonka	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Tilletia caries</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>) control in winter wheat. 63 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Patrycja Płonka	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Tilletia caries</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>) control in winter wheat. 64 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Unpublished		
KCP 6.2	Patrycja Płonka	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Tilletia caries</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>) control in winter wheat. 65 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Patrycja Płonka	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Tilletia caries</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>) control in winter wheat. 66 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Patrycja Płonka	2021	Biological efficacy expertise of fungicide seed treatment Fludio 025 GF for <i>Fusarium spp.</i> , <i>Tilletia caries</i> , <i>Monographella nivalis</i> (anam. <i>Microdochium nivale</i>) control in winter wheat. 67 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Krzysztof Kubiak	2021	Expertise of efficacy of product Fludio 025 GF in the control of fungal diseases in winter wheat (Field studies – for registration purpose) 306/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Angelika Szymura	2021	Analysis of quality parameters of winter wheat seeds application of Fludio 025 GF 1 J/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Unpublished		
KCP 6.2	Angelika Szymura	2021	Analysis of quality parameters of winter wheat seeds application of Fludio 025 GF 2 J/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Angelika Szymura	2021	Analysis of quality parameters of winter wheat seeds application of Fludio 025 GF 2 J/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Angelika Szymura	2021	Analysis of quality parameters of winter wheat seeds application of Fludio 025 GF 3 J/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Angelika Szymura	2021	Analysis of quality parameters of winter wheat seeds application of Fludio 025 GF 4 J/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Angelika Szymura	2021	Analysis of quality parameters of winter wheat seeds application of Fludio 025 GF 5 J/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Angelika Szymura	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter wheat. 58 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			GEP Unpublished		
KCP 6.2	Angelika Szymura	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter wheat. Annex to the report 58 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Angelika Szymura	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter wheat. 59 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Angelika Szymura	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter wheat. Annex to the report 59 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Angelika Szymura	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter wheat. 60 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Angelika Szymura	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter wheat. Annex to the report 60 F/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Angelika Szymura	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter wheat. 61 F/2022	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Unpublished		
KCP 6.2	Angelika Szymura	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter wheat. Annex to the report 61 F/2022 Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Angelika Szymura	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter wheat. 62 F/2022 Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Angelika Szymura	2021	Biological expertise of selectivity of seed treatment Fludio 025 GF in winter wheat. Annex to the report 62 F/2022 Institute of Plant Protection – National Research Institute, Sosnowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Krzysztof Kubiak	2021	Expertise of phytotoxicity of product Fludio 025 GF in winter triticale (Field studies – for registration purpose) 307/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Krzysztof Kubiak	2021	Expertise of phytotoxicity of product Fludio 025 GF in winter triticale (Field studies – for registration purpose) Annex to the report No. 307/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			GEP Unpublished		
KCP 6.2	Krzysztof Kubiak	2021	Expertise of phytotoxicity of product Fludio 025 GF in winter triticale (Field studies – for registration purpose) 308/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Krzysztof Kubiak	2021	Expertise of phytotoxicity of product Fludio 025 GF in winter triticale (Field studies – for registration purpose) Annex to the report No. 308/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Krzysztof Kubiak	2021	Expertise of phytotoxicity of product Fludio 025 GF in winter triticale (Field studies – for registration purpose) 309/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Krzysztof Kubiak	2021	Expertise of phytotoxicity of product Fludio 025 GF in winter triticale (Field studies – for registration purpose) Annex to the report No. 309/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 6.2	Agata Korbas	2021	Expertise on the phytotoxic effects of Fludio 025 GF in the cultivation of winter triticale (Field studies – for registration purpose) 341/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agata Korbas	2021	Expertise on the phytotoxic effects of Fludio 025 GF in the cultivation of winter triticale (Field studies – for registration purpose) Annex to the report No. 341/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agata Korbas	2021	Expertise on the phytotoxic effects of Fludio 025 GF in the cultivation of winter triticale (Field studies – for registration purpose) 342/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agata Korbas	2021	Expertise on the phytotoxic effects of Fludio 025 GF in the cultivation of winter triticale (Field studies – for registration purpose) Annex to the report No. 342/2022 Institute of plant protection – national research institute. Research Centre for Registration of Agrochemicals Fungicide Research Team GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Adam Szemendera	2021	The efficacy of FLUDIO 025 GF seed treatment in control of diseases in spring barley, Poland 2022. 28_01_F22_053	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Fertico Sp. z o.o. GEP Unpublished		
KCP 6.2	Adam Szemendera	2021	The efficacy of FLUDIO 025 GF seed treatment in control of diseases in spring barley, Poland 2022. 28_01_F22_054 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Adam Szemendera	2021	The efficacy of FLUDIO 025 GF seed treatment in control of diseases in spring wheat, Poland 2022. 29_01_F22_055 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Adam Szemendera	2021	The efficacy of FLUDIO 025 GF seed treatment in control of diseases in spring wheat, Poland 2022. 29_01_F22_056 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Adam Szemendera	2021	The efficacy of FLUDIO 025 GF seed treatment in control of diseases in spring wheat, Poland 2022. 29_01_F22_056 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Adam Szemendera	2021	The efficacy of FLUDIO 025 GF seed treatment in control of diseases in winter triticale, Poland 2021. 332_01_F21_70 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Adam Szemendera	2021	The efficacy of FLUDIO 025 GF seed treatment in control of diseases in winter triticale, Poland 2021.	N	Synthos Agro

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			332_01_F21_71 Fertico Sp. z o.o. GEP Unpublished		Sp. z o. o.
KCP 6.2	Adam Szemendera	2021	The efficacy of FLUDIO 025 GF seed treatment in control of diseases in winter wheat, Poland 2021. 332_01_F21_72 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Adam Szemendera	2021	The efficacy of FLUDIO 025 GF seed treatment in control of diseases in winter rye, Poland 2021. 332_01_F21_74 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Adam Szemendera	2021	The efficacy of FLUDIO 025 GF seed treatment in control of diseases in winter barley, Poland 2021. 332_01_F21_76 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Adam Szemendera	2021	The efficacy of FLUDIO 025 GF seed treatment in control of diseases in winter barley, Poland 2021. 332_01_F21_77 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Adam Szemendera	2021	The efficacy of FLUDIO 025 GF seed treatment in control of diseases in winter barley, Poland 2021. 332_01_F21_78 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 6.2	Cecylia Dreja	2023	Annex to trial Report No. 80F/2022 Biological expertise od selectivity of seed treatment Fludio 025 GF in spring barley. 80F/2022 (Annex) Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Cecylia Dreja	2023	Annex to trial Report No. 81F/2022 Biological expertise od selectivity of seed treatment Fludio 025 GF in spring barley. 81F/2022 (Annex) Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Cecylia Dreja	2023	Annex to trial Report No. 82F/2022 Biological expertise od selectivity of seed treatment Fludio 025 GF in spring barley. 82F/2022 (Annex) Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Cecylia Dreja	2023	Annex to trial Report No. 83F/2022 Biological expertise od selectivity of seed treatment Fludio 025 GF in spring barley. 83F/2022 (Annex) Institute of Plant Protection – National Research Institute, Sosnicowice Branch GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2	Krzysztof Kubiak	2023	Annex to the report No. 314/2022 Expertise of phytotoxicity of product Fludio 025 GF in spring wheat. (Field studies – for registration purpose). 314/2022 (Annex) Institute of Plant Protection – National Research Institute, Research Centre for Registration of Agrochemicals Fungicide Research Team. GEP	N	Synthos Agro Sp. z o. o.

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			Unpublished		
KCP 6.2	Krzysztof Kubiak	2023	Annex to the report No. 315/2022 Expertise of phytotoxicity of product Fludio 025 GF in spring wheat. (Field studies – for registration purpose). 315/2022 (Annex) Institute of Plant Protection – National Research Institute, Research Centre for Registration of Agrochemicals Fungicide Research Team. GEP	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agata Korbas	2023	Annex to the report No. 343/2022 Expertise of phytotoxicity of product Fludio 025 GF in spring wheat. (Field studies – for registration purpose). 343/2022 (Annex) Institute of Plant Protection – National Research Institute, Research Centre for Registration of Agrochemicals Fungicide Research Team. GEP	N	Synthos Agro Sp. z o. o.
KCP 6.2	Agata Korbas	2023	Annex to the report No. 344/2022 Expertise of phytotoxicity of product Fludio 025 GF in spring wheat. (Field studies – for registration purpose). 344/2022 (Annex) Institute of Plant Protection – National Research Institute, Research Centre for Registration of Agrochemicals Fungicide Research Team. GEP	N	Synthos Agro Sp. z o. o.

List of data submitted or referred to by the applicant and relied on, but already evaluated at EU peer review

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP XX	Author	YYYY	Title	Y/N	Owner

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			Company Report N Source GLP/non GLP/GEP/non GEP Published/Unpublished		

The following tables are to be completed by MS

List of data submitted by the applicant and not relied on

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP XX	Author	YYYY	Title Company Report N Source GLP/non GLP/GEP/non GEP Published/Unpublished	Y/N	Owner

List of data relied on not submitted by the applicant but necessary for evaluation

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP XX	Author	YYYY	Title Company Report N Source GLP/non GLP/GEP/non GEP Published/Unpublished	Y/N	Owner