REGISTRATION REPORT

Part B

Section 3

Efficacy Data and Information

Concise summary

Product code: AMINO 30 SL

Product name(s): El Camino 30 SL / Ranchero 30 SL

Chemical active substance(s):

Aminopyralid 30 g/L

Central Zone

Zonal Rapporteur Member State: Poland

CORE ASSESSMENT

(authorization)

Applicant: Innvigo Sp. z o.o.

Submission date: January 2025

zRMS Assessment: 18/04/2025

Following commenting period/Verification of reference list: 01/07/2025

Version history

When	What
April 2025	zRMS Assessment
July 2025	Following commenting period Verification of reference list

Table of Contents

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

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

Comments of zRMS:	

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

Abstract

This document summarizes information related to the efficacy of the plant protection product AMINO 30 SL, supporting its registration process under Article 33 of Regulation (EC) No 1107/2009. Poland is the zonal Rapporteur Member State (zRMS), and there are no concerned Member States.
AMINO 30 SL is a soluble concentrate (SL) formulation containing 30 g/L of aminopyralid. It is proposed for use as a post-emergence herbicide (BBCH 10–18) in winter oilseed rape crops. The maximum individual dose is proposed as 0.267 L/ha, delivering 8.01 g a.s./ha of aminopyralid, with a water volume of 200–300 L/ha. Only one application per crop per season is allowed.

Preliminary range-finding tests

Preliminary range-finding tests are not required since AMINO 30 SL contains aminopyralid which is existing active substance. The evaluator supports this statement.

Minimum effective dose

To determine the minimum effective dose, efficacy trials were conducted at three rates: the full rate of 0.267 L/ha and two reduced rates – 0.2 L/ha (the lowest recommended rate) and 0.16 L/ha (equivalent to 0.60N). For weeds such as CAPBP, CENCY, MATCH, PAPRH, VIOAR, and MATIN, the 0.2 L/ha and 0.267 L/ha rates provided optimal control, with the full rate (0.267 L/ha) being the most effective. The test results presented by the applicant clearly indicate that a dose of 0.2 L/ha may be sufficient under optimal conditions (e.g., low weed pressure, favourable environmental conditions, or the presence of less sensitive weed species). In such cases, the lower rate may still provide acceptable control. Therefore, the requested dose of 0.2 L/ha can be considered the minimum effective rate and is justified.

Efficacy tests

AMINO 30 SL demonstrated a very high level of efficacy across all proposed dose rates, with mean control exceeding 85% against major broad-leaved weeds such as CENCY and MATIN, as well as minor weeds including CAPBP, MATCH, PAPRH, and VIOAR in winter oilseed rape. For all tested weed species, the 0.267 L/ha dose of AMINO 30 SL performed comparably to the reference product, Runway, applied at the same rate (0.267 L/ha). Notably, under optimal climatic conditions, even a reduced dose of AMINO 30 SL may provide sufficient efficacy.

Resistance risk assessment

In terms of resistance risk, the evaluator concludes that the risk of resistance developing to aminopyralid from the proposed use of AMINO 30 SL is low to moderate. The resistance management strategy proposed by the applicant is considered to be acceptable to reduce the risk of resistance development.

Adverse effects on treated crops

Specific selectivity trials were conducted in weed free conditions to assess the crop safety of AMINO 30 SL. The phytotoxicity data indicate that the proposed uses are unlikely to cause significant injury to the crops. Any damage observed tended to be minor and transient. Additionally, these trials demonstrate that the uses of AMINO 30 SL are unlikely to have a negative impact on the yield or yield quality.

Observations on other undesirable or unintended side-effects

The applicant provided acceptable risk assessments in accordance with EPPO to consider the risk to both succeeding and adjacent crops. The evaluator considers that restrictions are necessary for following crops in normal rotation and in crop failure situations following an application of AMINO 30 SL. The evaluator considers that the following is supported as part of this core assessment;

- **Crop Failure:**

In the event of crop failure, oilseed rape, cereals, and maize may be sown after cultivating the soil to a depth of 5 cm. Alternatively, vegetables, root vegetables, bulbs, legumes, and other root crops may be sown 110 days after the application of AMINO 30 SL, provided the soil is cultivated to a depth of 5 cm.

- **Rotational Crops:**

If the crop is harvested as normal, all crops may be sown after cultivating the soil to a depth of 5 cm, except for oilseed rape, which may be sown even without soil cultivation.

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

GAP rev. , date: 2024-12-19

PPP (product name/code):	El Camino 30 SL, Ranchero 30 SL / AMINO 30 SL	Formulation type:	SL [a, b]
Active substance 1:	aminopyralid	Conc. of as 1:	30 g/l [c]
Active substance 2:	-	Conc. of as 2:	-
Active substance….:	-	Conc. of as ….:	- [c]
Safener:	-	Conc. of safener:	- [c]
Synergist:	-	Conc. of synergist:	- [c]
Applicant:	Innvigo Sp. z o.o.	Professional use:	☒
Zone(s):	central [d]	Non professional use:	☐
Verified by MS:	yes		

Field of use: herbicide

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. [e]	**Member state(s)**	**Crop and/ or situation** **(crop destination / purpose of crop)**	**F, Fn, Fpn G, Gn, Gpn or I**	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safen-er/synergist per ha [f]	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L prod-uct / 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 oilseed rape	F	CENCY, MATIN, CAPBP, MATCH, PAPRH, VIOAR	Spray, medium sprayer	Autumn BBCH 10-18	a) 1 b) 1	n/a	a) 0.2-0.267 b) 0.2-0.267	a) 6-8.01 g a.s/ha b) 6-8.01 g a.s/ha	200-300	-	-	A
2														

Interzonal uses (use as seed treatment, in greenhouses (or other closed places of plant production), as post-harvest treatment or for treatment of empty storage rooms)														
3														
4														
Minor uses according to Article 51 (zonal uses)														
5														
6														
Minor uses according to Article 51 (interzonal uses)														
7														
8														

Remarks table heading:

(a) e.g. wettable powder (WP), emulsifiable concentrate (EC), granule (GR)
(b) Catalogue of pesticide formulation types and international coding system CropLife International Technical Monograph n°2, 6th Edition Revised May 2008
(c) g/kg or g/l
(d) Select relevant
(e) Use number(s) in accordance with the list of all intended GAPs in Part B, Section 0 should be given in column 1
(f) No authorization possible for uses where the line is highlighted in grey, Use should be crossed out when the notifier no longer supports this use.

Remarks columns:

1 Numeration necessary to allow references
2 Use official codes/nomenclatures of EU Member States
3 For crops, the EU and Codex classifications (both) should be used; when relevant, the use situation should be described (e.g. fumigation of a structure)
4 F: professional field use, Fn: non-professional field use, Fpn: professional and non-professional field use, G: professional greenhouse use, Gn: non-professional greenhouse use, Gpn: professional and non-professional greenhouse use, I: indoor application
5 Scientific names and EPPO-Codes of target pests/diseases/ weeds or, when relevant, the common names of the pest groups (e.g. biting and sucking insects, soil born insects, foliar fungi, weeds) and the developmental stages of the pests and pest groups at the moment of application must be named.
6 Method, e.g. high volume spraying, low volume spraying, spreading, dusting, drench
Kind, e.g. overall, broadcast, aerial spraying, row, individual plant, between the plants - type of equipment used must be indicated.
7 Growth stage at first and last treatment (BBCH Monograph, Growth Stages of Plants, 1997, Blackwell, ISBN 3-8263-3152-4), including where relevant, information on season at time of application
8 The maximum number of application possible under practical conditions of use must be provided.
9 Minimum interval (in days) between applications of the same product
10 For specific uses other specifications might be possible, e.g.: g/m³ in case of fumigation of empty rooms. See also EPPO-Guideline PP 1/239 Dose expression for plant protection products.
11 The dimension (g, kg) must be clearly specified. (Maximum) dose of a.s. per treatment (usually g, kg or L product / ha).
12 If water volume range depends on application equipments (e.g. ULVA or LVA) it should be mentioned under “application: method/kind”.
13 PHI - minimum pre-harvest interval
14 Remarks may include: Extent of use/economic importance/restrictions

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

The following document is a summary of information concerning plant protection product AMINO 30 SL containing: 30 g/L aminopyralid, included in Annex to Commission Implementing Regulation (EU) No 540/2011 of 25 May 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards the list of approved active substances.
AMINO 30 SL applies in the Central Registration Zone for the registration in winter oilseed rape at BBCH 10-18 applied once per season at the maximum rate of 8,01 g a.s/ha aminopyralid per application for the control of most important dicotyledonous weed species.

Description of active substances

Active substance:
aminopyralid 30 g/L
CAS no 150114-71-9
IUPAC name: 4-amino-3,6-dichloropyridine-2-carboxylic acid

Formulants content:
The information concerning ingredients of product AMINO 30 SL are included in the confidential part of the registration dossier: Registration Report – Part C.

Mode of action

Aminopyralid_DAR_03_Vol_3_B1-B5_public.pdf
Aminopyralid is the amino analogue of clopyralid and is an active substance belonging to pyridine carboxylic acid group of herbicides. Aminopyralid is rapidly absorbed by plants and translocated, accumulating in meristematic tissue. Uptake is mainly via leaves. In susceptible weed species the active substances induce auxin type symptoms. These include stem elongation and premature senescence leading to cessation of growth and rapid necrosis.

Table 3.2-1: Details of the active substances

Active substance	Aminopyralid
Concentration	30 g/L
Chemical group	pyridine carboxylic acid
Mode of action	Aminopyralid is a herbicidal active substance belonging to the chemical class of auxin mimics, chemical group of pyridine carboxylic acid for the post-emergence control of dicotyledonous weed species. Aminopyralid is rapidly absorbed by plants via foliar uptake and translocated, accumulating in meristematic tissue. This active substance moves systemically throughout the plant and deregulates plant growth metabolic pathways affecting growth of the plant. This disruption of plant growth is achieved by binding of aminopyralid at receptor sites normally used by the natural growth hormones of target plant, which leads to its senescence. Classification according to Mode of Action (HRAC): O
Biological action	Aminopyralid is rapidly absorbed by plants and translocated, accumulating in meristematic tissue. Uptake is mainly via leaves (foliar uptake). In susceptible weed species the active substances induce auxin type symptoms. These include stem elongation and

Active substance	Aminopyralid
	premature senescence leading to cessation of growth and rapid necrosis.

Description of the plant protection product

Marketing name:

- product submitted to registration under two different marketing names: El Camino 30 SL, Ranchero 30 SL

Formulants content:
The information concerning ingredients of product AMINO 30 SL are included in the confidential part of the registration dossier: Registration Report – Part C.

Formulation of use:
SL – soluble concentrate containing one active substance.

General information on the plant protection product:
POLAND
AMINO 30 SL is to be applied in autumn:
winter oilseed rape
Apply at post-emergence growth stage from BBCH 10 to BBCH 18.

The suggested dose of the product:
AMINO 30 SL the range of 0,2-0,267 L/ha once a season in winter oilseed rape which is corresponding to 6-8,01 g a.s. per hectare of aminopyralid.

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

Uses		Member State	Currently registered rate(s)	Requested rate(s)	Comments / Other relevant details on GAPs
Crop(s)	Target(s)				
winter oilseed rape	dicotyledonous weeds	PL	N / A	0,2-0,267 L/ha	BBCH 10-18

Further details are in the table “All intended uses” in Part B - Section 3.

Description of the target pests

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

EPPO code	Scientific name	Common name*
CAPBP	*Capsella bursa-pastoris*	Shepherd’s purse
CENCY	*Centaurea cyanus*	Cornflower
MATCH	*Matricaria chamomilla*	Wild chamomile
PAPRH	*Papaver rhoeas*	Corn poppy, red poppy
VIOAR	*Viola arvensis*	Field violet
MATIN	*Tripleurospermum inodorum*	Scentless mayweed

* optional

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 oilseed rape	PL	-	*Capsella bursa-pastoris*	X	
			Centaurea cyanus	X	
			Matricaria chamomilla	X	
			Papaver rhoeas	X	
			Viola arvensis		X
			Tripleurospermum inodorum	X	

Compliance with the Uniform Principles

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

1. PP 1/135 (4) Phytotoxicity assessment
2. PP 1/181 (5) Conduct and reporting of efficacy evaluation trials including good experimental practice
3. PP 1/152(4) Design and analysis of efficacy evaluation trials
4. PP 1/49 (3) Weeds in brassica oil crops

Any deviations have not been identified.

Information on trials submitted (3.1 Efficacy data)

The applicant submitted 9 reports (in total) showing the results in research into product efficacy carried out in 2023-2024 in winter oilseed rape post emergence use in Poland. Trials were conducted in different regions of Poland where winter oilseed rape is grown commercially. The experiment was established on a set of complete randomized blocks in 4 replications. Efficacy studies on herbicide AMINO 30 SL were performed in 2023-2024 by Poznań University of Life Sciences and A.T Sp. z o.o.

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

Crop(s) *	Target(s)*	Country	Years	Type of trial**	Number of trials AMINO 30 SL (number of valid trials)		GEP, non-GEP, official***	Comments (any other relevant information)
					North-east zone	-		
winter oilseed rape	*Centaurea cyanus*	Poland	2023-2024	E	9(9)	-	GEP	-
	TOTAL	-	2023-2024	-	9(9)	-	-	-
	Papaver rhoeas	Poland	2023-2024	E	9(9)		GEP	-
	TOTAL	-	2023-2024	-	9(9)	-	-	-
	Tripleurospermum inodorum	Poland	2023-2024	E	9(9)		GEP	-
	TOTAL	-	2023-2024	-	9(9)	-	-	-
	Viola arvensis	Poland	2023-2024	E	9(9)		GEP	-
	TOTAL	-	2023-2024	-	9(9)	-	-	-
	Matricaria cha-	Poland	2023-2024	E	9(9)		GEP	-

	momilla							
	TOTAL	-	2023-2024	-	9(9)	-	-	-
	Capsella bursa-pastoris	Poland	2023-2024	E	9(9)		GEP	-
	TOTAL	-	2023-2024	-	9(9)	-	-	-
TOTAL			2023-2024	-	54 (9)	-	-	-

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

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

Crop(s)	Reference standard	Country(ies) where the product is registered (1)	Authorization number	Active sub-stance(s)	Formulation		Registered application rate(3)	Application rate in trials (per treatment)	Remark(4)
					Type(2)	Concentration of a.s.			
Winter oilseed rape	Runway	PL	R – 184/2023b date 25.09.2023	Aminopyralid	SL	30 g/L	0,267 L//ha	0,267 L//ha	Spray vol-ume 200-400 L/ha, number of applications: 1

(1) only on use(s) applied for (with the test product).
(2) e.g. WP (wettable 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.).

3.2.1 Preliminary tests (KCP 6.1)

Preliminary studies on product AMINO 30 SL were not carried out because this herbicide contains aminopyralid which is a well-known active substance that has been used for many years in agricultural practice.

Summary and conclusions on the preliminary trials

Not applicable

Conclusion – Preliminary range-finding tests

Preliminary range-finding tests are not required since AMINO 30 SL contains aminopyralid which is existing active substance. The evaluator supports this statement.

3.2.2 Minimum effective dose tests (KCP 6.2)

Applicant did not conduct separate trials for minimum effective dose, it was evaluated in efficacy trials.
9 field trials of post-emergence use were established in order to determine the efficacy and minimum effective dose as well for the control of dicotyledonous weeds in oilseed rape. AMINO 30 SL was tested at rates: 0,16, 0,2 and 0,267 L/ha, which is corresponding to amount of active substance accordingly: 4,8, 6 and 8,01 g a.s./ha. These rates reflect the proposed label rate of the full recommended rate of AMINO 30 SL, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose'*.
Poland
Solo use

AMINO 30 SL 0,2-0,267 L/ha
A summary of the dose response results is provided in 3.2-9a.

Table 3.2-9a: Minimum effective dose. Efficacy of AMINO 30 SL at proposed label rate 0.2-0.267 L/ha dose rate at 34-53 DA-A against dicotyledonous weeds in winter oilseed rape.

Grouping*	Number of trials	Infestation in the untreated control (unit)		Efficacy obtained with AMINO 30 SL at rate								
				0.16 L/ha (60% of full rate)			0.2 L/ha (75% of full rate)			0.267 L/ha (full rate)		
		Mean	Min & Max	Mean	Min	Max	Mean	Min	Max	Mean	Min	Max
Capsella bursa-pastoris	9	5,4	5 & 8	81,6	30	98,5	85,4	38,8	100,00	89,4	51,3	100
Centaurea cyanus	9	6,7	5 & 10	87,5	67,5	93,8	91,8	77,50	97	96,6	82,5	100
Matricaria chamomilla	9	5,9	5 & 9	91,8	81,3	97	94,9	86,3	99,5	98,5	92,5	100
Papaver rhoeas	9	6,2	5 & 7	88,7	72	94,8	93,7	82,5	99,5	98,1	90	100
Viola arvensis	9	14,8	5 & 78	82,0	57,5	90	86,7	70	95	91,0	77,5	98,5
Tripleurospermum inodorum	9	6,8	5 & 15	91,5	78,8	98,5	94,2	85	100	97,3	90,8	100

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

Summary and conclusions on the minimum effective dose

According to the presented results, the range of doses 0,2-0,267 L/ha of AMINO 30 SL provided the optimum overall control and should be considered as effective against these 6 major dicotyledonous weeds, for which activity of AMINO 30 SL is claimed.

According to submitted data, 1 application of AMINO 30 SL at 0,2-0,267 L/ha should therefore be used to efficiently control all the weeds claimed on the label.

As a result, the proposed rate of AMINO 30 SL at 0,2-0,267 L/ha be considered the minimum effective dose to deliver broad spectrum control of weeds under a wide range of environmental conditions.

Conclusion – Minimum effective dose

The trials submitted to support the minimum effective dose (MED) of AMINO 30 SL are the same as the efficacy trials described in section 3.2.3. The MED for weed control in winter oilseed rape was evaluated in nine trials conducted in the North-East zone. AMINO 30 SL is recommended for use in winter oilseed rape at rates between 0.2 and 0.267 L/ha.
To determine the minimum effective dose, efficacy trials were conducted at three rates: the full rate of 0.267 L/ha and two reduced rates 0.2 L/ha (the lowest recommended rate) and 0.16 L/ha (equivalent to 0.60N). For weeds such as CAPBP, CENCY, MATCH, PAPRH, VIOAR, and MATIN, the 0.2 L/ha and 0.267 L/ha rates provided optimal control, with the full rate (0.267 L/ha) being the most effective. The test results presented by the applicant clearly indicate that a dose of 0.2 L/ha may be sufficient under optimal conditions (e.g., low weed pressure, favourable environmental conditions, or the presence of less sensitive weed species). In such cases, the lower rate may still provide acceptable control. Therefore, the requested dose of 0.2 L/ha can be considered the minimum effective rate and is justified.

3.2.3 Efficacy tests (KCP 6.2)

Materials and methods
The applicant submitted 9 reports (in total) showing the results in research into product efficacy carried out in 2023-2024 in winter oilseed rape in Poland. List of these reports is contained in Appendix 1.

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

Testing units
The field experiments of the herbicide AMINO 30 SL were carried out by the following units:
- A.T Sp. z o.o., ul. Przemysłowa 3, 88-300 Mogilno, Poland
- Poznań University of Life Sciences, Research Center Złotniki, ul. Wojska Polskiego 28, 60-637 Poznań, Poland

The testing units are officially accredited to carry out efficacy testing in accordance with Commission Regulation (EU) Nº 284/2013 by the relevant authorities in each country.

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

1. PP 1/135(4) Phytotoxicity assessment
2. PP 1/152(4) Design and analysis of efficacy evaluation trials
3. PP 1/181(5) Conduct and reporting of efficacy evaluation trials including good experimental practice
4. PP 1/49(3) Weeds in brassica oil crops

They were carried out on the field in the conditions of natural weeds infestation.

Assessment methods

Statistical Analysis

Statistical calculation of the results was based on the analysis of variance for the randomized block experiment design. Experimental data were calculated using the computer program ARM.

Statistical analysis of the results were calculated out with the use of statistic pack of ARM, the trial results were statistically analysed using Student & Newman-Keuls Test (P=.05).

Assessment of efficacy

Weeds control (E) in %, was analyzed based on the estimate of weed infestation, where the number of particular weed species was compared between herbicide and control objects.

Efficacy as % of weed control. The occurrence and intensity of symptoms of weed damages were determined using % scale. (0% = no symptoms occur, 100% = full control of weeds).

Assessment of phytotoxicity

Phytotoxic effect of the tested herbicides was expressed in 0-100% scale, where crop condition was described and compared with control plants and plants after standard herbicide application.

Phytotoxicity of whole symptoms of injuries observed on the crop plants. Recording all the symptoms of possible phytotoxic effect of tested product, mainly: changes in the growth (plant height, tillering, dates of succeeding growth stages), thinning out of plants, discolorations (without destruction of plant tissue), necroses, deformations, yield quantity and quality. The occurrence and intensity of outside symptoms of crop damages were determined using 0-100 % scale (0 % = no damage; 100 % = total plant destruction).

Applications methods and rates

Poland
The application was conducted with a knapsack sprayer, BACCAI and BOSPHO. Tested herbicide was applied post-emergence at the growth stage:

Winter oilseed rape
Apply at the phase from BBCH 10 to BBCH 18

The product AMINO 30 SL was used at the following rates:
0,16 L/ha; 0,2 L/ha; 0,267 L/ha
Runway at rate 0,267 L/ha was used as a reference product.

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

Experiment pattern:

Winter oilseed rape 2023-2024

No.	Name	Rate (kg, l/ha)	Other rate (g a.s./ha)	Appl Code	Growth stage (BBCH)
1	Untreated Check				
2	AMINO 30 SL	0,16	4,8	A	BBCH 10-18
3	AMINO 30 SL	0,2	6	A	BBCH 10-18
4	AMINO 30 SL	0,267	8,01	A	BBCH 10-18
5	Runway	0,267	8,01	A	BBCH 10-18

Poland 2023-2024

Report code	A.T/2023/040/RZO	A.T/2023/041/RZO	AH/23/RO/35/Mr/01	AH/23/RO/35/Pr/02/a	AH/23/RO/35/Pr/03	AH/23/RO/35/Ka/04	AH/23/RO/35/Ma/05	AH/23/RO/35/JaW/06	AH/23/RO/35/Zł/07
Location	Żabiczyn / Poland	Zamarte / Poland	Mrowino / Poland	Przybroda / Poland	Przybroda / Poland	Kaźmierz / Poland	Machary / Poland	Janowiec Wielkopolski / Poland	Złotniki / Poland
Plant/cultivar	Winter oilseed rape / Dominator	Winter oilseed rape / SY Ilona	Winter oilseed rape / Harry	Winter oilseed rape / ES Imperio	Winter oilseed rape / Atora	Winter oilseed rape / Dominator	Winter oilseed rape / Graf	Winter oilseed rape / Berny	Winter oilseed rape / Alibaba
Seeding date	21.08.2023	24.08.2023	08.09.2023	16.09.2023	11.09.2023	25.08.2023	09.09.2023	28.08.2023	25.08.2023
Seeding rate	3 kg/ha	2,7 kg/ha	3 kg/ha	3 kg/ha	2,9 kg/ha	3 kg/ha	3 kg/ha	3 kg/ha	3 kg/ha
Forecrop	winter barley	winter wheat	winter barley	winter barley	winter triticale	winter barley	winter wheat	winter barley	spring barley

Type of sprayer	BACCAI	BACCAI	BOSPHO	BOSPHO	BOSPHO	BOSPHO	BOSPHO	BOSPHO	BOSPHO
Date of treatment	02.10.2023	29.09.2023	02.10.2023	02.10.2023	02.10.2023	06.10.2023	05.10.2023	05.10.2023	11.10.2023
Plant development phase	BBCH 10-16	BBCH 15-18	BBCH 13-14	BBCH 13-14	BBCH 13-14	BBCH 15-16	BBCH 14-16	BBCH 16-17	BBCH 17-18
Soil type	loamy sand	sandy loam	loamy sand	loamy sand	loamy sand	loamy sand	loamy sand	loamy sand	loamy sand
Soil pH	4,44	5,7	6	5,8	6	6,1	5,9	6	5,9
Water volume (l/ha)	300	300	200	250	250	300	250	250	200
Plot size	2,5x5=12,5 m^2	2,5x6=15 m^2	2x12=24 m^2	2,5x10=25 m^2	2,5x10=25 m^2	2,5x10=25 m^2	2x10=20 m^2	2,5x10=25 m^2	2,5x10=25 m^2

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

Summary of the data from effectiveness trials can be found at Appendix 5.

Table 3.2-10: Details on trial methodology

Guidelines	General guidelines	EPPO: PP 1/152 (4) Design and analysis of efficacy evaluation trials PP 1/181 (5) Conduct and reporting of efficacy evaluation trials including good experimental practice PP 1/135 (4) Phytotoxicity assessment
	Specific guidelines	PP 1/49(3) Weeds in brassica oil crops
Experimental design	Plot design	Randomized Complete Block (9),
	Plot size	12,5-25 m²
	Number of replications	4(9)
Crop	Trials per crop	Winter oilseed rape (9)
	Varieties per crop	Winter oilseed rape: Dominator, SY Ilona, Harry, ES Imperio, Atora, Graf, Berny, Alibaba
	Sowing period	Winter oilseed rape: 21.08.2023-16.09.2023
Application	Crop stage (BBCH)* at application	Winter oilseed rape: BBCH 10-18
	Timing Pest stage at application (1)	Post-emergence CAPBP (BBCH 10-31), CENCY (BBCH 10-17), MATCH (BBCH 10-21), PAPRH (BBCH 10-17), VIOAR (BBCH 12-16), MATIN (BBCH 09-16).
	Number of applications Intervals between applications	1 (9 trials)
	Spray volumes	200-300 L/ha
Assessment	Assessment types	% of weed coverage/ Efficacy as % of weed control using % scale 0% = no symptoms occur, 100% = full control of weeds
	Assessment dates	7-14 DA-A; 35-44 DA-A; 197-207 DA-A
Other relevant information	e.g. Soil type, pH (in case of soil active substance …)	sandy loam, loamy sand
	e.g. Natural / artificial innoculation…	n/a
	e.g. Field / Greenhouse...	n/a
	...	n/a

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

Winter oilseed rape – dicotyledonous weeds

A total of 9 trials were carried out to evaluate the efficacy of AMINO 30 SL for the control of dicotyledonous weeds in winter oilseed rape.

Efficacy data for dicotyledonous weeds are presented from 9 efficacy trials assessed. All these trials were conducted in season 2023-2024 in Poland.

3.2.3-1.1 The efficacy of AMINO 30 SL control of *Capsella bursa-pastoris* (CAPBP).

The efficiency of AMINO 30 SL in control of *Capsella bursa-pastoris* was investigated in 9 trials.

7-14 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the medium level of efficacy from 7 to 14 DA-A. The average effectiveness fluctuated from 74,3% to 80,4%.

The effectiveness at rate 0,16 L/ha fluctuated from 30% (14 DA-A) to 91,3% (12 DA-A), at rate 0,2 L/ha from 31,3% (14 DA-A) to 93,8% (10 DA-A), at rate 0,267 L/ha from 42,5% (14 DA-A) to 96% (12 DA-A).

The efficacy of the tested herbicide was slightly higher than the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 80,1% (Appendix 5 tab. 5.1).

34-53 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the medium to high level of efficacy from 34 to 53 DA-A. The average effectiveness fluctuated from 81,6% to 89,4%.

The effectiveness at rate 0,16 L/ha fluctuated from 30% (53 DA-A) to 98,5% (41 DA-A), at rate 0,2 L/ha from 38,8% (44 DA-A and 53 DA-A) to 100% (41 DA-A), at rate 0,267 L/ha from 51,3% (53 DA-A) to 100% (34 DA-A, 36 DA-A and 41 DA-A).

The efficacy of the tested herbicide was insignificantly lower than the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 89,7% (Appendix 5 tab. 5.2).

197-207 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the high level of efficacy from 197 to 207 DA-A. The average effectiveness fluctuated from 85,2% to 90,6%.

The effectiveness at rate 0,16 L/ha fluctuated from 42,5% (200 DA-A) to 98,5% (197 DA-A), at rate 0,2 L/ha from 50% (207 DA-A) to 100% (197 DA-A), at rate 0,267 L/ha from 56,3 (200 DA-A) to 100% (197 DA-A, 198 DA-A, 200 DA-A, 203 DA-A and 204 DA-A).

The efficacy of the tested herbicide was slightly higher than the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 90% (Appendix 5 tab. 5.3).

3.2.3-1.2 The efficacy of AMINO 30 SL control of *Centaurea cyanus* (CENCY).

The efficiency of AMINO 30 SL in control of *Centaurea cyanus* was investigated in 9 trials.

7-14 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the medium to high level of efficacy from 7 to 14 DA-A. The average effectiveness fluctuated from 78,9% to 90%.

The effectiveness at rate 0,16 L/ha fluctuated from 57,5% (14 DA-A) to 87,5% (12 DA-A), at rate 0,2

L/ha from 72,5% (14 DA-A) to 97,5% (12 DA-A), at rate 0,267 L/ha from 80% (14 DA-A) to 95% (12 DA-A).

The efficacy of the tested herbicide was comparable with the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 90,1% (Appendix 5 tab. 5.4).

34-53 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the high level of efficacy from 34 to 53 DA-A. The average effectiveness fluctuated from 87,5% to 96,6%.

The effectiveness at rate 0,16 L/ha fluctuated from 67,5% (44 DA-A) to 93,8% (36 DA-A and 41 DA-A), at rate 0,2 L/ha from 77,5% (53 DA-A) to 97% (36 DA-A), at rate 0,267 L/ha from 82,5% (44 DA-A) to 100% (41 DA-A).

The efficacy of the tested herbicide was comparable with the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 96,5% (Appendix 5 tab. 5.5).

197-207 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the high level of efficacy from 197 to 207 DA-A. The average effectiveness fluctuated from 89,9% to 98,8%.

The effectiveness at rate 0,16 L/ha fluctuated from 75,8% (200 DA-A) to 95,5% (198 DA-A), at rate 0,2 L/ha from 83,8 (207 DA-A) to 98,3% (204 DA-A), at rate 0,267 L/ha from 94,5% (207 DA-A) to 100% (197 DA-A, 203 DA-A and 204 DA-A).

The efficacy of the tested herbicide was equal the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 98,8% (Appendix 5 tab. 5.6).

3.2.3-1.3 The efficacy of AMINO 30 SL control of *Matricaria chamomilla* (MATCH).

The efficiency of AMINO 30 SL in control of *Matricaria chamomilla* was investigated in 9 trials.

7-14 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the medium to high level of efficacy from 7 to 14 DA-A. The average effectiveness fluctuated from 84,1% to 91,6%.

The effectiveness at rate 0,16 L/ha fluctuated from 73,8% (14 DA-A) to 88,8% (12 DA-A), at rate 0,2 L/ha from 83,8% (14 DA-A) to 91,3% (12 DA-A), at rate 0,267 L/ha from 88,8% (7 DA-A and 14 DA-A) to 93,8% (12 DA-A).

The efficacy of the tested herbicide was higher than the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 90,4% (Appendix 5 tab. 5.7).

34-53 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the high level of efficacy from 34 to 53 DA-A. The average effectiveness fluctuated from 91,8% to 98,5%.

The effectiveness at rate 0,16 L/ha fluctuated from 81,3% (44 DA-A) to 97% (34 DA-A), at rate 0,2 L/ha from 86,3% (44 DA-A) to 99,5% (34 DA-A), at rate 0,267 L/ha from 92,5% (53 DA-A) to 100% (34 DA-A, 35 Da-A, 36 DA-A and 41 DA-A).

The efficacy of the tested herbicide was equal to the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 98,5% (Appendix 5 tab. 5.8).

197-207 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the high level of efficacy from 197 to 207 DA-A. The average effectiveness fluctuated from 94,3% to 99,6%.

The effectiveness at rate 0,16 L/ha fluctuated from 82,5% (200 DA-A) to 99,3% (197 DA-A), at rate 0,2 L/ha from 91,3% (200 DA-A) to 99,8% (197 DA-A and 203 DA-A), at rate 0,267 L/ha from 96,5% (200 DA-A) to 100% (197 DA-A, 200 DA-A, 203 DA-A, 204 DA-A and 207 DA-A).

The efficacy of the tested herbicide was equal to the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 99,6% (Appendix 5 tab. 5.9).

3.2.3-1.4 The efficacy of AMINO 30 SL control of *Papaver rhoeas* (PAPRH).

The efficiency of AMINO 30 SL in control of *Papaver rhoeas* was investigated in 9 trials.

7-14 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the medium to high level of efficacy from 7 to 14 DA-A. The average effectiveness fluctuated from 79,7% to 89,8%.

The effectiveness at rate 0,16 L/ha fluctuated from 60% (14 DA-A) to 88,8% (12 DA-A), at rate 0,2 L/ha from 77,5% (14 DA-A) to 93,8% (12 DA-A), at rate 0,267 L/ha from 85% (14 DA-A) to 95% (12 DA-A).

The efficacy of the tested herbicide was slightly higher than the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 89,5% (Appendix 5 tab. 5.10).

34-53 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the high level of efficacy from 34 to 53 DA-A. The average effectiveness fluctuated from 88,7% to 98,1%.

The effectiveness at rate 0,16 L/ha fluctuated from 72% (53 DA-A) to 94,8% (41 DA-A), at rate 0,2 L/ha from 82,5% (53 DA-A) to 99,5% (41 DA-A), at rate 0,267 L/ha from 90% (53 DA-A) to 100% (34 DA-A, 35 DA-A, 36 DA-A, 38 DA-A and 41 DA-A).

The efficacy of the tested herbicide was slightly higher than the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 97,6 % (Appendix 5 tab. 5.11).

197-207 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the high level of efficacy from 197 to 207 DA-A. The average effectiveness fluctuated from 91,7% to 99,3%.

The effectiveness at rate 0,16 L/ha fluctuated from 80% (200 DA-A and 207 DA-A) to 98,8% (204 DA-A), at rate 0,2 L/ha from 85% (207 DA-A) to 99,8% (203 DA-A), at rate 0,267 L/ha from 98,8% (207

DA-A) to 100% (197 DA-A, 198 DA-A, 200 DA-A, 203 DA-A and 204 DA-A).

The efficacy of the tested herbicide was slightly higher to the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 99,1% (Appendix 5 tab. 5.12).

3.2.3-1.5 The efficacy of AMINO 30 SL control of *Viola arvensis* (VIOAR).

The efficiency of AMINO 30 SL in control of *Viola arvensis* was investigated in 9 trials.

7-14 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the medium level of efficacy from 7 to 14 DA-A. The average effectiveness fluctuated from 70,9% to 77,7%.

The effectiveness at rate 0,16 L/ha fluctuated from 47,5% (14 DA-A) to 80% (12 DA-A), at rate 0,2 L/ha from 52,5% (14 DA-A) to 81,3% (9 DA-A and 12 DA-A), at rate 0,267 L/ha from 60% (14 DA-A) to 85% (10 DA-A).

The efficacy of the tested herbicide was insignificantly lower than the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 78% (Appendix 5 tab. 5.13).

34-53 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the medium to high level of efficacy from 34 to 53 DA-A. The average effectiveness fluctuated from 82% to 91%.

The effectiveness at rate 0,16 L/ha fluctuated from 57,5% (44 DA-A) to 90% (35 DA-A and 36 DA-A), at rate 0,2 L/ha from 70% (44 DA-A) to 95% (36 DA-A), at rate 0,267 L/ha from 77,5% (53 DA-A) to 98,5% (38 DA-A).

The efficacy of the tested herbicide was insignificantly lower than the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 91,9% (Appendix 5 tab. 5.14).

197-207 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the high level of efficacy from 197 to 207 DA-A. The average effectiveness fluctuated from 83,9% to 93,1%.

The effectiveness at rate 0,16 L/ha fluctuated from 65% (200 DA-A) to 91,3% (204 DA-A), at rate 0,2 L/ha from 75% (207 DA-A) to 95,8% (198 DA-A), at rate 0,267 L/ha from 81,3% (207 DA-A) to 99,5% (204 DA-A).

The efficacy of the tested herbicide was slightly higher than the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 92,9% (Appendix 5 tab. 5.15).

3.2.3-1.6 The efficacy of AMINO 30 SL control of *Tripleurospermum inodorum* (MATIN).

The efficiency of AMINO 30 SL in control of *Tripleurospermum inodorum* was investigated in 9 trials.

7-14 DA-A
The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the medium to high level of efficacy from 7 to 14 DA-A. The average effectiveness fluctuated from 82,3% to 89,8%.

The effectiveness at rate 0,16 L/ha fluctuated from 71,3% (14 DA-A) to 92,5% (10 DA-A), at rate 0,2 L/ha from 82,5% (14 DA-A) to 95% (10 DA-A), at rate 0,267 L/ha from 82,5% (12 DA-A) to 97% (10 DA-A).

The efficacy of the tested herbicide was insignificantly lower than the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 90,1% (Appendix 5 tab. 5.16).

34-53 DA-A

The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the high level of efficacy from 34 to 53 DA-A. The average effectiveness fluctuated from 91,5% to 97,3%.

The effectiveness at rate 0,16 L/ha fluctuated from 78,8% (44 DA-A) to 98,5% (36 DA-A and 41 DA-A), at rate 0,2 L/ha from 85% (44 DA-A and 53 DA-A) to 100% (36 DA-A and 41 DA-A), at rate 0,267 L/ha from 90,8% (53 DA-A) to 100% (34 DA-A, 36 DA-A, 38 DA-A and 41 DA-A).

The efficacy of the tested herbicide was insignificantly lower than the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 97,6% (Appendix 5 tab. 5.17).

197-207 DA-A

The tested product AMINO 30 SL at rates 0,16 L/ha, 0,2 L /ha and 0,267 L/ha controlled this species of weed at the high level of efficacy from 197 to 207 DA-A. The average effectiveness fluctuated from 93% to 99,5%.

The effectiveness at rate 0,16 L/ha fluctuated from 80,0% (200 DA-A) to 99,5% (203 DA-A), at rate 0,2 L/ha from 90% (200 DA-A and 203 DA-A) to 100% (197 DA-A and 203 DA-A), at rate 0,267 L/ha from 97,5% (200 DA-A) to 100% (197 DA-A, 198 DA-A, 200 DA-A, 203 DA-A, 204 DA-A and 207 DA-A).

The efficacy of the tested herbicide was slightly higher than the standard product Runway at rate 0,267 L/ha. In the trials the average efficacy of standard was 99,1% (Appendix 5 tab. 5.18).

Table 3.2-11: Efficacy of AMINO 30 SL at the timing of 34-53 DA-A.

Target	Grouping *	Number of trials	Infestation in the untreated control (number/m²)		% control								No of trials where product is >, <, = compared to standard(s)**
					AMINO 30 SL at rate 0.16 L/ha		AMINO 30 SL at rate 0.2 L/ha		AMINO 30 SL at rate 0.267 L/ha		Runway at rate 0.267 L/ha		
			Mean	Min & Max	Mean	Min & Max	Mean	Min & Max	Mean	Min & Max	Mean	Min & Max	
CAPBP	North-East Zone	9	5,4	5 & 8	81,6	30 & 98,5	85,4	38,8 & 100	89,4	51,3 & 100	89,7	53,8 & 100	
CENCY	North-East Zone	9	6,7	5 & 10	87,5	67,5 & 93,8	91,8	77,5 & 97	96,6	82,5 & 100	96,5	82,5 & 100	n/a
MATCH	North-East Zone	9	5,9	5 & 9	91,8	81,3 & 97	94,9	86,3 & 99,5	98,5	92,5 & 100	98,5	92,5 & 100	n/a
PAPRH	North-East Zone	9	6,2	5 & 7	88,7	72 & 94,8	93,7	82,5 & 99,5	98,1	90 & 100	97,6	88,8 & 100	n/a
VIOAR	North-East Zone	9	14,8	5 & 78	82,0	57,5 & 90	86,7	70 & 95	91,0	77,5 & 98,5	91,9	78,8 & 98,3	n/a
MATIN	North-East Zone	9	6,8	5 & 15	91,5	78,8 & 98,5	94,2	85 & 100	97,3	90,8 & 100	97,6	91,3 & 100	n/a

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

** Optional

Minor use

Not applicable

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

Not applicable

Summary and conclusion

Conclusions on the biological efficacy

The submitted efficacy/selectivity data (reports from field trials) and additional information fulfil the requirements and conditions determined in the following EPPO guidelines:

1. PP 1/135(4) Phytotoxicity assessment
2. PP 1/152(4) Design and analysis of efficacy evaluation trials
3. PP 1/181(5) Conduct and reporting of efficacy evaluation trials including good experimental practice
4. PP 1/49(3) Weeds in brassica oil crops

The studies fulfil also requirements of the Commission Regulation (EU) No 540/2011 of 25 May 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards the data requirements for plant protection products.

The formulation of AMINO 30 SL is soluble concentrate (SL) and it comprises active substance aminopyralid (30 g a.s./L). It is a postemergence herbicide mainly active through foliar uptake.

The applicant submitted 9 reports (in total) showing the results in research into product efficacy carried out in 2023-2024 in winter oilseed rape.
The obtained data in performed trials show that AMINO 30 SL provides benefits against the most important dicotyledonous weeds in winter oilseed rape, as shown in the table below.

The following table describes the effectiveness of weeds:

S (Susceptible)	>85 %
M (Moderately Susceptible)	70 – 85%
MT (Moderately Tolerant)	60 – 70%
T (Tolerant)	< 60%

The following table shows the average sensitivity of weeds in winter oilseed rape:

No.	Product dose (L/ha)	EPPO code	Scientific name	Average (%)	Efficacy
1.	AMINO 30 SL 0,16 L/ha	CENCY	*Centaurea cyanus*	87,52	S
		PAPRH	*Papaver rhoeas*	88,70	S
		MATIN	*Tripleurospermum inodorum*	91,54	S
		VIOAR	*Viola arvensis*	81,97	MS
		MATCH	*Matricaria chamomilla*	91,77	S
		CAPBP	*Capsella bursa-pastoris*	81,58	MS
2.	AMINO 30 SL 0,2 L/ha	CENCY	*Centaurea cyanus*	91,84	S
		PAPRH	*Papaver rhoeas*	93,68	S
		MATIN	*Tripleurospermum inodorum*	94,20	S
		VIOAR	*Viola arvensis*	86,69	S
		MATCH	*Matricaria chamomilla*	94,87	S
		CAPBP	*Capsella bursa-pastoris*	85,36	S
3.	AMINO 30 SL 0,267 L/ha	CENCY	*Centaurea cyanus*	96,60	S
		PAPRH	*Papaver rhoeas*	98,06	S
		MATIN	*Tripleurospermum inodorum*	97,32	S
		VIOAR	*Viola arvensis*	90,98	S
		MATCH	*Matricaria chamomilla*	98,46	S
		CAPBP	*Capsella bursa-pastoris*	89,39	S

The obtained data in performed trials show that AMINO 30 SL provides benefits against the most important dicotyledonous weeds in winter oilseed rape. On the basis of submitted research, it is possible to state that AMINO 30 SL used at dose controlled:

Dose 0,16 L/ha
Susceptible: *Centaurea cyanus* (CENCY), *Matricaria chamomilla* (MATCH), *Papaver rhoeas* (PAPRH), *Tripleurospermum inodorum* (MATIN),
Moderately Susceptible: *Viola arvensis* (VIOAR), *Capsella bursa-pastoris* (CAPBP)

Dose 0,2 L/ha
Susceptible: *Centaurea cyanus* (CENCY), *Matricaria chamomilla* (MATCH), *Papaver rhoeas* (PAPRH), *Tripleurospermum inodorum* (MATIN), *Capsella bursa-pastoris* (CAPBP), *Viola arvensis* (VIOAR)

Dose 0,267 L/ha
Susceptible: *Centaurea cyanus* (CENCY), *Matricaria chamomilla* (MATCH), *Papaver rhoeas* (PAPRH), *Tripleurospermum inodorum* (MATIN), *Capsella bursa-pastoris* (CAPBP), *Viola arvensis* (VIOAR).

Conclusion – Efficacy tests
Efficacy evaluations for post-emergence weed control in winter oilseed rape in the North-East zone are summarized in this section from nine efficacy trials. Single applications of AMINO 30 SL were carried out at BBCH 10–18, using both the full intended rate (0.267 L/ha) and a reduced rate (0.2 L/ha). The trials were conducted in Poland in season 2023-2024. In all trials, Runway at a reference rate 0.267 L/ha, was used as the standard.

All these trials were carried out according to the GEP standards and following the EPPO guidelines: EPPO PP 1/152(4) *Design and analysis of efficacy evaluation trials*, EPPO PP 1/181(4) *Conduct and reporting of efficacy evaluation trials including GEP*, EPPO PP 1/135(4) *Phytotoxicity assessment*, and PP 1/49(3) *Weeds in brassica oil crops*.

In these trials, AMINO 30 SL demonstrated a very high level of efficacy across all proposed dose rates, with mean control exceeding 85% against major broad-leaved weeds such as CENCY and MATIN, as well as minor species including CAPBP, MATCH, PAPRH, and VIOAR in winter oilseed rape. For all tested weed species, the 0.267 L/ha dose of AMINO 30 SL performed comparably to the reference product RUNWAY, applied at the same rate. It is important to note that, under optimal climatic conditions (e.g., low weed pressure, favourable environmental conditions, or the presence of less sensitive weed species), even the reduced dose of 0.2 L/ha may provide sufficient efficacy.

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

Resistance Risk Assessment (*according to EPPO PP 1/213 (4) Resistance risk analysis*)

3.3.1. Mode of action
AMINO 30 SL is a herbicide containing active substance: aminopyralid 30 g/L, which belong to 4 (legacy O) HRAC group - Inhibition of pyridine-carboxylates.
Aminopyralid is a herbicidal active substance belonging to the chemical class of auxin mimics for the post-emergence control of dicotyledonous weed species. Aminopyralid is rapidly absorbed by plants via foliar uptake and translocated, accumulating in meristematic tissue. This active substance moves systemically throughout the plant and deregulates plant growth metabolic pathways affecting growth of the plant. This disruption of plant growth is achieved by binding of aminopyralid at receptor sites normally used by the natural growth hormones of target plant, which leads to its senescence. The symptoms are observable within hours or days after application, depending on the weed species. Impact of aminopyralid on target plants causes variety of symptoms such as thickened, curved and twisted stems and leaves, cupping and crinkling of leaves, stem breaking, narrowing of leaves, hardened stem growth, enlarged roots and proliferated growth.

3.3.2. Mechanism of resistance
AMINO 30 SL is a herbicide containing active substance: aminopyralid 30 g/L, which belong to 4 (legacy O) HRAC group - Inhibition of pyridine-carboxylates.
According to EPPO PP 1/213 (4) Resistance risk analysis weeds usually only produce one generation per year and development of resistance is usually a relatively slow process. It is difficult to class any weed species as inherently more or less likely to develop resistance to a particular herbicide.

3.3.3. Evidence of resistance
AMINO 30 SL is a herbicide containing active substance: aminopyralid 30 g/L, which belong to 4 (legacy O) HRAC group - Inhibition of pyridine-carboxylates. This group of herbicides is quite well known and has been applied commercially for decades.

According to the Herbicide Resistance Action Committee (HRAC) website www.weedscience.org, 89 cases of resistance in weeds to auxin mimics herbicides have been reported worldwide.
Weeds have also developed a resistance mechanism to aminopyralid. 2 cases of resistance were reported to *Papaver rhoeas* in France, 1 case of resistance was reported to *Amaranthus tuberculatus* in United States and 1 case of resistance was reported to *Chenopodium album* in New Zealand (Table 3.3-1).

Table 3.3-1. Reported cases of weed resistance to aminopyralid worldwide [www.weedscience.org].

Year	Species	Country	MOAs	Actives
2005	*Chenopodium album*	New Zealand	Auxin Mimics (O/4)	aminopyralid, clopyralid, dicamba
2009	*Amaranthus tuberculatus*	United States	Auxin Mimics (O/4), ALS inhibitors (B/2), PSII inhibitors (C1 C2/5)	2,4-D, aminopyralid, atrazine, chlorimuron-ethyl, imazethapyr, picloram
2015	*Papaver rhoeas*	France	Auxin Mimics (O/4)	2,4-D, aminopyralid
2016	*Papaver rhoeas*	France	Auxin Mimics (O/4), ALS inhibitors (B/2)	2,4-D, aminopyralid, iodosulfuron-methyl-Na, MCPA, mesosulfuron-methyl, metsulfuron-methyl

According to the Aminopyralid_DAR_03_Vol_3_B1-B5_public.pdf
Aminopyralid is the amino analogue of clopyralid, belonging to the pyridine carboxylic acid group of herbicides, a well-established mode of action. Other pyridine carboxylic acid herbicides such as fluroxy-pyr, clopyralid, and triclopyr have been used in agriculture over a long period of time, but as yet, there have been no reported field cases of resistance. Overall, the inherent risk for the use of aminopyralid may be considered to be low.

3.3.4. Cross-resistance

According to https://hracglobal.com/files/Herbicide-Cross-Resistance-and-Multiple-Resistance-in-Plants.pdf
Cross resistance is defined as the expression of a genetically-endowed mechanism conferring the ability to withstand herbicides from different chemical classes. There are two broad cross resistance categories; target site cross resistance and non-target site cross resistance.

According to https://hracglobal.com/files/Weed-Resistance-to-Synthetic-Auxin-Herbicides.pdf
In range of global view, the most important synthetic auxin resistant weeds are *Kochia scoparia, Raphanus raphanistrum, Sinapis arvensis* and *Papaver rhoeas*. The risk of additional herbicide-resistant biotypes developing with altered target sites is considered to be low. The complex interaction with the auxin perception and responsive pathway makes resistance through overexpression of the target proteins posing a low probability (Busi, Roberto, et al. 2018).

Since there are only 4 evidences of resistance to aminopyralid, it can be stated that AMINO 30 SL has low resistance occurrence potential, however the awareness of full support of implementation of best herbicide resistance management practices needs to be kept.

3.3.5. Sensitivity data

The Applicant did not conduct separate trials for sensitivity data, this data was evaluated in efficacy trials. The 9 field post-emergence trials were established in order to determine the sensitivity of weeds in winter oilseed rape. AMINO 30 SL was tested at doses: 0,16, 0,2 to 0,267 L/ha (4,8-8,01 g of active substance) in winter oilseed rape for the control of dicotyledonous weeds. Detailed studies on the weeds sensitivity are submitted and summarised in 3.2 Efficacy data (KCP 6.2).

3.3.6. Use pattern

Herbicide AMINO 30 SL has demonstrated good crop tolerance to winter oilseed rape. Therefore concluded that AMINO 30 SL is safe usage at proposed rate and this support the label claim for the use in winter oilseed rape.
Undesirable effects are not expected on succeeding crops, adjacent crop, part of plants used for propagating purposes and beneficial organisms.
Based on submitted data the following regulation on the label is proposed:
in winter oilseed rape in autumn, applied once per season post-emergence BBCH 10-18:

- solo at the dose range 0,2-0,267 L/ha which are corresponding to 6-8,01 g a.s./ha of aminopyralid per application for the control of most important weed species.

The product AMINO 30 SL should be used once per season in autumn post-emergence of crop and weeds. To avoid resistance, products contain active substance with the same group should not be used year after year on the same field.
Recommended volume of water 200-300 L/ha
Recommended medium droplet spraying

3.3.7. Resistance risk assessment of unrestricted use pattern

According to EPPO PP 1/213 (4) Resistance risk analysis weeds usually only produce one generation per year and development of resistance is usually a relatively slow process. In case of aminopyralid the cross resistance is relatively low, with 4 cases of resistance have been recorded, it is considered reasonable that no specific resistance management strategy will be required. However, to avoid the development of resistance, the user must follow the general principles of integrated pest management and the label of the plant protection product.

3.3.8. Test methods

Not applicable

3.3.9. Acceptability of the resistance risk

AMINO 30 SL is herbicide containing active substance: aminopyralid 30 g/L, which belongs to 4 (legacy O) HRAC group - Inhibition of pyridine-carboxylates. This group of herbicides is quite well known and has been applied commercially for decades.
According to the Herbicide Resistance Action Committee (HRAC) website www.weedscience.org, 4 cases of resistance in weeds were reported worldwide in use of aminopyralid.
According to EPPO PP 1/213 (4) Resistance risk analysis weeds usually only produce one generation per year and development of resistance is usually a relatively slow process.
In conclusion, in the Applicant's opinion, this level of weeds resistance risk should be considered to be acceptable, provided always that the provisions on the label are followed.

3.3.10. Management strategy

According to *Herbicide Resistance Action Committee (HRAC) (https://hracglobal.com/prevention-management/best-management-practices)*
Integrated Weed Management (IWM) refers to using chemical, cultural, mechanical and biological methods, in an integrated fashion, to control weeds. It does not rely excessively on any one method. When used in a integrated approach, the following tools help reduce selection pressure and survival of resistant weeds.
• Chemical - Applying herbicides to a crop.

• Mechanical - Includes measures such as hand-weeding using cultivation or ploughing to control emerged plants and bury non-germinated seed. It also includes harvest weed seed destruction such as stubble burning and cutting for hay or silage to prevent the weeds from setting seed.
• Cultural - Includes altering the crop planting date, row spacing and harvest timing to disrupt the weed cycle. It also includes planting crops that can out-compete weeds, buying certified seed that's free of weeds and using a diverse crop rotation. Growers should also sanitize farm equipment when moving between fields.
• Biological - Includes introducing insects and pathogens that control target weed species and introducing post-harvest grazing of growing weeds.
Using a diversified crop rotation allows farmers to use these different weed techniques. Avoid successive crops that use herbicides with the same mechanism of action to control the same weed species in the same field.

Guidelines for the sustainable use of herbicide site of action groups:
• Use mixtures or sequential treatments of herbicides having different sites of action. Each herbicide in the mixture should target the same weed species.
• Consider all chemical control options before planting, in-crop and after harvest.
• Avoid continued use of the same herbicides, or herbicides with the same site of action in the same field, unless integrated with other weed control practices.
• Limit the number of applications of a single herbicide or herbicides with the same site of action in a single growing season.
• Herbicide mixtures and herbicide rotations alone are not enough to prevent resistance. They must be used in a diversified plan than also incorporates mechanical, cultural and biological practices.
Growers should also do the following:
• Follow label use instructions, such as application rates, timing and equipment recommendations.
• Know the weeds in their fields and nearby non-crop areas and tailor their weed control program to weed densities and economic thresholds.
• Monitor herbicide results and be aware of any trends or changes in weed populations.
• Maintain detailed field records to confirm cropping and herbicide history.

3.3.11. Implementation of the management strategy

The herbicide label provides all the necessary information for preventing weed resistance to herbicides.

3.3.12. Monitoring, reporting and reaction to changes in performance

According to https://hracglobal.com/files/Monitoring-and-Mitigation-of-Herbicide-Resistance.pdf
Managing the risk of herbicide resistance (HR) is an area of strategic importance for leading herbicide technology providers and is the focus of the Global Herbicide Resistance Action Committee (HRAC), an organization comprised of 8 major companies working as a part of Crop Life International. Early detection of HR, understanding the scope of HR in a defined area, and potential mitigation of resistance through efforts to limit its spread are important aspects of managing the risk of HR. Monitoring for HR populations has been employed by public and private weed scientists for both early detection and defining the scope of resistance. The primary methods used to monitor for resistance include:
1) field surveys where seed from putative resistant plants are collected and tested in a controlled environment using bioassay procedures,
2) market research surveys of farmers and weed management experts, and
3) tracking farmer performance inquiries with appropriate follow up field evaluation and testing.
The most common monitoring method is the use of field surveys designed to either qualitatively (i.e., determine whether the level of resistance is high, medium, or low) or quantitatively (i.e., determine the

area infested with HR populations) define existing HR. The primary method to detect resistance in new species and in new geographies is to track farmer performance inquiries. Once resistance is detected, steps may be taken to mitigate its impact. A critical aspect to mitigation is the implementation of best management practices (BMPs) which is facilitated by effective education and training programs. Education efforts can be enhanced with information obtained from monitoring studies and early detection of resistant populations using appropriate monitoring methods can improve the outcome of mitigation efforts.

Conclusion - Resistance risk assessment

A risk assessment conducted according to EPPO Standard PP1/213 (4) was provided.

Evidence of Resistance and Cross-Resistance
Globally, there have been four reported cases of resistance to aminopyralid across three different weed species: two cases in *Papaver rhoeas* from France, one case in *Amaranthus tuberculatus* from the United States, and one case in *Chenopodium album* from New Zealand.
Analysis of Inherent Risk
Given that two cases of resistance to aminopyralid have been reported in Europe, the inherent risk associated with this active ingredient can be considered low to medium. The dicotyledonous target weed *Papaver rhoeas* (PAPRH) is regarded as a high-risk species for developing resistance.
Analysis of the agronomic risk
The herbicide is intended to be used against annual dicotyledonous species post-emergent in winter oilseed rape. It can be concluded that the overall agronomic resistance risk implemented by AMINO 30 SL has to be regarded as low to medium under current normal European agricultural practice.
Summary and Conclusions
According to the applicant, the risk of development of resistance is considered to be acceptable and no further specific management strategies are required.

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 oilseed rape	Poland	S + Y + Q	9	-	2023-2024	GEP	
TOTAL	-	-	**9**	-	-	-	

* 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 oilseed rape	Runway	PL	R – 184/2023b date 25.09.2023	aminopyralid	SL – soluble concentrate	30 g/l	0,267 l/ha	0,267 l/ha	

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

3.4.1 Phytotoxicity to host crop (KCP 6.4.1)

Materials and methods
The applicant submitted 9 reports (in total) showing the results in research into product selectivity carried out in 2023-2024 in Poland. List of these reports is contained in Appendix 1.

Site
Trials were conducted in different regions of Poland where winter oilseed rape is grown commercially. The experiment was established on a set of complete randomized blocks in 4 replications. Details on trial sites, applications and data on effectiveness are included in Appendix 3 and 4
Location details and cultivation operations
The description of the trial location, including soil data, soil condition and production techniques of the trial site was based on the information provided by the Farmer. The trial site was chosen in such a way that climate and soil conditions were appropriate to the cultivation of the test system.

Testing units
The field experiments of the herbicide AMINO 30 SL were carried out by the following units:
- A.T Sp. z o.o., ul. Przemysłowa 3, 88-300 Mogilno, Poland
- Poznań University of Life Sciences, Research Center Złotniki, ul. Wojska Polskiego 28, 60-637 Poznań, Poland

Experimental details
The selectivity trials were designed, conducted and reported according to the following EPPO guidelines:

1. PP 1/135(4) Phytotoxicity assessment
2. PP 1/152(4) Design and analysis of efficacy evaluation trials
3. PP 1/181(5) Conduct and reporting of efficacy evaluation trials including good experimental practice
4. PP 1/49(3) Weeds in brassica oil crops

Assessment methods

Statistical Analysis
Statistical calculation of the results was based on the analysis of variance for the randomized block experiment design. Experimental data were calculated using the computer program ARM.

Statistical analysis of the results were calculated out with the use of statistic pack of ARM, the trial results were statistically analysed using Student & Newman-Keuls Test (P=.05).

Assessment of phytotoxicity
Phytotoxic effect of the tested herbicides was expressed in 0-100% scale, where crop condition was described and compared with control plants and plants after standard herbicide application.

Phytotoxicity of whole symptoms of injuries observed on the crop plants. Recording all the symptoms of possible phytotoxic effect of tested product, mainly: changes in the growth (plant height, tillering, dates of succeeding growth stages), thinning out of plants, discolorations (with-out destruction of plant tissue), necroses, deformations, yield quantity and quality. The occurrence and intensity of outside symptoms of crop damages were determined using 0-100 % scale (0 % = no damage; 100 % = total plant destruction).

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

Applications methods and rates
The application was conducted with a knapsack sprayer –BACCAI and BOSPHO.
Tested herbicide was applied post-emergence at the growth stage:

Winter oilseed rape
Apply post-emergence at the crop stage from BBCH 10 to BBCH 18.

The product AMINO 30 SL was used at the following rates:
0,267 L/ha; 0,534 L/ha
Runway at rates 0,267 L/ha was used as a reference product along with the 2N rate 0,534 L/ha.

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

Experiment pattern:

Winter oilseed rape in Poland 2023-2024

No	Code name	Application code	Rate l/ha	Other rate (a.s g/ha)	Growth stage (BBCH)
1	Untreated				
2	AMINO 30 SL	A	0,267 L/ha	8,01	BBCH 10-18
3	AMINO 30 SL	A	0,534 L/ha	16,02	BBCH 10-18
4	Runway	A	0,267 L/ha	8,01	BBCH 10-18
5	Runway	A	0,534 L/ha	16,02	BBCH 10-18

Poland 2023-2024

Report code	A.T/2023/042/RZO	A.T/2023/043/RZO	AH/23/RO/35/Zł/01	AH/23/RO/35/Pr/02/b	AH/23/RO/35/Br/03	AH/23/RO/35/Ma/04	AH/23/RO/35/JaW/05	AH/23/RO/35/Ka/06	AH/23/RO/35/Da/07
Location	Laskowni-ca Mała / Poland	Zamarte / Poland	Złotniki / Poland	Przybroda / Poland	Brody / Poland	Machary / Poland	Janowiec Wielkopol-ski / Poland	Kaźmierz / Poland	Dalekie / Poland
Plant/cultivar	Winter oilseed rape / Kuga	Winter oilseed rape / ES DESIRIO	Winter oilseed rape / Architect	Winter oilseed rape / SY Florian	Winter oilseed rape / Ambassa-dor	Winter oilseed rape / Graf	Winter oilseed rape / Berny	Winter oilseed rape / Dominator	Winter oilseed rape / Chrobry
Seeding date	25.08.2023	02.09.2023	06.09.2023	09.09.2023	31.08.2023	09.09.2023	28.08.2023	25.08.2023	28.08.2023
Seeding rate	2,8 kg/ha	2,2 kg/ha	3 kg/ha	3,1 kg/ha	3,6 kg/ha	3 kg/ha	3 kg/ha	3 kg/ha	2,9 kg/ha
Forecrop	winter barley	spring barley	spring barley	winter barley	winter wheat	winter wheat	winter barley	spring barley	spring wheat

Type of sprayer	BACCAI	BACCAI	BOSPHO	BOSPHO	BOSPHO	BOSPHO	BOSPHO	BOSPHO	BOSPHO
Date of treatment (A)	29.09.2023	29.09.2023	02.10.2023	02.10.2023	29.09.2023	05.10.2023	05.10.2023	02.10.2023	02.10.2023
Plant development phase (A)	BBCH 14-16	BBCH 15-17	BBCH 13-14	BBCH 13-14	BBCH 14	BBCH 14	BBCH 16	BBCH 16	BBCH 16-17
Soil type	loamy sand	sandy loam	loamy sand	loamy sand	loamy sand	loamy sand	loamy sand	loamy sand	loamy sand
Soil pH	6,3	6,6	5,9	6	6,6	5,9	6	6,1	5,9
Water volume (l/ha)	200	300	250	250	230	250	250	250	250
Plot size	2,5x11=27,5m^2	2,5x8=20m^2	2,5x10=25 m^2	2,5x10=25m^2	2,5x9=22,5 m^2	2x10=20m^2	2x10=20m^2	2,5x10=25 m^2	2,5x10=25 m^2

Table 3.4-3: Phytotoxicity of product

Winter oilseed rape

Postemergence use

Phytotoxicity observations were conducted in total 18 trials (9 efficacy and 9 selectivity) trials in 2023-2024 in Poland on wide range of commercially grown varieties. Phytotoxic effects were not observed in any of 9 efficacy trials. In 9 selectivity trials, phytotoxic effects were not observed as well, except one case from report A.T/2023/042/RZO. The site of this trial was sown with winter oilseed rape variety Kuga. The tested product caused plant deformation, which was reported during first spring assessment on 175 DA-A. The average damage rate of AMINO 30 SL 1N dose 0,267 L/ha was 6,3% and 16,3% of 2N dose 0,534 L/ha. The phytotoxic effects were observed as well on reference product Runway at the very same observation timing of 175 DA-A. The average damage rate of Runway 1N dose 0,267 L/ha was 10% and 17,5% of 2N dose 0,534 L/ha. Phytotoxicity symptoms disappeared throughout further course of trial A.T/2023/042/RZO, which is confirmed by 0% phytotoxic effect rate in all treated plots 28 days later on 203 DA-A. Moreover, the phytotoxicity observed in this trial left no impact on yield quality and quantity. It can be stated that tested product AMINO 30 SL is safe for winter oilseed rape.

Number of trials with…		**Selectivity trials (9 trials)**				**Efficacy trials (9 trials)**	
		AMINO 30 SL		**Runway**		**AMINO 30 SL**	**Runway**
		N	**2N (or other)**	**N**	**2N (or other)**	**N**	**N**
Maximum of phytotoxicity recorded during the trials	0% to 5%	0	0	0	0	0	0
	>5% to 10%	1	0	1	0	0	0
	>10% to 15%	0	0	0	0	0	0
	>15 %	0	1	0	1	0	0
Level of symptoms at the last assessments	0% to 5%	0	0	0	0	0	0
	>5% to 10%	0	0	0	0	0	0
	>10% to 15%	0	0	0	0	0	0
	>15 %	0	0	0	0	0	0

Phytotoxicity details will be provided in Appendix 6.

Conclusion – Phytotoxicity to host crop

A total of 18 trials (9 efficacy and 9 selectivity) are presented in this dossier for the registration of AMINO 30 SL. All trials were located in the north-east EPPO climatic zone. Trials were conducted according to EPPO Standard PP1/135 (*Phytotoxicity assessment*).
In the 2023–2024 trials conducted in the north-east EPPO zone, no phytotoxicity symptoms were observed in winter oilseed rape across nine efficacy trials and eight of nine specific selectivity trials. These trials assessed a single application of AMINO 30 SL at BBCH 10–18, using both the proposed rate (0.267 L/ha) and a double rate (0.534 L/ha).
In one selectivity trial, phytotoxic symptoms were recorded with a similar frequency and comparable maximum severity for both AMINO 30 SL and the reference product. The level of damage observed for AMINO 30 SL was 6.3% at 0.267 L/ha and 16.3% at 0.534 L/ha. For the reference product RUNWAY, the average damage levels were 10% (0.267 L/ha) and 17.5% (0.534 L/ha), assessed at the same time point (175 DA-A).The phytotoxicity caused by AMINO 30 SL was transient, completely disappearing by the last assessment.

3.4.2 Effect on the yield of treated plants or plant product (KCP 6.4.2)

Influence of AMINO 30 SL on the yield was evaluated in selectivity research. The yield quantity was evaluated on the basis of harvested grains quantity from one hectare (t/ha) adjusted to moisture content. The yield quality was evaluated on the basis of thousand grains weight (TKW), weight of hectolitre of grains (HLW) and oil content (OILCON). The influence of the tested product on quantity and quality of grains was evaluated in 9 field crop safety experiments in Poland in 2023-2024. There were no differences between the treatment objects and standard. Details of the data shows tables below.

Table 3.4.2-1. The influence of AMINO 30 SL on yield quantity [t/ha]

Crop code	Report code	Assessment date	Days after application DA-A	Crop stage majority	No.	1	2	3	4	6	LSD (P=.05)
					Name	Untreated Check	AMINO 30 SL	AMINO 30 SL	Runway	Runway	
					Rate (L/ha)		0,267	0,534	0,267	0,534	
Winter oilseed rape t/ha	**A.T/2023/042/RZO**	15.07.2024	290 DA-A	BBCH 99		4,99	4,81	4,96	4,86	4,80	0,171
	A.T/2023/043/RZO	30.07.2024	305 DA-A	BBCH 99		4,44	4,52	4,49	4,34	4,81	0,479
	AH/23/RO/35/Zl/01	09.07.2024	281 DA-A	BBCH 89		3,4	3,6	3,4	3,5	3,7	0,27
	AH/23/RO/35/Pr/02/b	10.07.2024	282 DA-A	BBCH 89		3,4	3,7	3,4	3,8	3,5	0,38
	AH/23/RO/35/Br/03	15.07.2024	290 DA-A	BBCH 89		3,4	3,6	3,6	3,6	3,6	0,16
	AH/23/RO/35/Ma/04	13.07.2024	282 DA-A	BBCH 89		3,3	3,3	3,4	3,3	3,4	0,12
	AH/23/RO/35/JaW/05	13.07.2024	282 DA-A	BBCH 89		3,7	3,8	3,7	3,6	3,7	0,25
	AH/23/RO/35/Ka/06	15.07.2024	287 DA-A	BBCH 89		4,0	4,0	3,9	3,9	4,1	0,18
	AH/23/RO/35/Da/07	10.07.2024	282 DA-A	BBCH 89		3,7	3,6	3,7	3,7	3,8	0,16
				Average		3,81	3,88	3,84	3,84	3,93	
				Min.		3,30	3,30	3,40	3,30	3,40	
				Max.		4,99	4,81	4,96	4,86	4,81	

Table 3.4-4: Relationship between phytotoxicity and yield.

Test report	Variety	Maximum phyto. at 1N rate (%) (DAA)		Maximum phyto. at 2N (or other) rate (%) (DAA)		Yield in the untreated control Absolute figures (t/ha)	Yield at 1N as % of untreated		Yield at 2N (or other) rate as % of untreated	
		AMINO 30 SL	Runway	AMINO 30 SL	Runway		AMINO 30 SL	Runway	AMINO 30 SL	Runway
A.T/2023/042/RZO	Kuga	6,3 (175 DA-A)	10,0 (175 DA-A)	16,3 (175 DA-A)	17,5 (175 DA-A)	4,99	96,3	97,3	99,3	96,2

Standard – Runway
For winter oilseed rape a total of 9 selectivity trials were carried out in 2023-2024 in Poland. Phytotoxicity was not observed, except occurrence in 1 out of 9 selectivity studies. The product caused plant deformation, which was reported during first spring assessment on 175 DA-A. The symptoms concern tested item AMINO 30 SL (1N and 2N dose rates) and reference product Runway (1N and 2N dose rates).
In this trial, other assessments in the rest of timings have shown safeness for winter oilseed rape.
The phytotoxicity symptoms caused no negative effect on the yield of winter oilseed rape.

Conclusion - Effect on the yield of treated plants or plant product

In the trial where AMINO 30 SL caused phytotoxic symptoms, the mean yield at the single rate (N) was 96.3% (a 3.7% reduction) relative to the untreated control, and 99.3% (a 0.7% reduction) at the double rate (2N). In comparison, the reference product resulted in yields of 97.3% (a 2.7% reduction) at N and 96.2% (a 3.8% reduction) at 2N, relative to the untreated control.
Although some phytotoxicity symptoms were observed, the yield loss remained below 5%. Notably, the yield at the double rate (2N) of AMINO 30 SL was higher than at the lower rate (N), suggesting that the symptoms did not negatively affect yield.
Based on these results, AMINO 30 SL applied at 0.267 L/ha can be considered safe for winter oilseed rape.

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

9 field experiments to obtain selectivity conducted in 2023-2024 in Poland on winter oilseed rape revealed no negative impact of AMINO 30 SL on quality of yield.

Table 3.4.3.1-1. The influence of the AMINO 30 SL on quality of yield
Winter oilseed rape moisture content [%]

Crop code	Report code	Assessment date	Days after application DA-A	Crop stage majority	No.	1	2	3	4	6	LSD (P=.05)
					Name	Untreated Check	AMINO 30 SL	AMINO 30 SL	Runway	Runway	
					Rate (L/ha)		0,267	0,534	0,267	0,534	
Winter oilseed rape moisture content %	**A.T/2023/042/RZO**	15.07.2024	290 DA-A	BBCH 99		5,45	5,55	5,53	5,60	5,63	0,165
	A.T/2023/043/RZO	30.07.2024	305 DA-A	BBCH 99		6,70	6,73	6,70	6,63	6,70	0,102
	AH/23/RO/35/Zl/01	09.07.2024	281 DA-A	BBCH 89		9,10	9,03	9,10	9,10	9,08	0,131
	AH/23/RO/35/Pr/02/b	10.07.2024	282 DA-A	BBCH 89		8,95	8,88	8,90	9,05	9,05	0,146
	AH/23/RO/35/Br/03	15.07.2024	290 DA-A	BBCH 89		7,43	7,48	7,55	7,38	7,48	0,253
	AH/23/RO/35/Ma/04	13.07.2024	282 DA-A	BBCH 89		6,73	6,70	6,80	6,68	6,73	0,232
	AH/23/RO/35/JaW/05	13.07.2024	282 DA-A	BBCH 89		7,45	7,48	7,63	7,45	7,53	0,222
	AH/23/RO/35/Ka/06	15.07.2024	287 DA-A	BBCH 89		6,45	6,28	6,33	6,33	6,43	0,132
	AH/23/RO/35/Da/07	10.07.2024	282 DA-A	BBCH 89		6,52	6,45	6,53	6,43	6,53	0,130
				Average		7,20	7,18	7,23	7,18	7,24	
				Min.		5,45	5,55	5,53	5,60	5,63	
				Max.		9,10	9,03	9,10	9,10	9,08	

Table 3.4.3.1-2. The influence of the AMINO 30 SL on quality of yield
Winter oilseed rape thousand weight grain [g]

Crop code	Report code	Assessment date	Days after application DA-A	Crop stage majority	No.	1	2	3	4	6	LSD (P=.05)
					Name	Untreated Check	AMINO 30 SL	AMINO 30 SL	Runway	Runway	
					Rate (L/ha)		0,267	0,534	0,267	0,534	
Winter oilseed rape TKW g	**A.T/2023/042/RZO**	26.07.2024	301 DA-A	BBCH 99		4,45	4,68	4,75	5,53	4,73	0,247
	A.T/2023/043/RZO	14.08.2024	320 DA-A	BBCH 99		5,28	4,98	5,35	5,28	5,13	0,494
	AH/23/RO/35/Zl/01	17.07.2024	289 DA-A	BBCH 99		5,46	5,64	5,44	5,52	5,47	0,311
	AH/23/RO/35/Pr/02/b	15.07.2024	287 DA-A	BBCH 99		5,76	5,87	5,80	5,87	5,82	0,289
	AH/23/RO/35/Br/03	17.07.2024	292 DA-A	BBCH 99		5,29	5,37	5,27	5,35	5,28	0,171
	AH/23/RO/35/Ma/04	18.07.2024	287 DA-A	BBCH 99		4,92	4,94	4,90	4,94	4,93	0,114
	AH/23/RO/35/JaW/05	18.07.2024	287 DA-A	BBCH 99		5,39	5,47	5,43	5,42	5,43	0,182
	AH/23/RO/35/Ka/06	19.07.2024	291 DA-A	BBCH 99		4,74	4,79	4,67	4,66	4,70	0,169
	AH/23/RO/35/Da/07	17.07.2024	289 DA-A	BBCH 99		4,72	4,78	4,68	4,75	4,75	0,181
				Average		5,11	5,17	5,14	5,26	5,14	
				Min.		4,45	4,68	4,67	4,66	4,70	
				Max.		5,76	5,87	5,80	5,87	5,82	

Table 3.4.3.1-3. The influence of the AMINO 30 SL on quality of yield
Winter oilseed rape (HLW = weight 100 Ltr (hl))

Crop code	Report code	Assessment date	Days after application DA-A	Crop stage majority	No.	1	2	3	4	6	LSD (P=.05)
					Name	Untreated Check	AMINO 30 SL	AMINO 30 SL	Runway	Runway	
					Rate (L/ha)		0,267	0,534	0,267	0,534	
Winter oilseed rape HLW kg	**A.T/2023/042/RZO**	26.07.2024	301 DA-A	BBCH 99		64,30	64,35	64,40	64,33	64,08	0,359
	A.T/2023/043/RZO	14.08.2024	320 DA-A	BBCH 99		62,55	62,48	62,20	62,83	62,58	0,725
	AH/23/RO/35/Zl/01	17.07.2024	289 DA-A	BBCH 99		64,70	65,70	64,00	64,70	66,13	2,181
	AH/23/RO/35/Pr/02/b	15.07.2024	287 DA-A	BBCH 99		58,50	57,50	57,05	59,78	59,83	3,381
	AH/23/RO/35/Br/03	17.07.2024	292 DA-A	BBCH 99		63,68	63,28	63,93	63,58	64,55	1,239
	AH/23/RO/35/Ma/04	18.07.2024	287 DA-A	BBCH 99		67,93	66,68	66,20	65,58	65,68	1,850
	AH/23/RO/35/JaW/05	18.07.2024	287 DA-A	BBCH 99		64,38	66,48	65,48	65,13	66,00	2,285
	AH/23/RO/35/Ka/06	19.07.2024	291 DA-A	BBCH 99		66,58	67,20	66,93	67,30	66,30	2,080
	AH/23/RO/35/Da/07	17.07.2024	289 DA-A	BBCH 99		69,30	68,88	68,15	68,68	68,55	1,306
				Average		64,66	64,73	64,26	64,66	64,86	
				Min.		58,50	57,50	57,05	59,78	59,83	
				Max.		69,30	68,88	68,15	68,68	68,55	

Table 3.4.3.1-4. The influence of the AMINO 30 SL on quality of yield
Winter oilseed rape oil content [%]

Crop code	Report code	Assessment date	Days after application DA-A	Crop stage majority	No.	1	2	3	4	6	LSD (P=.05)
					Name	Untreated Check	AMINO 30 SL	AMINO 30 SL	Runway	Runway	
					Rate (L/ha)		0,267	0,534	0,267	0,534	
Winter oilseed rape oil content %	**A.T/2023/042/RZO**	26.07.2024	301 DA-A	BBCH 99		44,70	45,10	44,83	44,60	44,53	0,483
	A.T/2023/043/RZO	14.08.2024	320 DA-A	BBCH 99		43,95	44,08	44,33	44,40	43,55	0,657
	AH/23/RO/35/Zl/01	25.07.2024	297 DA-A	BBCH 99		44,20	44,30	44,10	44,10	44,20	-
	AH/23/RO/35/Pr/02/b	25.07.2024	297 DA-A	BBCH 99		44,20	44,20	44,10	44,20	44,10	-
	AH/23/RO/35/Br/03	25.07.2024	300 DA-A	BBCH 99		42,60	43,20	42,90	43,10	42,80	-
	AH/23/RO/35/Ma/04	25.07.2024	294 DA-A	BBCH 99		42,70	42,90	42,80	42,90	42,90	-
	AH/23/RO/35/JaW/05	25.07.2024	294 DA-A	BBCH 99		44,10	44,20	44,20	44,10	44,00	-
	AH/23/RO/35/Ka/06	25.07.2024	297 DA-A	BBCH 99		42,60	42,50	42,90	42,80	42,50	-
	AH/23/RO/35/Da/07	25.07.2024	297 DA-A	BBCH 99		42,70	42,60	42,90	42,60	42,80	-
				Average		43,53	43,68	43,67	43,64	43,49	
				Min.		42,60	42,50	42,80	42,60	42,50	
				Max.		44,70	45,10	44,83	44,60	44,53	

Conclusion – Yield quality

The data showed that the application of AMINO 30 SL at the two rates tested (0.267 L/ha and 0.534 L/ha) has no adverse effect on the quality parameters of winter oilseed rape yield compared to the untreated control and the reference product. For all measured parameters, moisture content, thousand kernel weight (TKW), hectolitre weight (HLW) and oil content, the values for the AMINO 30 SL treatments were either comparable to or slightly higher than those of the control and the standard product.

3.4.4 Effects on transformation processes (KCP 6.4.4)

Lack of additional tests in this range. Aminopyralid comprising in this product has been applied for many years, not only in Poland but also in the other countries of Europe.
Following the EPPO Standard PP/1 243(2) *Effects of plant protection products on transformation processes*, in Applicant's opinion, there is no need to provide data on possible effects of the test product on transformation processes. AMINO 30 SL is a herbicide product to be used at postemergence crop condition at BBCH 10-18, which is considered to be long-term to harvest. Based on submitted data from total of 9 efficacy and 9 selectivity trials conducted in Poland in 2023-2024 season, the product is safe for winter oilseed rape, causing no phytotoxic effects and furthermore, causing no negative impact on yield quality and quantity. Moreover, the residue data Part B, Section 7 show that at the proposed application rate of AMINO 30 SL residues below the LOQ are found in winter oilseed rape. In that case no further testing is needed. It can be stated that the output from winter oilseed rape treated with AMINO 30 SL is safe for transformation processes.
According to *Reasoned opinion on the modification of the existing MRL for aminopyralid in rape seed, EFSA Journal 2012;10(9):2894*
The toxicological profile of aminopyralid was assessed in the DAR by the rapporteur Member State the United Kingdom and the data were sufficient to propose an ADI of 0.26 mg/kg bw per day and an ARfD of 0.26 mg/kg bw. Pending the finalisation of the peer review process, the assessment and the derived toxicological reference values should be considered as provisional.
Specific studies investigating the magnitude of aminopyralid residues in processed commodities are not required, as the residues expected in primary crops are low and the total theoretical maximum daily intake (TMDI) is below the trigger value of 10 % of the ADI.

Conclusion - Effects on transformation processes

Given that aminopyralid has herbicidal activity and is therefore not expected to affect yeast, and considering the long history of safe use of similar products containing this active substance in Europe, the risk of any impact on processing procedures is considered low. Overall, despite the absence of specific data on AMINO 30 SL, the evaluator concludes that its proposed use is unlikely to negatively affect processing procedures, including transformation processes.

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

Lack of additional tests in this range. According to EPPO standard PP 1/135(4) *Phytotoxicity assessment* in case of herbicide there no data on plant parts for propagation are required. Since the propagation material of winter oilseed rape are the seeds and the claimed application timing of AMINO 30 SL is the postemergence crop stage BBCH 10-18, which is before inflorescence initiation, the lack of additional tests in range is justified.
There is no information available pointing to presence of any limitations to using of AMINO 30 SL in seed crops of winter oilseed rape.
In the course of studies carried out in Poland in the season of 2023 on product AMINO 30 SL, the herbicide has not been observed to have any significant influence on yield and yield quality of winter oilseed rape. What is more, there have been no phytotoxicity symptoms accounted for in various cultivars of winter oilseed rape. The residue data Part B, Section 7 demonstrate that at the proposed application rate of AMINO 30 SL residues below the LOQ are found in winter oilseed rape. In that case no further testing is needed.

The product may be used in seed crops of winter oilseed rape.

Conclusion - Impact on treated plants or plant products to be used for propagation

According to EPPO Standard PP 1/135(4), when post-emergence herbicides are applied after growth stage BBCH 30, data on plant parts intended for propagation (e.g., seeds, tubers) are required if such parts are used for further propagation.
Amino 30 SL is proposed for use as a post-emergence herbicide at growth stages BBCH 10–18 in winter oilseed rape, with a proposed maximum individual dose of 0.267 L/ha. A comparable product RUNWAY, which delivers the same amount of aminopyralid, is authorized in Poland for use in oilseed rape without any known issues related to propagation. Moreover, the active substance has a long-standing record of safe use in oilseed rape, with no reported propagation-related concerns.
Results from selectivity trials further support the safety of the product, as no adverse effects on the crop were observed, confirming that AMINO 30 SL poses no risk to plant parts intended for propagation.

Summary and conclusion

The submitted efficacy data (reports from 9 field trials) and additional information fulfil requirements and conditions determined in the following EPPO guidelines:
- PP 1/135 (4) Phytotoxicity assessment
- PP 1/152 (4) Design and analysis of efficacy evaluation trials
- PP 1/181 (5) Conduct and reporting of efficacy evaluation trials including good experimental practice

They were carried out on the field in the conditions of natural weeds infestation. The efficacy trials were concluded according to the EPPO standards:
- PP 1/049 (3) Weeds in brassica oil crops

The studies fulfil also requirements of the Commission Regulation (EU) No 540/2011 of 25 May 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards the data requirements for plant protection products.

The formulation of AMINO 30 SL is soluble concentrate (SL) and it comprises active substance amino-pyralid 30 g/l . The applicant submitted 9 reports in total in winter oilseed rape showing the results in research into product efficacy carried out in 2023 in winter oilseed rape.
The obtained data in performed trials show that AMINO 30 SL provides benefits against the most important weeds in winter oilseed rape as shown in the tables below.

The following table describes the effectiveness of weeds

S (Susceptible)	> 85%
MS (Moderately Susceptible)	70 – 85%
MT (Moderately Tolerant)	60 – 70%
T (Tolerant)	< 60%

winter oilseed rape autumn application 2023

No.	Product dose (L/ha)	EPPO code	Scientific name	Average (%)	Efficacy
1.	AMINO 30 SL 0,16 L/ha	CENCY	*Centaurea cyanus*	87,52	S
		PAPRH	*Papaver rhoeas*	88,70	S
		MATIN	*Tripleurospermum inodorum*	91,54	S
		VIOAR	*Viola arvensis*	81,97	MS
		MATCH	*Matricaria chamomilla*	91,77	S

		CAPBP	*Capsella bursa-pastoris*	81,58	MS
2.	AMINO 30 SL 0,2 L/ha	CENCY	*Centaurea cyanus*	91,84	S
		PAPRH	*Papaver rhoeas*	93,68	S
		MATIN	*Tripleurospermum inodorum*	94,20	S
		VIOAR	*Viola arvensis*	86,69	S
		MATCH	*Matricaria chamomilla*	94,87	S
		CAPBP	*Capsella bursa-pastoris*	85,36	S
3.	AMINO 30 SL 0,267 L/ha	CENCY	*Centaurea cyanus*	96,60	S
		PAPRH	*Papaver rhoeas*	98,06	S
		MATIN	*Tripleurospermum inodorum*	97,32	S
		VIOAR	*Viola arvensis*	90,98	S
		MATCH	*Matricaria chamomilla*	98,46	S
		CAPBP	*Capsella bursa-pastoris*	89,39	S

Herbicide AMINO 30 SL has demonstrated good crop tolerance to winter oilseed rape. Therefore concluded that AMINO 30 SL is safe usage at proposed rate and this support the label claim for the use in winter oilseed rape.

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

According to the above, the plant protection product AMINO 30 SL can be approved to the market and use in Poland according to proposed range of use – GAP
Based on submitted data the following regulation on the label is proposed:
Poland:
Winter oilseed rape
Recommended dose at: once a season AMINO 30 SL 0,2-0,267 l/ha at BBCH 10-18.

Recommended volume of water 200-300 l/ha
Recommended medium droplet spraying

Use of AMINO 30 SL according to the proposed GAP does not represent a hazard to rotational crops and does not justify a specific labelling. AMINO 30 SL is not persistent in soil or is it taken up by succeeding crops.

3.5 Observations on other undesirable or unintended side-effects (KCP 6.5)

3.5.1 Impact on succeeding crops (KCP 6.5.1)

According to EPPO guidance PP 1/207 worst case NOER from Seedling Emergence studies (L. Kowalczyk, Study code: G-59-24 and L. Kowalczyk, Study code: G-93-24):

Table 3.5-1: Recalculated NOER-value for test product

Crop	Worst case NOER from seedling emergence study [ml/ha]	Recalculated NOER to g/ha using product's density = 1.0220 g/ml	Recalculated NOER from g/ha to mg/kg soil using factor 750 (5 cm depth and 1.5 g/cm soil's density)
Pisum sativum	19,2	19,62	0,0262
Solanum lycopersicum	19,2	19,62	0,0262
Daucus carota	120	122,64	0,1635
Allium cepa	120	122,64	0,1635
Avena sativa	300	306,60	0,4088
Triticum aestivum	300	306,60	0,4088
Beta vulgaris	19,2	19,62	0,0262
Zea Mays	300	306,60	0,4088

Predicted Environmental Concentrations (PEC) for the individual actives are performed with equations (1) and (2) (cfr. EPPO guidance PP 1/207(2)):

(1) $$PECini = \frac{A \cdot (1\text{-}fint)}{100 \cdot d \cdot b}$$

(2) PECact (t) = PECini . e-k.t = PECini . e-t.ln2/DT50

Whereby A = application rate (g active/ha), fint = fraction intercepted by crop cover (40% for oilseed rape at BBCH 10-19), d = depth of soil layer (cm) and bd = bulk density of soil.
DT50 = 35 days – as worst case scenario for product's DT50

Table 3.5-2: PEC-values and TER-calculation of AMINO 30 SL (aminopyralid 30 g/L) based on NOER-values.

Succeeding crop(1)	Days after application(2)	NOER mg/kg soil (3)	PEC(4)				TER(5)			
			mg/kg soil e.g. 5 cm	mg/kg soil e.g. 10 cm	mg/kg soil e.g. 20 cm	mg/kg soil e.g. 30 cm	NOER/PEC e.g. 5 cm	NOER/PEC e.g. 10 cm	NOER/PEC e.g. 20 cm	NOER/PEC e.g. 30 cm
Pisum sativum	1	0,0262	0,2183	0,1092	0,0546	0,0364	0,11984	0,23968	0,47936	0,71903
	10		0,1791	0,0895	0,0448	0,0298	0,14609	0,29217	0,58434	0,87651
	20		0,1469	0,0735	0,0367	0,0245	0,17808	0,35616	0,71232	1,06848
	30		0,1205	0,0603	0,0301	0,0201	0,21708	0,43416	0,86833	-
	40		0,0989	0,0494	0,0247	0,0165	0,26463	0,52925	1,05850	-
	50		0,0811	0,0406	0,0203	0,0135	0,32258	0,64516	-	-
	60		0,0665	0,0333	0,0166	0,0111	0,39323	0,78646	-	-
	70		0,0546	0,0273	0,0136	0,0091	0,47936	0,95871	-	-
	80		0,0448	0,0224	0,0112	0,0075	0,58434	1,16868	-	-
	90		0,0367	0,0184	0,0092	0,0061	0,71232	-	-	-
	100		0,0301	0,0151	0,0075	0,0050	0,86833	-	-	-
	110		0,0247	0,0124	0,0062	0,0041	1,05850	-	-	-
Solanum lycopersicum	1	0,0262	0,2183	0,1092	0,0546	0,0364	0,11984	0,23968	0,47936	0,71903
	10		0,1791	0,0895	0,0448	0,0298	0,14609	0,29217	0,58434	0,87651
	20		0,1469	0,0735	0,0367	0,0245	0,17808	0,35616	0,71232	1,06848
	30		0,1205	0,0603	0,0301	0,0201	0,21708	0,43416	0,86833	-
	40		0,0989	0,0494	0,0247	0,0165	0,26463	0,52925	1,05850	-

Succeeding crop(1)	Days after application(2)	NOER mg/kg soil (3)	PEC(4)				TER(5)			
			mg/kg soil e.g. 5 cm	mg/kg soil e.g. 10 cm	mg/kg soil e.g. 20 cm	mg/kg soil e.g. 30 cm	NOER/PEC e.g. 5 cm	NOER/PEC e.g. 10 cm	NOER/PEC e.g. 20 cm	NOER/PEC e.g. 30 cm
	50		0,0811	0,0406	0,0203	0,0135	0,32258	0,64516	-	-
	60		0,0665	0,0333	0,0166	0,0111	0,39323	0,78646	-	-
	70		0,0546	0,0273	0,0136	0,0091	0,47936	0,95871	-	-
	80		0,0448	0,0224	0,0112	0,0075	0,58434	1,16868	-	-
	90		0,0367	0,0184	0,0092	0,0061	0,71232	-	-	-
	100		0,0301	0,0151	0,0075	0,0050	0,86833	-	-	-
	110		0,0247	0,0124	0,0062	0,0041	1,05850	-	-	-
Daucus carota	1	0,1635	0,2183	0,1092	0,0546	0,0364	0,74899	1,49798	2,99597	4,49395
	10		0,1791	0,0895	0,0448	0,0298	0,91303	-	-	-
	20		0,1469	0,0735	0,0367	0,0245	1,11300	-	-	-
Allium cepa	1	0,1635	0,2183	0,1092	0,0546	0,0364	0,74899	1,49798	2,99597	4,49395
	10		0,1791	0,0895	0,0448	0,0298	0,91303	-	-	-
	20		0,1469	0,0735	0,0367	0,0245	1,11300	-	-	-
Avena sativa	1	0,4088	0,2183	0,1092	0,0546	0,0364	1,87248	3,74496	7,48992	11,23488
Triticum aestivum	1	0,4088	0,2183	0,1092	0,0546	0,0364	1,87248	3,74496	7,48992	11,23488
Beta vulgaris	1	0,0262	0,2183	0,1092	0,0546	0,0364	0,11984	0,23968	0,47936	0,71903
	10		0,1791	0,0895	0,0448	0,0298	0,14609	0,29217	0,58434	0,87651
	20		0,1469	0,0735	0,0367	0,0245	0,17808	0,35616	0,71232	1,06848
	30		0,1205	0,0603	0,0301	0,0201	0,21708	0,43416	0,86833	-
	40		0,0989	0,0494	0,0247	0,0165	0,26463	0,52925	1,05850	-
	50		0,0811	0,0406	0,0203	0,0135	0,32258	0,64516	-	-
	60		0,0665	0,0333	0,0166	0,0111	0,39323	0,78646	-	-
	70		0,0546	0,0273	0,0136	0,0091	0,47936	0,95871	-	-
	80		0,0448	0,0224	0,0112	0,0075	0,58434	1,16868	-	-
	90		0,0367	0,0184	0,0092	0,0061	0,71232	-	-	-
	100		0,0301	0,0151	0,0075	0,0050	0,86833	-	-	-
	110		0,0247	0,0124	0,0062	0,0041	1,05850	-	-	-
Zea mays	1	0,4088	0,2183	0,1092	0,0546	0,0364	1,87248	3,74496	7,48992	11,23488

(1) possible following crops in a regular crop rotation
(2) adequate value for following crop in a regular crop rotation
(3) NOER-values of succeeding crops
(4) PEC (soil depth e.g. 5/20 cm)
(5) TER (soil depth e.g. 5/20 cm)

The TER values of AMINO 30 SL do exceed a trigger value 1, then no further trials are required when:

	Date of sowing	Crop rotation
		DT50= 35
Crop		
Pisum sativum	April	Normal crop rotation after soil cultivation on 5 cm depth before sowing
Solanum lycopersicum	May	Normal crop rotation after soil cultivation on 5 cm depth before sowing

Daucus carota	April	Normal crop rotation after soil cultivation on 5 cm depth before sowing
Allium cepa	April	Normal crop rotation after soil cultivation on 5 cm depth before sowing
Avena sativa	March/April	Normal crop rotation after soil cultivation on 5 cm depth before sowing
Triticum aestivum	September/October/March/April	Normal crop rotation after soil cultivation on 5 cm depth before sowing
Beta vulgaris	April	Normal crop rotation after soil cultivation on 5 cm depth before sowing
Zea Mays	April/May	Normal crop rotation after soil cultivation on 5 cm depth before sowing

Labelling in Succeeding crop sections:
- after soil cultivation 5 cm deep before sowing you can sow all crops,
- without ploughing: oilseed rape.

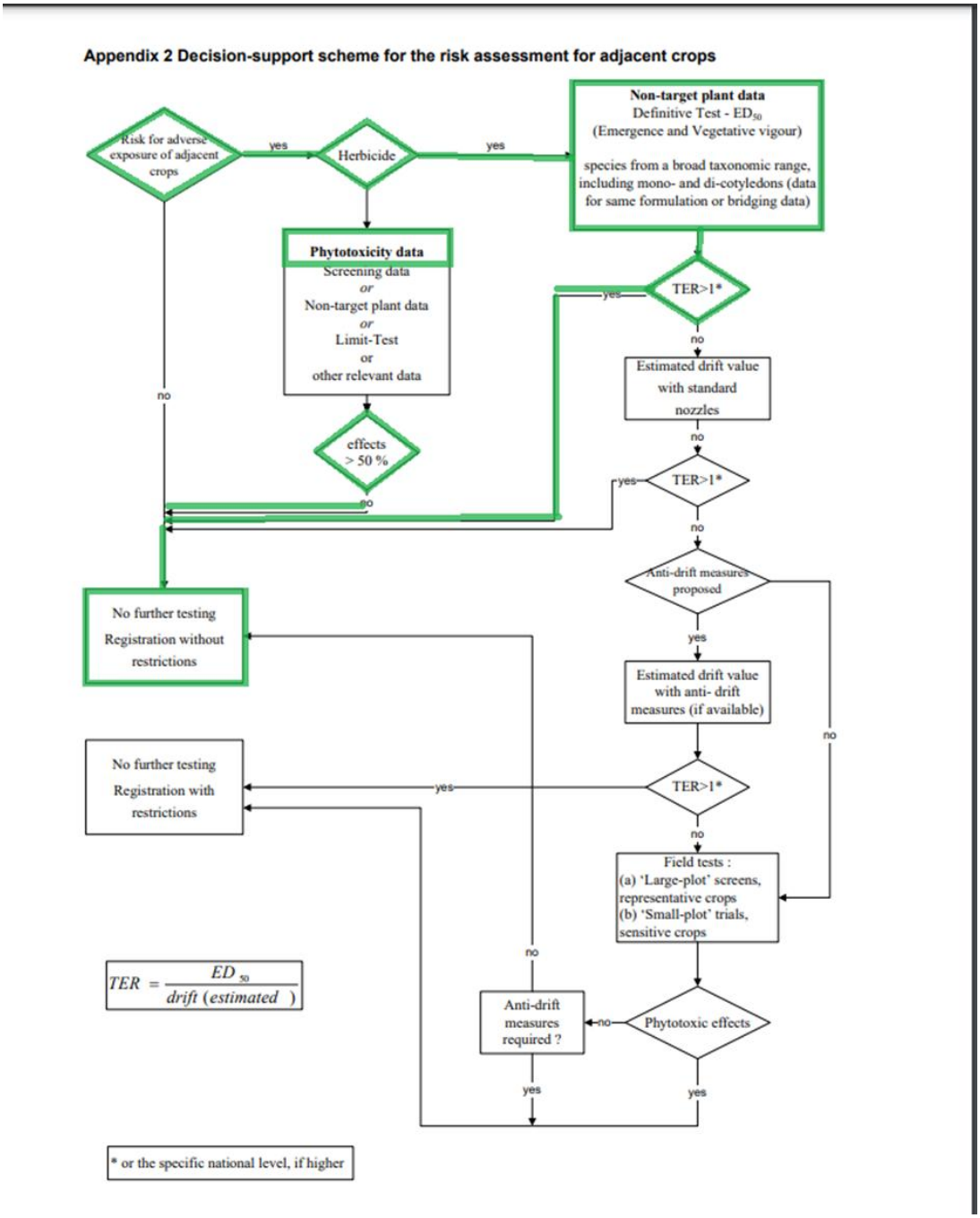
In case of crop failure, as a succeeding crop you can sow:
- oilseed rape, cereals and maize after soil cultivation 5 cm deep,
- vegetables, root vegetables, bulbs, legumes and root crops 110 days after application and after soil cultivation 5 cm deep.

Conclusion - Impact on succeeding crops

The applicant considered the following conditions for sowing succeeding crops acceptable:
Crop Failure:
In the event of crop failure, oilseed rape, cereals, and maize may be sown after cultivating the soil to a depth of 5 cm. Alternatively, vegetables, root vegetables, bulbs, legumes, and other root crops may be sown 110 days after the application of AMINO 30 SL, provided the soil is cultivated to a depth of 5 cm.
Rotational Crops:
If the crop is harvested as normal, all crops may be sown after cultivating the soil to a depth of 5 cm, except for oilseed rape, which may be sown even without soil cultivation.

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

No specific studies were conducted to fill this data point.
According to EPPO 1/256 - Decision-support scheme for the risk assessment for adjacent crops - Toxicity values are compared with predicted environmental concentrations to develop a Toxicity:Exposure-Ratio (TER is calculated as the ED50-value divided by the estimated drift value Appendix 2. Progression to the next tier is warranted if the safety margin is not met, while testing is stopped if the safety margin is met or exceeded.
Tier 0: If no adverse exposure of adjacent crops will occur under field conditions (e.g. seed treatment, use of granules, application by watering can) no further testing is necessary.
Tier 1: If a relevant exposure is likely. If the plant protection product causes no phytotoxic symptoms on the plant species tested, no further testing is necessary.
Tier 2: If phytotoxicity is observed, dose-response relationships for species representing plant families for which significant negative activity has been found should be generated to quantify the level of effect using both soil and foliar exposure scenarios.
AMINO 30 SL analyse for decision if further testing is necessary.
According EPPO 1/256, Appendix 2 Decision-support scheme for the risk assessment for adjacent crops on green applicant marked path of analyse.



AMINO 30 SL is herbicide so there is risk for adverse exposure of adjacent crops. When analysing phytotoxicity of AMINO 30 SL in winter oilseed rape, there was only one report with the phytotoxicity symptoms in this crop in all efficacy and selectivity trials conducted in Poland.

For all data and details with assessment of the risk for non-target plants due to the use of AMINO 30 SL please refer to section 9 Ecotoxicology point 9.10.
In all efficacy trails no effects on non-target organisms were observed.
When phytotoxicity effects are below 50% no further testing is needed. Registration without restrictions.
When Non target plant data TER >1 no further testing is needed. Registration without restrictions.

Conclusion - Impact on other plants including adjacent crops

AMINO 30 SL poses no unacceptable risk to non-target terrestrial plants according to the label with ap-

propriate buffer zone (1m and use of 50% drift reducing nozzles or 5m with no drift reducing technology to non-agricultural land).

Tank cleaning

Cleaning of equipment should be conducted according to the flowing procedure:

- Immediately after spraying drain tank completely. Any contamination on the outside of the spraying equipment should be removed by washing with clean water.
- Rinse inside of tank with clean water and flush through boom and hoses using at least one tenth of the spray tank volume. Drain completely.
- Fill the tank with clean water and add one of the cleaning agents recommended for clean-up of spraying equipment. Agitate for a minimum of 10 min. and then flush the boom and hoses with the cleaning solution. Nozzles and filters should be removed and cleaned up separately with a recommended cleaning agent.
- Rinse the tank with clean water and flush through the boom and hoses using at least one tenth of the spray tank volume. Drain tank completely.
- AMINO 30 SL is non-corrosive to equipment, non-flammable and non-volatile.

According to Report Górka I., 2024, Study code: ICB/92/2024 Determination of physicochemical properties of AMINO 30 SL before and after accelerated storage test, the effectiveness rate of tank cleaning from AMINO 30 SL is very high (99,73%), moreover it shows that number of rinse procedures does not influence the effectiveness rate. Therefore, it may be stated that single rinse procedure would be enough to clean the tank at maximum level. The results of tank cleaning from AMINO 30 SL product are shown in the picture below:

Table 22. Percentage of aminopyralid removed from the bottle.

	Active ingredient removed from the bottle [%]			
	Measurement 1	Measurement 2	Measurement 3	Average
Solution 1 (Single rinse procedure)	>99.73	>99.73	>99.73	>99.73
Solution 2 (Double rinse procedure)	>99.73	>99.73	>99.73	>99.73
Solution 3 (Triple rinse procedure)	>99.73	>99.73	>99.73	>99.73

Conclusion -Tank cleaning

The case presented by the applicant is acceptable and no further data are required.

3.5.3 Effects on beneficial and other non-target organisms (KCP 6.5.3)

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

Conclusion - Effects on beneficial and other non-target organisms

The case presented by the applicant is acceptable and no further data are required.

Compatibility with current management practices including IPM

Not applicable

Summary and conclusion

AMINO 30 SL resulted to be highly tolerant to use in winter oilseed rape. It may be stated that AMINO 30 SL is safe to use at proposed rate and this supports the label claim for the use in winter oilseed rape. Undesirable effects are not expected on succeeding crops, adjacent crop and beneficial organisms.
Use of AMINO 30 SL according to the proposed GAP does not represent a hazard to rotational crops and does not justify a specific labelling. AMINO 30 SL is not persistent in soil nor is it taken up by succeeding crops.

3.6 Other/special studies

No performed

3.7 List of test facilities including the corresponding certificates

Table 3.5-5: List of test facilities

Test facility	Address	Certificate (Yes or No)
A.T Sp. z o.o.	ul. Przemysłowa 3 88-300 Mogilno Poland	Yes
Poznań University of Life Sciences, Research Center Złotniki	ul. Wojska Polskiego 28 60-637 Poznań Poland	Yes

Appendix 1 Lists of data considered in support of the evaluation

List of data submitted by the applicant and relied on

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 6 KCP 6.2	Joanna Guzińska	2023	Efficacy evaluation of herbicide AMINO 30 SL when applied into winter oilseed rape to control of weeds, Poland, 2023. A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno Poland Report no.: A.T/2023/040/RZO GEP - yes Unpublished	N	PUH CHEMIROL Sp. z o.o.
KCP 6 KCP 6.2	Joanna Guzińska	2023	Efficacy evaluation of herbicide AMINO 30 SL when applied into winter oilseed rape to control of weeds, Poland, 2023. A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno Poland Report no.: A.T/2023/041/RZO GEP - yes Unpublished	N	PUH CHEMIROL Sp. z o.o.
KCP 6 KCP 6.2	Artur Strzeliński	2023	The evaluation effiicacy of herbicide AMINO 30 SL in the control on weeds in the cultivation on winter rape. Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland Report no.: AH/23/RO/35/Mr/01 GEP - yes Unpublished	N	PUH CHEMIROL Sp. z o.o.
KCP 6 KCP 6.2	Artur Strzeliński	2023	The evaluation effiicacy of herbicide AMINO 30 SL in the control on weeds in the cultivation on winter rape. Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland	N	PUH CHEMIROL 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
			Report no.: AH/23/RO/35/Pr/02/a GEP - yes Unpublished		
KCP 6 KCP 6.2	Artur Strzeliński	2023	The evaluation effiicacy of herbicide AMINO 30 SL in the control on weeds in the cultivation on winter rape. Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland Report no.: AH/23/RO/35/Pr/03 GEP - yes Unpublished	N	PUH CHEMIROL Sp. z o.o.
KCP 6 KCP 6.2	Artur Strzeliński	2023	The evaluation effiicacy of herbicide AMINO 30 SL in the control on weeds in the cultivation on winter rape. Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland Report no.: AH/23/RO/35/Ka/04 GEP - yes Unpublished	N	PUH CHEMIROL Sp. z o.o.
KCP 6 KCP 6.2	Artur Strzeliński	2023	The evaluation effiicacy of herbicide AMINO 30 SL in the control on weeds in the cultivation on winter rape. Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland Report no.: AH/23/RO/35/Ma/05 GEP - yes Unpublished	N	PUH CHEMIROL Sp. z o.o.
KCP 6 KCP 6.2	Artur Strzeliński	2023	The evaluation effiicacy of herbicide AMINO 30 SL in the control on weeds in the cultivation on winter rape. Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland	N	PUH CHEMIROL 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
			Report no.: AH/23/RO/35/JaW/06 GEP - yes Unpublished		
KCP 6 KCP 6.2	Artur Strzeliński	2023	The evaluation effiicacy of herbicide AMINO 30 SL in the control on weeds in the cultivation on winter rape. Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland Report no.: AH/23/RO/35/Zł/07 GEP - yes Unpublished	N	PUH CHEMIROL Sp. z o.o.
KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Joanna Guzińska	2023	Field study to evaluate the crop safety of herbicide AMINO 30 SL when applied in winter oilseed rape, Poland 2023. A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno Poland Report no.: A.T/2023/042/RZO GEP - yes Unpublished	N	PUH CHEMIROL Sp. z o.o.
KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Joanna Guzińska	2023	Field study to evaluate the crop safety of herbicide AMINO 30 SL when applied in winter oilseed rape, Poland 2023. A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno Poland Report no.: A.T/2023/043/RZO GEP - yes Unpublished	N	PUH CHEMIROL Sp. z o.o.
KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeliński	2023	The evaluation selectivity of herbicide AMINO 30 SL in the cultivation on winter rape. Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland Report no.: AH/23/RO/35/Zł/01 GEP - yes	N	PUH CHEMIROL 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 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeliński	2023	The evaluation selectivity of herbicide AMINO 30 SL in the cultivation on winter rape. Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland Report no.: AH/23/RO/35/Pr/02/b GEP - yes Unpublished	N	PUH CHEMIROL Sp. z o.o.
KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeliński	2023	The evaluation selectivity of herbicide AMINO 30 SL in the cultivation on winter rape. Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland Report no.: AH/23/RO/35/Br/03 GEP - yes Unpublished	N	PUH CHEMIROL Sp. z o.o.
KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeliński	2023	The evaluation selectivity of herbicide AMINO 30 SL in the cultivation on winter rape. Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland Report no.: AH/23/RO/35/Ma/04 GEP - yes Unpublished	N	PUH CHEMIROL Sp. z o.o.
KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeliński	2023	The evaluation selectivity of herbicide AMINO 30 SL in the cultivation on winter rape. Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland Report no.: AH/23/RO/35/JaW/05 GEP - yes	N	PUH CHEMIROL 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 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeliński	2023	The evaluation selectivity of herbicide AMINO 30 SL in the cultivation on winter rape. Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland Report no.: AH/23/RO/35/Ka/06 GEP - yes Unpublished	N	PUH CHEMIROL Sp. z o.o.
KCP 6.4 KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Artur Strzeliński	2023	The evaluation selectivity of herbicide AMINO 30 SL in the cultivation on winter rape. Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland Report no.: AH/23/RO/35/Da/07 GEP - yes Unpublished	N	PUH CHEMIROL Sp. z o.o.

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

Not applicable

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
n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a

List of data submitted by the applicant and not relied on

Not applicable

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
n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a

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

Not applicable

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
n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a

Appendix 2 Additional information provided by the applicant

COMPARISON OF CLIMATIC AND AGRICULTURAL CONDITIONS IN POLAND AND THE CZECH REPUBLIC IN REFERENCE TO REGISTRATION OF PLANT PROTECTION PRODUCT AMINO 30 SL

1. Introduction

The purpose of the following document is to compare climatic and agricultural conditions of Poland and the Czech Republic in order to enable data from efficacy and phytotoxicity trials conducted in Poland to be used for registration purposes of autumn, postemergence applied, winter oilseed rape herbicide AMINO 30 SL in Czech Republic.

2. Plant protection products under consideration

2.1. General

Total of 9 efficacy and 9 phytotoxicity field studies were conducted in Poland in 2023-2024 in winter oilseed rape to examinate plant protection product AMINO 30 SL containing the active substance aminopyralid 30 g/L and a standard herbicide Runway containing the active substance aminopyralid 30 g/L. Total of 9 efficacy and 9 phytotoxicity GEP trials in winter oilseed rape were carried out to assess the product's efficacy and phytotoxic potential.

2.2. Products' characteristics:

Table 1. Products' characteristics

PRODUCT	AMINO 30 SL	Runway
active substance content	aminopyralid 30 g/L	aminopyralid 30 g/L
formulation	SL – soluble concentrate	SL – soluble concentrate

The following information originates from Conclusion on the peer review of the pesticide risk assessment of the active substance *Aminopyralid_DAR_03_Vol_3_B1-B5_public.pdf* for the active substance aminopyralid.

Table 2. Properties of active substances

active substance common name	**aminopyralid**
active substance chemical name	4-amino-3,6-dichloropyridine-2-carboxylic acid
function	Aminopyralid is the amino analogue of clopyralid and is an active substance belonging to pyridine carboxylic acid group of herbicides. Aminopyralid is rapidly absorbed by plants and translocated, accumulating in meristematic tissue. Uptake is mainly via leaves. In susceptible weed species the active substances induce auxin type symptoms. These include stem elongation and premature senescence leading to cessation of growth and rapid necrosis.
mode of action	Auxin mimics
application	apply once per season, between growth stage BBCH 10-18 in winter oilseed rape

3. Climatic conditions

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

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

Figure 1. Location of Poland and the Czech Republic

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

Figure 2. Location of climate stations

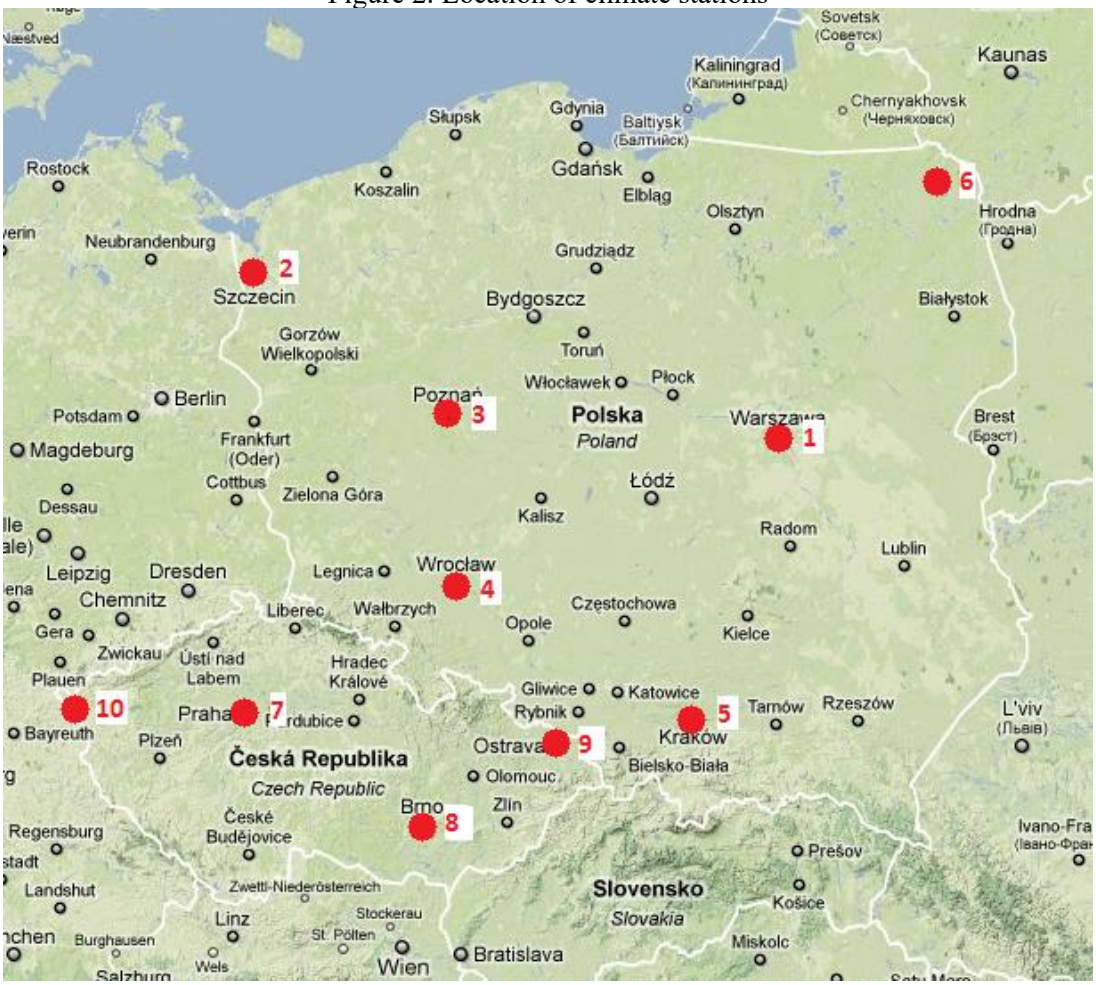


Table 3. Parameters of climate stations

Number on map	Location	Latitude	Longitude	Elevation (meters AMSL)
POLAND				
1.	Warsaw	52.10°N	20.58°E	106
2.	Szczecin	52.35°N	14.54°E	1
3.	Poznan	52.25°N	16.50°E	86
4.	Wroclaw	51.06°N	16.53°E	120
5.	Krakow	50.05°N	19.48°E	237
6.	Suwalki	54.08°N	22.57°E	186
THE CZECH REPUBLIC				
7.	Prague	50.00°N	14.40°E	303
8.	Brno	49.15°N	16.70°E	238
9.	Ostrava	49.68°N	18.10°E	256
10.	Cheb	50.08°N	12.40°E	474

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

Climate stations were selected in a way that ensures their equal distribution throughout the area of each country. Data from Poland was collected from six stations while data from the Czech Republic was collected from four stations. The number of Czech stations is smaller than that of Polish stations as detailed climatic data was not readily available from a greater number of stations in the Czech Republic. What is more, the authors of this report believe that the number of stations taken into account is sufficient to perform the comparison of climatic conditions and that it is relative to the acreage of each country.

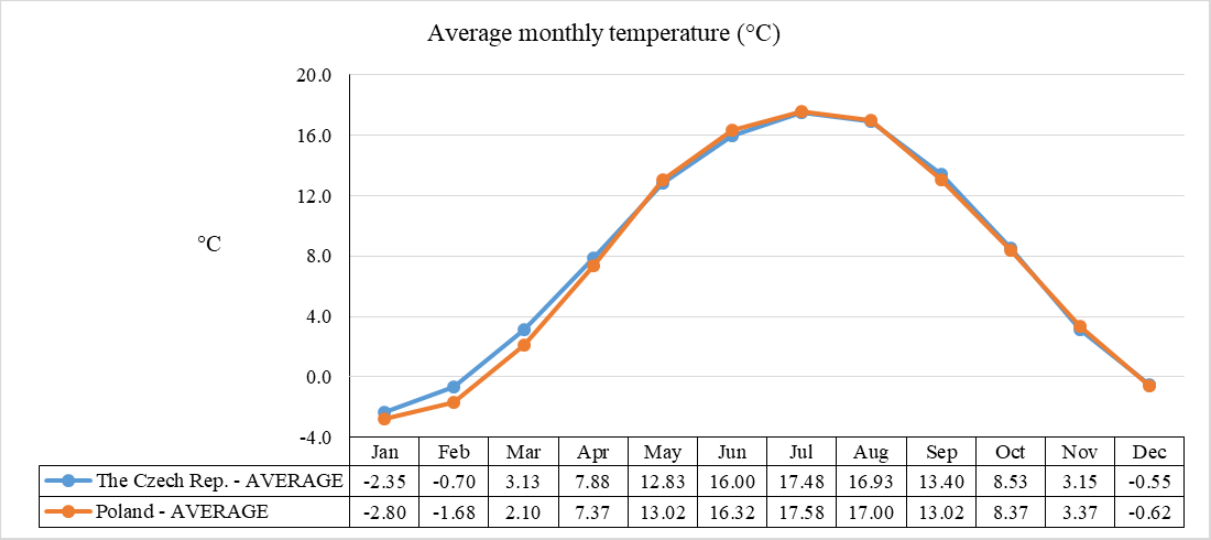
3.1. Average monthly temperature

Table 4. Average monthly temperature data

Location	Average monthly temperature (°C)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
The Czech Rep.: Cheb	-2.5	-1.2	2.4	6.7	11.7	15.0	16.5	15.8	12.5	7.8	2.4	-1.0
The Czech Rep.: Prague	-2.0	-0.6	3.1	7.6	12.5	15.6	17.1	16.6	13.2	8.3	3.0	-0.2
The Czech Rep.: Brno	-2.5	-0.3	3.8	9.0	13.9	17.0	18.5	18.1	14.3	9.1	3.5	-0.6
The Czech Rep.: Ostrava	-2.4	-0.7	3.2	8.2	13.2	16.4	17.8	17.2	13.6	8.9	3.7	-0.4
The Czech Rep. - AVERAGE	-2.35	-0.70	3.13	7.88	12.83	16.00	17.48	16.93	13.40	8.53	3.15	-0.55
Poland: Warsaw	-3.3	-2.1	1.9	7.7	13.5	16.7	18.0	17.3	13.1	8.2	3.2	-0.9
Poland: Poznan	-2.0	-1.0	2.7	7.6	13.3	16.7	18.0	17.4	13.4	8.8	3.8	-0.1
Poland: Wroclaw	-1.8	-0.5	3.2	8.0	13.1	16.5	17.7	17.2	13.4	8.9	3.9	0.2
Poland: Krakow	-3.3	-1.6	2.4	7.9	13.1	16.2	17.5	16.9	13.1	8.3	3.2	-1.0
Poland: Szczecin	-1.1	-0.3	3.0	7.4	12.9	16.4	17.7	17.2	13.5	9.2	4.4	0.8
Poland: Suwalki	-5.3	-4.6	-0.6	5.6	12.2	15.4	16.6	16.0	11.6	6.8	1.7	-2.7
Poland - AVERAGE	-2.80	-1.68	2.10	7.37	13.02	16.32	17.58	17.00	13.02	8.37	3.37	-0.62

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

Figure 3. Average monthly temperature graph



The table and graph above show that average temperature in Poland and in the Czech Republic is very similar. There are slight differences only in the winter months. The time which has crucial importance for the application of product AMINO 30 SL is late summer/early autumn. In the months of August through December there are very close correlations between average temperatures in Poland and in Czech Republic.

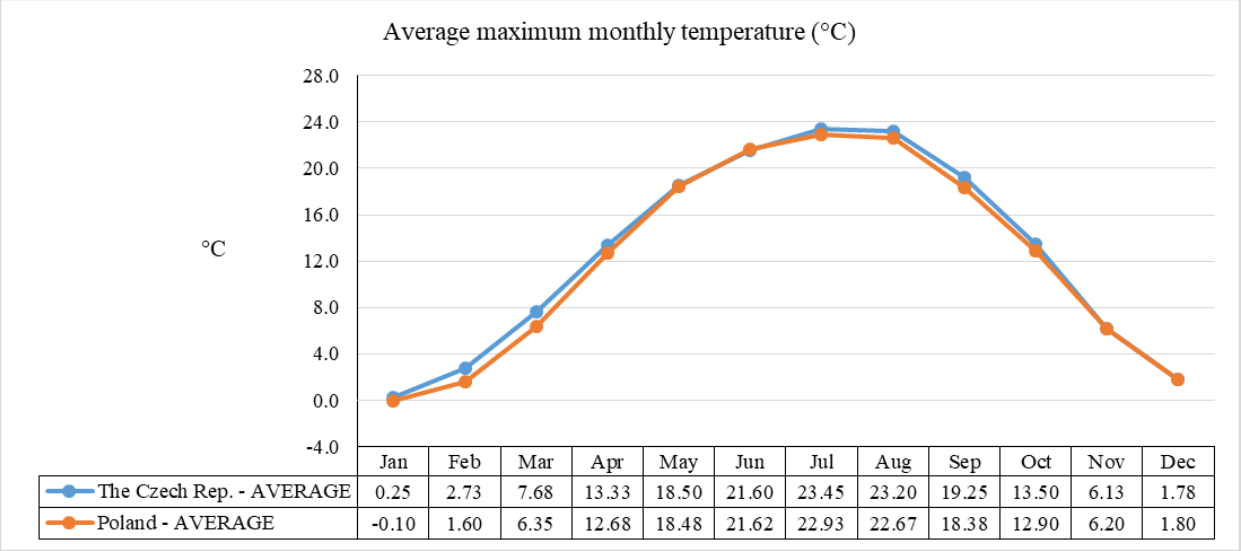
3.2 Average maximum monthly temperature

Table 5. Average maximum monthly temperature data

Location	Average maximum monthly temperature (°C)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
The Czech Rep.: Cheb	0.0	2.3	7.0	12.2	17.4	20.6	22.4	22.2	18.5	12.8	5.2	1.3
The Czech Rep.: Prague	0.4	2.7	7.7	13.2	18.3	21.4	23.3	23.0	19.0	13.1	6.0	1.9
The Czech Rep.: Brno	0.2	3.1	8.4	14.4	19.5	22.5	24.5	24.2	20.1	14.1	6.6	1.9
The Czech Rep.: Ostrava	0.4	2.8	7.6	13.5	18.8	21.9	23.6	23.4	19.4	14.0	6.7	2.0
The Czech Rep. - AVERAGE	0.25	2.73	7.68	13.33	18.50	21.60	23.45	23.20	19.25	13.50	6.13	1.78
Poland: Warsaw	-0.7	1.0	6.0	12.9	18.8	22.0	23.3	22.9	18.3	12.7	5.9	1.4
Poland: Poznan	0.5	2.2	6.8	13.0	18.8	22.1	23.5	23.1	18.7	13.1	6.4	2.2
Poland: Wroclaw	1.3	3.2	7.9	13.6	18.8	22.0	23.4	23.2	19.3	14.1	7.4	3.0
Poland: Krakow	-0.1	2.1	7.1	13.5	18.7	21.6	23.0	22.8	18.8	13.8	6.8	1.8
Poland: Szczecin	1.3	2.8	7.2	12.6	18.4	21.6	22.8	22.6	18.6	13.1	6.9	3.0
Poland: Suwalki	-2.9	-1.7	3.1	10.5	17.4	20.4	21.6	21.4	16.6	10.6	3.8	-0.6
Poland - AVERAGE	-0.10	1.60	6.35	12.68	18.48	21.62	22.93	22.67	18.38	12.90	6.20	1.80

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

Figure 4. Average maximum monthly temperature graph



The table and graph above present the average maximum temperature in each month. It is clear that maximum temperature in Poland and in the Czech Republic is very similar. In late summer/early autumn months that are crucial for the application of product AMINO 30 SL average maximum temperature in both countries differs by no more than 0.87°C in September.

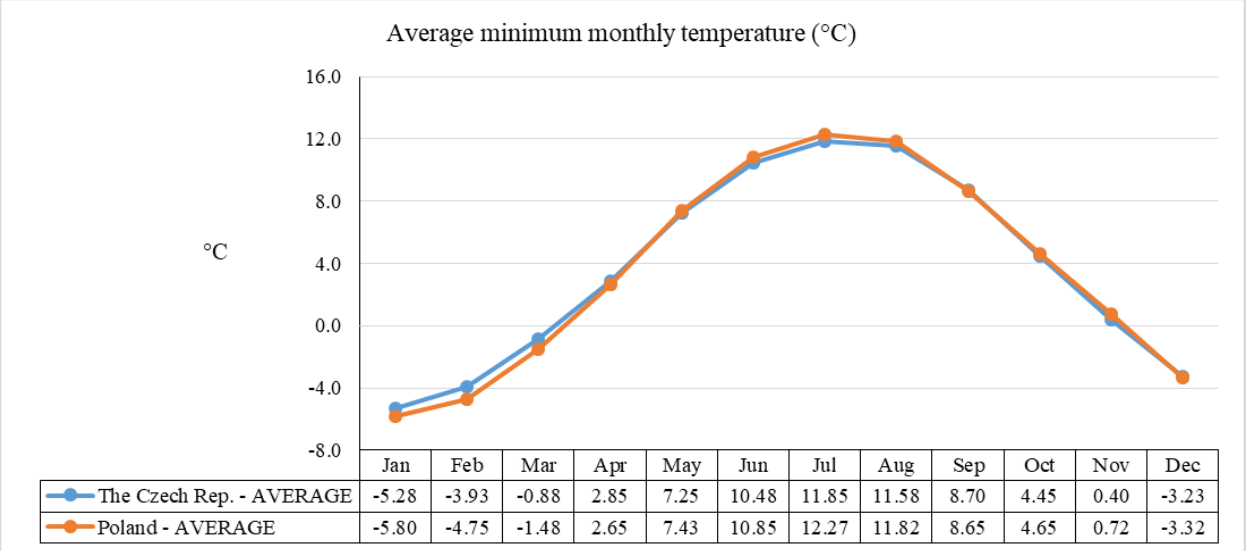
3.3 Average minimum monthly temperatures

Table 6. Average minimum monthly temperature data

Location	Average minimum monthly temperature (°C)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
The Czech Rep.: Cheb	-5.0	-4.1	-1.2	2.1	6.3	9.6	11.0	10.6	8.0	4.1	0.0	-3.3
The Czech Rep.: Prague	-5.3	-4.2	-1.3	2.4	7.1	10.4	11.8	11.5	8.6	4.0	-0.2	-3.4
The Czech Rep.: Brno	-5.2	-3.3	-0.2	3.9	8.3	11.3	12.7	12.6	9.5	5.0	0.9	-3.0
The Czech Rep.: Ostrava	-5.6	-4.1	-0.8	3.0	7.3	10.6	11.9	11.6	8.7	4.7	0.9	-3.2
The Czech Rep. - AVERAGE	-5.28	-3.93	-0.88	2.85	7.25	10.48	11.85	11.58	8.70	4.45	0.40	-3.23
Poland: Warsaw	-6.1	-5.0	-1.5	3.0	8.0	11.3	12.6	12.1	8.7	4.5	0.8	-3.4
Poland: Poznan	-4.8	-3.9	-0.8	2.8	7.7	11.2	12.5	12.2	9.0	5.3	1.2	-2.6
Poland: Wroclaw	-5.3	-4.0	-0.9	2.8	7.1	10.7	12.0	11.6	8.7	4.6	0.6	-3.1
Poland: Krakow	-6.7	-4.8	-1.3	3.0	7.6	10.8	12.2	11.8	8.6	4.2	0.2	-4.0
Poland: Szczecin	-3.7	-3.1	-0.4	2.9	7.5	11.1	12.9	12.3	9.5	5.8	2.0	-1.6
Poland: Suwalki	-8.2	-7.7	-4.0	1.4	6.7	10.0	11.4	10.9	7.4	3.5	-0.5	-5.2
Poland - AVERAGE	-5.80	-4.75	-1.48	2.65	7.43	10.85	12.27	11.82	8.65	4.65	0.72	-3.32

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

Figure 5. Average minimum monthly temperature graph



Average minimum monthly temperature in Poland and in the Czech Republic follows almost the same pattern, therefore, it is comparable. The table and graph above show that minimum monthly temperature in Poland and in the Czech Republic is very similar. There are slight differences only in the winter months. The time which is of most importance for the application of product AMINO 30 SL is late summer/early autumn. In the months of August through December there are very close correlations between average temperatures in Poland and in Czech Republic.

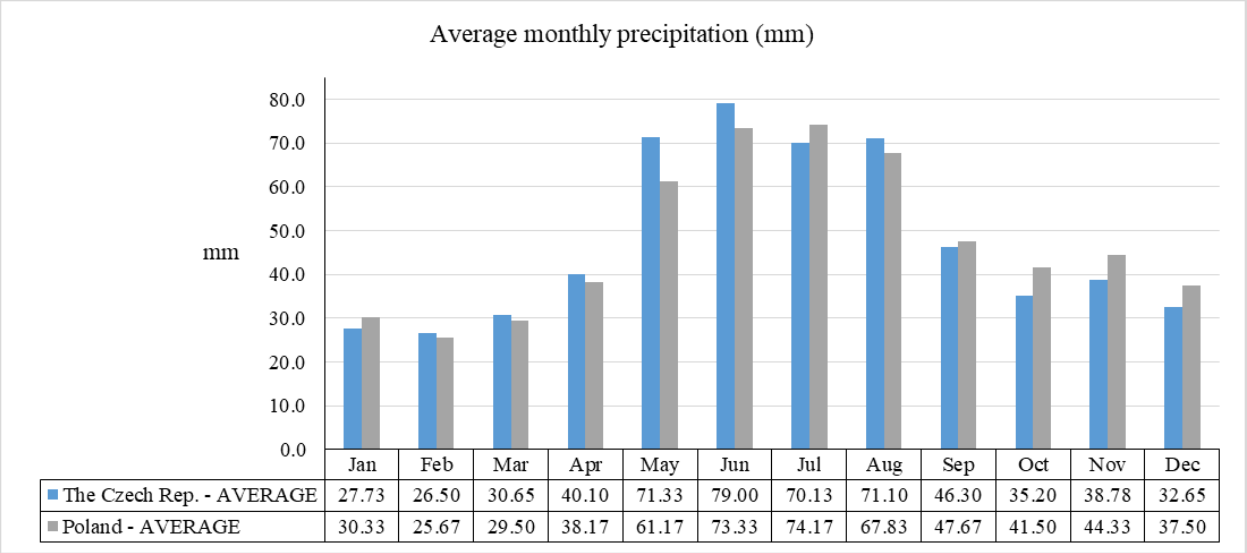
3.3 Average monthly precipitation sum

Table 7. Average monthly precipitation sum data

Location	Average monthly precipitation sum (mm)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
The Czech Rep.: Cheb	36.1	29.5	36.3	38.3	56.0	66.9	59.2	66.5	48.4	37.5	41.1	43.9
The Czech Rep.: Prague	23.6	22.6	28.1	38.2	77.2	72.7	66.2	69.6	40.4	30.5	31.9	25.3
The Czech Rep.: Brno	24.5	23.7	24.2	31.5	60.9	72.0	64.0	56.5	37.6	30.5	37.5	27.1
The Czech Rep.: Ostrava	26.7	30.2	34.0	52.4	91.2	104.4	91.1	91.8	58.8	42.3	44.6	34.3
The Czech Rep. - AVERAGE	27.73	26.50	30.65	40.10	71.33	79.00	70.13	71.10	46.30	35.20	38.78	32.65
Poland: Warsaw	22.0	21.0	26.0	33.0	58.0	71.0	69.0	62.0	43.0	37.0	41.0	32.0
Poland: Poznan	30.0	24.0	27.0	36.0	53.0	60.0	69.0	57.0	43.0	39.0	39.0	38.0
Poland: Wroclaw	28.0	26.0	26.0	39.0	64.0	80.0	84.0	78.0	48.0	40.0	43.0	34.0
Poland: Krakow	34.0	32.0	34.0	48.0	83.0	97.0	85.0	87.0	54.0	46.0	45.0	41.0
Poland: Szczecin	36.0	27.0	32.0	38.0	52.0	57.0	61.0	55.0	44.0	38.0	46.0	41.0
Poland: Suwalki	32.0	24.0	32.0	35.0	57.0	75.0	77.0	68.0	54.0	49.0	52.0	39.0
Poland - AVERAGE	30.33	25.67	29.50	38.17	61.17	73.33	74.17	67.83	47.67	41.50	44.33	37.50

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

Figure 6. Average monthly precipitation sum graph



Average monthly precipitation sum in Poland and in the Czech Republic is similar.

4. Soil conditions

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

As has been mentioned above in Table 2. aminopyralid acts primarily through foliar uptake with little or no soil activity. This allows authors of this report to disregard soil conditions as they have very limited or no influence on the efficacy of the product.

5. Agricultural practice

5.1. Winter oilseed rape sowing timing

According to the MOCA Study carried out by The MARS STAT Action in Poland sowing of winter oilseed rape takes place in August (depending on the region term of sowing ranges from August 1st till August 25th). In the Czech Republic term of sowing of winter oilseed rape is similar for majority of territory – the optimum sowing time is August 10th till August 25th. In the area where Czech borders with Austria and Slovakia meet, winter oilseed rape can be sown in second half of July.

5.2. Winter oilseed rape growth and development

Figure 7. Phenological crop calendar for winter oilseed rape in Poland

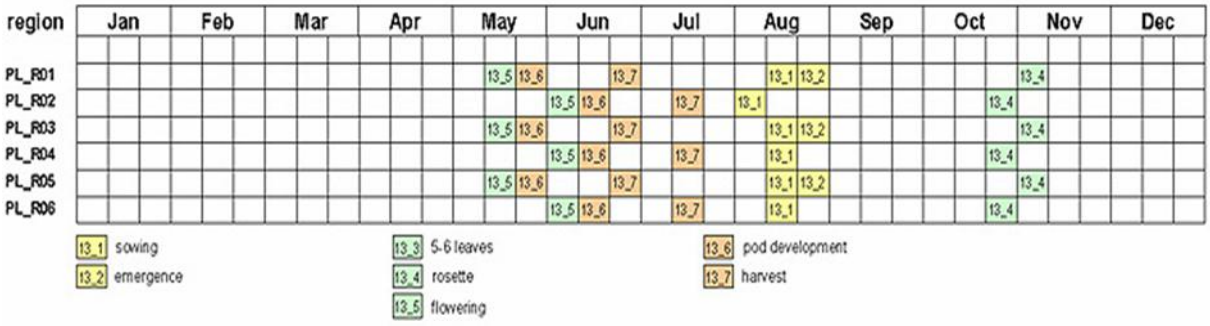
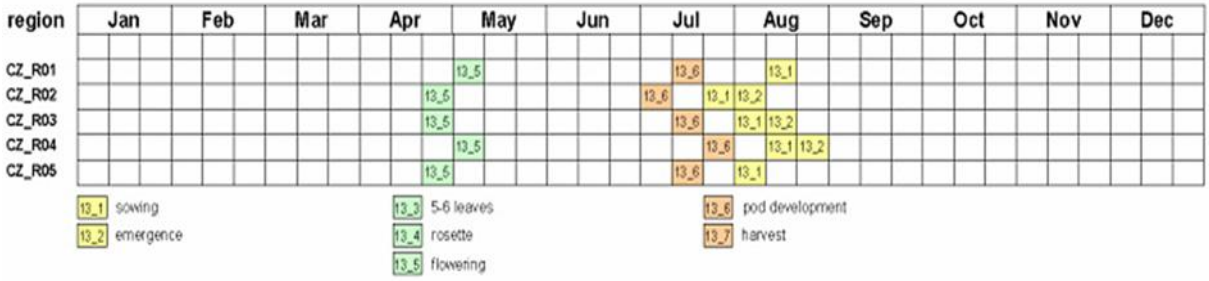


Figure 8. Phenological crop calendar for winter oilseed rape in Czech Republic



The data tables are incomplete with respect to tillering and shooting phases in the Czech Republic. It is so, because for financial reasons complete phenological data from the Czech Hydrometeorological Institute was not available to the authors of the MOCA Study. However, the distribution of the other available phenological phases allows for the assumption that the missing data is also comparable. In both countries climatic conditions are comparable so the development of winter oilseed rape follows a similar pattern.

In general, it may be stated that winter oilseed rape develops in a similar way in Poland and in the Czech Republic.

5.3. Timing of application

The optimal application timing of AMINO 30 SL product in winter oilseed rape is from crop BBCH stage 10, referring to cotyledons completely unfolded, until crop BBCH stage 18, referring to 8 leaves unfolded. The optimal rate requested for the use of AMINO 30 SL is 0,2-0,267 L/ha which is corresponding to 6-8,01 g a.s./ha of aminopyralid in water volume 200-300 L/ha.

5.4. Target pests

The obtained data in performed trials show that AMINO 30 SL provides benefits against the most important dicotyledonous weeds in winter oilseed rape as shown in the table below.
The following table describes the effectiveness of fungal diseases
≥ 85% – Susceptible (M)
70 – 85% – Moderately susceptible (MS)
60 – 70% – Moderately tolerant (MT)
<60% – Tolerant (T)

winter oilseed rape

No.	Product dose (L/ha)	EPPO code	Scientific name	Average (%)	Efficacy
1.	AMINO 30 SL 0,16 L/ha	CENCY	*Centaurea cyanus*	87,5	S
		PAPRH	*Papaver rhoeas*	88,7	S
		MATIN	*Tripleurospermum inodorum*	91,5	S
		VIOAR	*Viola arvensis*	82,0	MS
		MATCH	*Matricaria chamomilla*	91,8	S
		CAPBP	*Capsella bursa-pastoris*	81,6	MS
2.	AMINO 30 SL 0,2 L/ha	CENCY	*Centaurea cyanus*	91,8	S
		PAPRH	*Papaver rhoeas*	93,7	S
		MATIN	*Tripleurospermum inodorum*	94,2	S
		VIOAR	*Viola arvensis*	86,7	S
		MATCH	*Matricaria chamomilla*	94,9	S
		CAPBP	*Capsella bursa-pastoris*	85,4	S
3.	AMINO 30 SL 0,267 L/ha	CENCY	*Centaurea cyanus*	96,6	S
		PAPRH	*Papaver rhoeas*	98,1	S
		MATIN	*Tripleurospermum inodorum*	97,3	S
		VIOAR	*Viola arvensis*	91,0	S
		MATCH	*Matricaria chamomilla*	98,5	S
		CAPBP	*Capsella bursa-pastoris*	89,4	S

Summing up, it may be stated that the most problematic weed species in winter oilseed rape in Poland and in the Czech Republic are comparable and they are all controlled by AMINO 30 SL at rate range 0,2-0,267 L/ha. Therefore, in respect to similarity in agro-climatic conditions, product is expected to be equally highly efficient in both Poland and in the Czech Republic.

6. Conclusion

Poland and the Czech Republic are neighboring countries. Both lie in central Europe in the moderate climate zone. They share not only the border but also important climatic characteristics. Yearly temperature and precipitation patterns are very similar in both counties. This has influence on the agricultural practice in these countries and on the development of cultivated crops. Winter oilseed rape which are of interest to the authors of this report, go through its development phases at relatively close calendar dates.

In conclusion, authors of this report state that Poland and the Czech Republic share many elements of climatic and agricultural conditions. This allows efficacy and phytotoxicity study results acquired in Poland to be used in registration procedures of autumn, foliar applied, winter oilseed rape herbicide AMINO 30 SL in the Czech Republic.

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

Test report/ research number (1)	Trial location (2); Crop cultivar; F/G (3); N/A (4)	Testing Unit (5)	Test method (6); Plot size; Sample size (7)	Treatment			
				Growth stage (8)	Interval	Total number	Spray volume (L/ha)
A.T/2023/040/RZO	Żabiczyn / Poland Winter oilseed rape / Dominator F N	A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno Poland	EPPO PP1/49(3) 2,5 x 5 = 12,5m^2	BBCH 10-16	n/d	1	300
A.T/2023/041/RZO	Zamarte / Poland Winter oilseed rape / SY Ilona F N	A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno Poland	EPPO PP1/49(3) 2,5 x 6 = 15m2	BBCH 15-18	n/d	1	300
AH/23/RO/35/Mr/01	Mrowino / Poland Winter oilseed rape / Harry F N	Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland	EPPO PP1/49(3) 2 x 12 = 24m2	BBCH 13-14	n/d	1	200
AH/23/RO/35/Pr/02/a	Przybroda / Poland Winter oilseed rape / ES Imperio F N	Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland	EPPO PP1/49(3) 2,5 x 10 = 25 m2	BBCH 13-14	n/d	1	250
AH/23/RO/35/Pr/03	Przybroda / Poland Winter oilseed rape / Atora F	Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28	EPPO PP1/49(3) 2,5 x 10 = 25 m2	BBCH 13-14	n/d	1	250

	N	60-637 Poznań Poland					
AH/23/RO/35/Ka/04	Kaźmierz / Poland Winter oilseed rape / Dominator F N	Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland	EPPO PP1/49(3) 2,5 x 10 = 25 m2	BBCH 15-16	n/d	1	300
AH/23/RO/35/Ma/05	Machary/ Poland Winter oilseed rape / Graf F N	Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland	EPPO PP1/49(3) 2 x 10 = 20 m2	BBCH 14-16	n/d	1	250
AH/23/RO/35/JaW/06	Janowiec Wielkopolski / Poland Winter oilseed rape / Berny F N	Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland	EPPO PP1/49(3) 2,5 x 10 = 25 m2	BBCH 16-17	n/d	1	250
AH/23/RO/35/Zł/07	Złotniki / Poland Winter oilseed rape / Alibaba F N	Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland	EPPO PP1/49(3) 2,5 x 10 = 25 m2	BBCH 17-18	n/d	1	200

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

Appendix 4: Summary of data on effectiveness trials per use

Test report (1)	Crop/ cultivar Harmful organism/ weed species or intended use	Assessed part and variable (2) no / m^2	Untreated BBCH (during application)	Efficacy treatments (3)				Remarks (4)
				Product		Standard (s)		
				Name	Dose [l/ha]	Name	Dose [l/ha]	
A.T/2023/040/RZO	Winter oilseed rape / Dominator	Weeds no / m^2 CENCY 5 PAPRH 6 MATIN 5 VIOAR 5 MATCH 17 CAPBP 6	CENCY 11-12 PAPRH 14-16 MATIN 10-14 VIOAR 14-16 MATCH 16-18 CAPBP 12-14	1. AMINO 30 SL 2. AMINO 30 SL 3. AMINO 30 SL	0.16 0.2 0.267	1. Runway	0.267	Application date: 02.10.2023 Assessment date: 02.10.2023 09.10.2023 16.10.2023 15.11.2023 19.04.2024 15.05.2024
A.T/2023/041/RZO	Winter oilseed rape / SY Ilona	Weeds no / m^2 CENCY 10 MATIN 15 PAPRH 7 VIOAR 5 CAPBP 5 MATCH 5	CENCY 14-17 MATIN 14-16 PAPRH 15-17 VIOAR 14-16 CAPBP 15-31 MATCH 16-21	1. AMINO 30 SL 2. AMINO 30 SL 3. AMINO 30 SL	0.16 0.2 0.267	1. Runway	0.267	Application date: 29.09.2023 Assessment date: 29.09.2023 06.10.2023 13.10.2023 21.11.2023 19.03.2024 23.04.2024
AH/23/RO/35/Mr/01	Winter oilseed rape / Harry	Weeds no / m^2 CENCY 7 PAPRH 5 MATIN 6 VIOAR 7 CAPBP 8 MATCH 5	CENCY 10-14 PAPRH 10-14 MATIN 10-14 VIOAR 12-16 CAPBP 10-14 MATCH 10-12	1. AMINO 30 SL 2. AMINO 30 SL 3. AMINO 30 SL	0.16 0.2 0.267	1. Runway	0.267	Application date: 02.10.2023 Assessment date: 12.10.2023 07.11.2023 21.03.2024 22.04.2024

AH/23/RO/35/Pr/02/a	Winter oilseed rape / ES Imperio	Weeds no / m^2 CENCY 6 PAPRH 7 MATIN 5 MATCH 5 VIOAR 7 CAPBP 5	CENCY 10-12 PAPRH 11-14 MATIN 10-12 MATCH 10-12 VIOAR 12-14 CAPBP 10-12	1. AMINO 30 SL 2. AMINO 30 SL 3. AMINO 30 SL	0.16 0.2 0.267	1. Runway	0.267	Application date: 02.10.2023 Assessment date: 11.10.2023 06.11.2023 22.03.2024 23.04.2024
AH/23/RO/35/Pr/03	Winter oilseed rape / Atora	Weeds no / m^2 CENCY 8 MATIN 5 MATCH 7 VIOAR 8 CAPBP 5 PAPRH 7	CENCY 10-13 MATIN 09-12 MATCH 10-12 VIOAR 12-14 CAPBP 10-12 PAPRH 11-14	1. AMINO 30 SL 2. AMINO 30 SL 3. AMINO 30 SL	0.16 0.2 0.267	1. Runway	0.267	Application date: 02.10.2023 Assessment date: 12.10.2023 09.11.2023 20.03.2024 23.04.2024
AH/23/RO/35/Ka/04	Winter oilseed rape / Dominator	Weeds no / m^2 CENCY 5 PAPRH 5 MATIN 6 MATCH 7 VIOAR 7 CAPBP 5	CENCY 11-13 PAPRH 11-14 MATIN 10-13 MATCH 10-12 VIOAR 12-13 CAPBP 10-12	1. AMINO 30 SL 2. AMINO 30 SL 3. AMINO 30 SL	0.16 0.2 0.267	1. Runway	0.267	Application date: 06.10.2023 Assessment date: 18.10.2023 16.11.2023 20.03.2024 26.04.2024
AH/23/RO/35/Ma/05	Winter oilseed rape / Graf	Weeds no / m^2 CENCY 6 PAPRH 5 MATIN 5 MATCH 5 VIOAR 6 CAPBP 5	CENCY 10-14 PAPRH 11-14 MATIN 10-14 MATCH 10-12 VIOAR 12-16 CAPBP 10-14	1. AMINO 30 SL 2. AMINO 30 SL 3. AMINO 30 SL	0.16 0.2 0.267	1. Runway	0.267	Application date: 05.10.2023 Assessment date: 12.10.2023 06.11.2023 20.03.2024 22.04.2024
AH/23/RO/35/JaW/06	Winter oilseed rape / Berny	Weeds no / m^2 PAPRH 7	PAPRH 12-13 MATIN 11-14 VIOAR 12-16	1. AMINO 30 SL 2. AMINO 30 SL 3. AMINO 30 SL	0.16 0.2 0.267	1. Runway	0.267	Application date: 05.10.2023

		MATIN 8 VIOAR 8 CAPBP 5 CENCY 7 MATCH 5	CAPBP 10-14 CENCY 10-14 MATCH 10-12					Assessment date: 17.10.2023 15.11.2023 18.03.2024 19.04.2024
AH/23/RO/35/Zł/07	Winter oilseed rape / Alibaba	Weeds no / m^2 CENCY 6 PAPRH 5 MATIN 5 MATCH 5 VIOAR 7 CAPBP 5	CENCY 11-14 PAPRH 11-13 MATIN 11-13 MATCH 10-12 VIOAR 12-14 CAPBP 10-12	1. AMINO 30 SL 2. AMINO 30 SL 3. AMINO 30 SL	0.16 0.2 0.267	1. Runway	0.267	Application date: 11.10.2023 Assessment date: 23.10.2023 16.11.2023 20.03.2024 26.04.2024

Appendix 5: Summary of detailed data on herbicide effectiveness trials

Table 5.1. The efficacy of AMINO 30 SL in control of Capsella bursa-pastoris (CAPBP) at 7-14 DA-A.

Pest code					**No.**	1	2	3	4	5	
CAPBP (Capsella bursa-pastoris)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	14 DA-A	16.10.2023	6	plant		0,0	30,0	31,3	42,5	41,3	4,620
A.T/2023/041/RZO	14 DA-A	13.10.2023	5	plant		0,0	30,0	37,5	42,5	41,3	11,170
AH/23/RO/35/Mr/01	10 DA-A	12.10.2023	8	plant		0,0	87,5	93,8	95,0	95,0	3,560
AH/23/RO/35/Pr/02/a	9 DA-A	11.10.2023	5	plant		0,0	88,8	88,8	91,3	90,0	4,720
AH/23/RO/35/Pr/03	10 DA-A	12.10.2023	5	plant		0,0	81,3	85,0	90,0	90,0	2,520
AH/23/RO/35/Ka/04	12 DA-A	18.10.2023	5	plant		0,0	90,0	91,3	91,3	91,3	4,240
AH/23/RO/35/Ma/05	7 DA-A	12.10.2023	5	plant		0,0	82,5	81,3	85,0	86,3	3,710
AH/23/RO/35/JaW/06	12 DA-A	17.10.2023	5	plant		0,0	91,3	92,5	96,0	94,8	6,390
AH/23/RO/35/Zl/07	12 DA-A	23.10.2023	5	plant		0,0	87,5	87,5	90,0	91,3	5,250
Min.			5			0,00	30,0	31,3	42,5	41,3	
Max.			8			0,00	91,3	93,8	96,0	95,0	
Average			5,4			0,00	74,3	76,6	80,4	80,1	

Table 5.2. The efficacy of AMINO 30 SL in control of Capsella bursa-pastoris (CAPBP) at 34-53 DA-A.

Pest code					**No.**	1	2	3	4	5	
CAPBP (Capsella bursa-pastoris)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	44 DA-A	15.11.2023	6	plant		0,0	33,8	38,8	53,8	53,8	5,660
A.T/2023/041/RZO	53 DA-A	21.11.2023	5	plant		0,0	30,0	38,8	51,3	53,8	8,660
AH/23/RO/35/Mr/01	36 DA-A	07.11.2023	8	plant		0,0	94,8	99,5	100,0	100,0	3,660
AH/23/RO/35/Pr/02/a	35 DA-A	06.11.2023	5	plant		0,0	95,0	97,0	99,8	99,5	2,540
AH/23/RO/35/Pr/03	38 DA-A	09.11.2023	5	plant		0,0	96,0	97,8	99,8	100,0	2,800
AH/23/RO/35/Ka/04	41 DA-A	16.11.2023	5	plant		0,0	95,0	97,0	100,0	100,0	2,330
AH/23/RO/35/Ma/05	34 DA-A	08.11.2023	5	plant		0,0	94,8	99,5	100,0	100,0	3,750
AH/23/RO/35/JaW/06	41 DA-A	15.11.2023	5	plant		0,0	98,5	100,0	100,0	100,0	2,400
AH/23/RO/35/Zl/07	36 DA-A	16.11.2023	5	plant		0,0	96,3	99,8	99,8	100,0	2,550
Min.			5			0,00	30,0	38,8	51,3	53,8	
Max.			8			0,00	98,5	100,0	100,0	100,0	
Average			5,4			0,00	81,6	85,4	89,4	89,7	

Table 5.3. The efficacy of AMINO 30 SL in control of Capsella bursa-pastoris (CAPBP) at 197-207 DA-A.

Pest code					**No.**	1	2	3	4	5	
CAPBP (Capsella bursa-pastoris)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	200 DA-A	19.04.2024	6	plant		0,0	42,5	58,8	56,3	57,5	3,770
A.T/2023/041/RZO	207 DA-A	23.04.2024	5	plant		0,0	50,0	50,0	58,8	52,5	6,290
AH/23/RO/35/Mr/01	203 DA-A	22.04.2024	8	plant		0,0	97,3	99,8	100,0	100,0	2,630
AH/23/RO/35/Pr/02/a	204 DA-A	23.04.2024	5	plant		0,0	95,0	99,8	100,0	100,0	0,500
AH/23/RO/35/Pr/03	204 DA-A	23.04.2024	5	plant		0,0	96,0	97,8	100,0	100,0	2,620
AH/23/RO/35/Ka/04	203 DA-A	26.04.2024	5	plant		0,0	95,0	98,0	100,0	100,0	2,020
AH/23/RO/35/Ma/05	200 DA-A	22.04.2024	5	plant		0,0	96,0	99,5	100,0	100,0	2,180
AH/23/RO/35/JaW/06	197 DA-A	19.04.2024	5	plant		0,0	98,5	100,0	100,0	100,0	2,400
AH/23/RO/35/Zl/07	198 DA-A	26.04.2024	5	plant		0,0	96,3	99,8	100,0	100,0	2,530
Min.			5			0,00	42,5	50,0	56,3	52,5	
Max.			8			0,00	98,5	100,0	100,0	100,0	
Average			5,4			0,00	85,2	89,3	90,6	90,0	

Table 5.4. The efficacy of AMINO 30 SL in control of Centaurea cyanus (CENCY) at 7-14 DA-A.

Pest code					**No.**	1	2	3	4	5	
CENCY (Centaurea cyanus)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	14 DA-A	16.10.2023	5	plant		0,0	57,5	72,5	80,0	81,3	2,750
A.T/2023/041/RZO	14 DA-A	13.10.2023	10	plant		0,0	72,0	80,0	87,5	87,5	4,570
AH/23/RO/35/Mr/01	10 DA-A	12.10.2023	7	plant		0,0	83,8	87,5	95,0	95,0	4,120
AH/23/RO/35/Pr/02/a	9 DA-A	11.10.2023	6	plant		0,0	83,8	85,0	91,3	91,3	4,720
AH/23/RO/35/Pr/03	10 DA-A	12.10.2023	8	plant		0,0	80,0	93,8	87,5	86,3	4,930
AH/23/RO/35/Ka/04	12 DA-A	18.10.2023	5	plant		0,0	87,5	88,8	93,8	96,0	5,130
AH/23/RO/35/Ma/05	7 DA-A	12.10.2023	6	plant		0,0	77,5	82,5	87,5	87,5	5,040
AH/23/RO/35/JaW/06	12 DA-A	17.10.2023	7	plant		0,0	83,8	87,5	95,0	95,0	4,120
AH/23/RO/35/Zl/07	12 DA-A	23.10.2023	6	plant		0,0	83,8	97,5	92,5	91,3	5,730
Min.			5			0,00	57,5	72,5	80,0	81,3	
Max.			10			0,00	87,5	97,5	95,0	96,0	
Average			6,7			0,00	78,9	86,1	90,0	90,1	

Table 5.5. The efficacy of AMINO 30 SL in control of Centaurea cyanus (CENCY) at 34-53 DA-A.

Pest code					**No.**	1	2	3	4	5	
CENCY (Centaurea cyanus)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	44 DA-A	15.11.2023	5	plant		0,0	67,5	77,5	82,5	82,5	4,990
A.T/2023/041/RZO	53 DA-A	21.11.2023	10	plant		0,0	77,5	81,3	88,8	87,5	4,160
AH/23/RO/35/Mr/01	36 DA-A	07.11.2023	7	plant		0,0	91,3	95,0	99,8	100,0	2,530
AH/23/RO/35/Pr/02/a	35 DA-A	06.11.2023	6	plant		0,0	91,3	95,0	99,5	99,8	2,530
AH/23/RO/35/Pr/03	38 DA-A	09.11.2023	8	plant		0,0	90,0	93,8	99,5	98,5	3,810
AH/23/RO/35/Ka/04	41 DA-A	16.11.2023	5	plant		0,0	92,5	97,0	100,0	100,0	3,730
AH/23/RO/35/Ma/05	34 DA-A	08.11.2023	6	plant		0,0	90,0	95,0	99,5	99,8	0,710
AH/23/RO/35/JaW/06	41 DA-A	15.11.2023	7	plant		0,0	93,8	95,0	100,0	100,0	2,520
AH/23/RO/35/Zl/07	36 DA-A	16.11.2023	6	plant		0,0	93,8	97,0	99,8	100,0	3,060
Min.			5			0,00	67,5	77,5	82,5	82,5	
Max.			10			0,00	93,8	97,0	100,0	100,0	
Average			6,7			0,00	87,5	91,8	96,6	96,5	

Table 5.6. The efficacy of AMINO 30 SL in control of Centaurea cyanus (CENCY) at 197-207 DA-A.

Pest code					**No.**	1	2	3	4	5	
CENCY (Centaurea cyanus)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	200 DA-A	19.04.2024	5	plant		0,0	75,8	85,5	95,0	95,0	1,200
A.T/2023/041/RZO	207 DA-A	23.04.2024	10	plant		0,0	77,8	83,8	94,5	95,0	2,410
AH/23/RO/35/Mr/01	203 DA-A	22.04.2024	7	plant		0,0	93,8	96,0	100,0	100,0	3,090
AH/23/RO/35/Pr/02/a	204 DA-A	23.04.2024	6	plant		0,0	95,0	98,3	100,0	100,0	2,240
AH/23/RO/35/Pr/03	204 DA-A	23.04.2024	8	plant		0,0	91,3	95,0	100,0	99,8	2,530
AH/23/RO/35/Ka/04	203 DA-A	26.04.2024	5	plant		0,0	93,8	98,0	100,0	100,0	3,360
AH/23/RO/35/Ma/05	200 DA-A	22.04.2024	6	plant		0,0	91,3	97,0	99,8	99,8	3,060
AH/23/RO/35/JaW/06	197 DA-A	19.04.2024	7	plant		0,0	95,0	97,3	100,0	100,0	2,650
AH/23/RO/35/Zl/07	198 DA-A	26.04.2024	6	plant		0,0	95,5	97,3	99,8	100,0	4,250
Min.			5			0,00	75,8	83,8	94,5	95,0	
Max.			10			0,00	95,5	98,3	100,0	100,0	
Average			6,7			0,00	89,9	94,2	98,8	98,8	

Table 5.7. The efficacy of AMINO 30 SL control of Matricaria chamomilla (MATCH) at 7-14 DA-A.

Pest code					**No.**	1	2	3	4	5	
MATCH (Matricaria chamomilla)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	14 DA-A	16.10.2023	10	plant		0,0	73,8	83,8	88,8	88,8	3,770
A.T/2023/041/RZO	14 DA-A	13.10.2023	5	plant		0,0	77,5	83,8	90,0	90,0	2,750
AH/23/RO/35/Mr/01	10 DA-A	12.10.2023	5	plant		0,0	86,3	90,0	93,8	91,3	4,240
AH/23/RO/35/Pr/02/a	9 DA-A	11.10.2023	5	plant		0,0	87,5	88,8	92,5	92,5	5,820
AH/23/RO/35/Pr/03	10 DA-A	12.10.2023	7	plant		0,0	82,5	88,8	91,3	90,0	4,490
AH/23/RO/35/Ka/04	12 DA-A	18.10.2023	7	plant		0,0	88,8	90,0	91,3	90,0	3,990
AH/23/RO/35/Ma/05	7 DA-A	12.10.2023	5	plant		0,0	82,5	86,3	88,8	88,8	5,730
AH/23/RO/35/JaW/06	12 DA-A	17.10.2023	5	plant		0,0	88,8	90,0	93,8	91,3	4,720
AH/23/RO/35/Zl/07	12 DA-A	23.10.2023	5	plant		0,0	88,8	91,3	93,8	91,3	5,640
Min.			5			0,00	73,8	83,8	88,8	88,8	
Max.			10			0,00	88,8	91,3	93,8	92,5	
Average			6			0,00	84,1	88,1	91,6	90,4	

Table 5.8. The efficacy of AMINO 30 SL in control of Matricaria chamomilla (MATCH) at 34-53 DA-A.

Pest code					**No.**	1	2	3	4	5	
MATCH (Matricaria chamomilla)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	44 DA-A	15.11.2023	9	plant		0,0	81,3	86,3	95,0	93,8	2,750
A.T/2023/041/RZO	53 DA-A	21.11.2023	5	plant		0,0	83,8	87,5	92,5	92,5	4,670
AH/23/RO/35/Mr/01	36 DA-A	07.11.2023	5	plant		0,0	92,5	96,0	100,0	100,0	3,770
AH/23/RO/35/Pr/02/a	35 DA-A	06.11.2023	5	plant		0,0	95,0	97,0	100,0	100,0	2,330
AH/23/RO/35/Pr/03	38 DA-A	09.11.2023	7	plant		0,0	93,8	96,0	99,8	100,0	3,250
AH/23/RO/35/Ka/04	41 DA-A	16.11.2023	7	plant		0,0	95,0	98,5	100,0	100,0	2,400
AH/23/RO/35/Ma/05	34 DA-A	08.11.2023	5	plant		0,0	97,0	99,5	100,0	100,0	2,400
AH/23/RO/35/JaW/06	41 DA-A	15.11.2023	5	plant		0,0	92,5	96,0	100,0	100,0	3,770
AH/23/RO/35/Zl/07	36 DA-A	16.11.2023	5	plant		0,0	95,0	97,0	98,8	100,0	3,170
Min.			5			0,00	81,3	86,3	92,5	92,5	
Max.			9			0,00	97,0	99,5	100,0	100,0	
Average			5,9			0,00	91,8	94,9	98,5	98,5	

Table 5.9. The efficacy of AMINO 30 SL in control of Matricaria chamomilla (MATCH) at 197-207 DA-A.

Pest code					**No.**	1	2	3	4	5	
MATCH (Matricaria chamomilla)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	200 DA-A	19.04.2024	9	plant		0,0	82,5	91,3	96,5	96,3	4,000
A.T/2023/041/RZO	207 DA-A	23.04.2024	5	plant		0,0	90,0	93,8	100,0	100,0	2,000
AH/23/RO/35/Mr/01	203 DA-A	22.04.2024	5	plant		0,0	98,0	99,5	100,0	100,0	2,180
AH/23/RO/35/Pr/02/a	204 DA-A	23.04.2024	5	plant		0,0	97,0	99,3	100,0	100,0	2,450
AH/23/RO/35/Pr/03	204 DA-A	23.04.2024	7	plant		0,0	93,8	97,0	99,8	100,0	3,300
AH/23/RO/35/Ka/04	203 DA-A	26.04.2024	7	plant		0,0	95,0	98,8	100,0	100,0	2,520
AH/23/RO/35/Ma/05	200 DA-A	22.04.2024	5	plant		0,0	97,0	99,5	100,0	100,0	2,400
AH/23/RO/35/JaW/06	197 DA-A	19.04.2024	5	plant		0,0	99,3	99,8	100,0	100,0	0,680
AH/23/RO/35/Zl/07	198 DA-A	26.04.2024	5	plant		0,0	96,0	97,3	99,8	100,0	3,610
Min.			5			0,00	82,5	91,3	96,5	96,3	
Max.			70			0,00	99,3	99,8	100,0	100,0	
Average			7,61			0,00	94,3	97,4	99,6	99,6	

Table 5.10. The efficacy of AMINO 30 SL control of Papaver rhoeas (PAPRH) at 7-14 DA-A.

Pest code					**No.**	1	2	3	4	5	
PAPRH (Papaver rhoeas)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	14 DA-A	16.10.2023	6	plant		0,0	60,0	77,5	85,0	85,0	2,310
A.T/2023/041/RZO	14 DA-A	13.10.2023	15	plant		0,0	67,5	82,8	87,0	85,8	5,210
AH/23/RO/35/Mr/01	10 DA-A	12.10.2023	5	plant		0,0	87,5	88,8	93,8	95,8	4,950
AH/23/RO/35/Pr/02/a	9 DA-A	11.10.2023	7	plant		0,0	81,3	82,5	88,8	87,5	4,930
AH/23/RO/35/Pr/03	10 DA-A	12.10.2023	7	plant		0,0	77,5	83,8	90,0	87,5	3,850
AH/23/RO/35/Ka/04	12 DA-A	18.10.2023	5	plant		0,0	87,5	90,0	91,3	91,3	4,720
AH/23/RO/35/Ma/05	7 DA-A	12.10.2023	5	plant		0,0	80,0	80,0	86,3	86,3	3,090
AH/23/RO/35/JaW/06	12 DA-A	17.10.2023	7	plant		0,0	88,8	93,8	95,0	95,0	3,710
AH/23/RO/35/Zl/07	12 DA-A	23.10.2023	5	plant		0,0	87,5	91,3	91,3	91,3	5,350
Min.			5			0,00	60,0	77,5	85,0	85,0	
Max.			15			0,00	88,8	93,8	95,0	95,8	
Average			6,9			0,00	79,7	85,6	89,8	89,5	

Table 5.11. The efficacy of AMINO 30 SL in control of Papaver rhoeas (PAPRH) at 34-53 DA-A.

Pest code					**No.**	1	2	3	4	5	
PAPRH (Papaver rhoeas)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	44 DA-A	15.11.2023	6	plant		0,0	75,0	83,8	92,5	90,0	2,750
A.T/2023/041/RZO	53 DA-A	21.11.2023	7	plant		0,0	72,0	82,5	90,0	88,8	4,050
AH/23/RO/35/Mr/01	36 DA-A	07.11.2023	5	plant		0,0	93,8	98,3	100,0	100,0	3,460
AH/23/RO/35/Pr/02/a	35 DA-A	06.11.2023	7	plant		0,0	93,8	97,0	100,0	100,0	3,670
AH/23/RO/35/Pr/03	38 DA-A	09.11.2023	7	plant		0,0	92,5	95,0	100,0	100,0	2,910
AH/23/RO/35/Ka/04	41 DA-A	16.11.2023	5	plant		0,0	94,8	99,5	100,0	100,0	3,660
AH/23/RO/35/Ma/05	34 DA-A	08.11.2023	5	plant		0,0	88,8	96,0	100,0	100,0	3,090
AH/23/RO/35/JaW/06	41 DA-A	15.11.2023	7	plant		0,0	93,8	96,0	100,0	100,0	3,090
AH/23/RO/35/Zl/07	36 DA-A	16.11.2023	7	plant		0,0	93,8	95,0	100,0	100,0	2,520
Min.			5			0,00	72,0	82,5	90,0	88,8	
Max.			7			0,00	94,8	99,5	100,0	100,0	
Average			6,2			0,00	88,7	93,7	98,1	97,6	

Table 5.12. The efficacy of AMINO 30 SL in control of Papaver rhoeas (PAPRH) at 197-207 DA-A.

Pest code					**No.**	1	2	3	4	5	
PAPRH (Papaver rhoeas)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	200 DA-A	19.04.2024	6	plant		0,0	80,0	88,3	95,0	93,3	3,210
A.T/2023/041/RZO	207 DA-A	23.04.2024	7	plant		0,0	80,0	85,0	98,8	98,8	6,110
AH/23/RO/35/Mr/01	203 DA-A	22.04.2024	5	plant		0,0	95,0	98,3	100,0	100,0	2,240
AH/23/RO/35/Pr/02/a	204 DA-A	23.04.2024	7	plant		0,0	97,0	99,0	100,0	100,0	2,600
AH/23/RO/35/Pr/03	204 DA-A	23.04.2024	7	plant		0,0	98,8	99,3	100,0	100,0	1,150
AH/23/RO/35/Ka/04	203 DA-A	26.04.2024	5	plant		0,0	94,8	99,8	100,0	100,0	3,640
AH/23/RO/35/Ma/05	200 DA-A	22.04.2024	5	plant		0,0	91,3	97,0	100,0	100,0	3,670
AH/23/RO/35/JaW/06	197 DA-A	19.04.2024	7	plant		0,0	95,0	96,3	100,0	100,0	2,520
AH/23/RO/35/Zl/07	198 DA-A	26.04.2024	7	plant		0,0	93,8	96,3	100,0	100,0	3,410
Min.			5			0,00	80,0	85,0	95,0	93,3	
Max.			7			0,00	98,8	99,8	100,0	100,0	
Average			6,2			0,00	91,7	95,5	99,3	99,1	

Table 5.13. The efficacy of AMINO 30 SL control of Viola arvensis (VIOAR) at 7-14 DA-A.

Pest code					**No.**	1	2	3	4	5	
VIOAR (Viola arvensis)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	14 DA-A	16.10.2023	77	plant		0,0	47,5	52,5	60,0	57,5	15,410
A.T/2023/041/RZO	14 DA-A	13.10.2023	5	plant		0,0	63,3	71,3	77,0	75,8	4,890
AH/23/RO/35/Mr/01	10 DA-A	12.10.2023	7	plant		0,0	77,5	80,0	85,0	86,3	3,560
AH/23/RO/35/Pr/02/a	9 DA-A	11.10.2023	7	plant		0,0	78,8	81,3	82,5	83,8	5,350
AH/23/RO/35/Pr/03	10 DA-A	12.10.2023	8	plant		0,0	70,0	71,3	76,3	78,8	4,240
AH/23/RO/35/Ka/04	12 DA-A	18.10.2023	7	plant		0,0	80,0	81,3	82,5	82,5	5,250
AH/23/RO/35/Ma/05	7 DA-A	12.10.2023	6	plant		0,0	68,8	70,0	72,5	72,5	5,250
AH/23/RO/35/JaW/06	12 DA-A	17.10.2023	8	plant		0,0	80,0	81,3	82,5	85,0	5,040
AH/23/RO/35/Zl/07	12 DA-A	23.10.2023	7	plant		0,0	72,5	77,5	81,3	80,0	6,980
Min.			5			0,00	47,5	52,5	60,0	57,5	
Max.			77			0,00	80,0	81,3	85,0	86,3	
Average			14,7			0,00	70,9	74,1	77,7	78,0	

Table 5.14. The efficacy of AMINO 30 SL in control of Viola arvensis (VIOAR) at 34-53 DA-A.

Pest code					**No.**	1	2	3	4	5	
VIOAR (Viola arvensis)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	44 DA-A	15.11.2023	78	plant		0,0	57,5	70,0	80,0	86,3	10,350
A.T/2023/041/RZO	53 DA-A	21.11.2023	5	plant		0,0	70,0	73,8	77,5	78,8	4,220
AH/23/RO/35/Mr/01	36 DA-A	07.11.2023	7	plant		0,0	86,3	90,0	95,0	93,8	3,410
AH/23/RO/35/Pr/02/a	35 DA-A	06.11.2023	7	plant		0,0	85,0	88,8	90,0	90,0	2,520
AH/23/RO/35/Pr/03	38 DA-A	09.11.2023	8	plant		0,0	90,0	92,5	98,5	98,3	4,440
AH/23/RO/35/Ka/04	41 DA-A	16.11.2023	7	plant		0,0	88,8	93,8	97,0	96,0	4,400
AH/23/RO/35/Ma/05	34 DA-A	08.11.2023	6	plant		0,0	83,8	87,5	88,8	91,3	5,350
AH/23/RO/35/JaW/06	41 DA-A	15.11.2023	8	plant		0,0	86,3	88,8	96,0	97,0	4,810
AH/23/RO/35/Zl/07	36 DA-A	16.11.2023	7	plant		0,0	90,0	95,0	96,0	96,0	5,070
Min.			5			0,00	57,5	70,0	77,5	78,8	
Max.			78			0,00	90,0	95,0	98,5	98,3	
Average			14,8			0,00	82,0	86,7	91,0	91,9	

Table 5.15. The efficacy of AMINO 30 SL in control of Viola arvensis (VIOAR) at 197-207 DA-A.

Pest code					**No.**	1	2	3	4	5	
VIOAR (Viola arvensis)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	200 DA-A	19.04.2024	65	plant		0,0	65,0	78,8	82,5	83,8	11,150
A.T/2023/041/RZO	207 DA-A	23.04.2024	5	plant		0,0	68,8	75,0	81,3	82,0	7,700
AH/23/RO/35/Mr/01	203 DA-A	22.04.2024	5	plant		0,0	90,0	91,3	96,0	95,0	2,810
AH/23/RO/35/Pr/02/a	204 DA-A	23.04.2024	5	plant		0,0	91,3	95,0	97,0	96,0	4,040
AH/23/RO/35/Pr/03	204 DA-A	23.04.2024	8	plant		0,0	90,0	92,5	99,5	99,0	3,050
AH/23/RO/35/Ka/04	203 DA-A	26.04.2024	7	plant		0,0	88,8	94,5	97,3	96,3	5,040
AH/23/RO/35/Ma/05	200 DA-A	22.04.2024	6	plant		0,0	83,8	88,8	90,0	91,3	4,720
AH/23/RO/35/JaW/06	197 DA-A	19.04.2024	8	plant		0,0	87,5	88,8	97,0	97,0	4,490
AH/23/RO/35/Zl/07	198 DA-A	26.04.2024	7	plant		0,0	90,0	95,8	97,0	96,0	5,120
Min.			5			0,00	65,0	75,0	81,3	82,0	
Max.			65			0,00	91,3	95,8	99,5	99,0	
Average			12,9			0,00	83,9	88,9	93,1	92,9	

Table 5.16. The efficacy of AMINO 30 SL in control of Tripleurospermum inodorum (MATIN) at 7-14 DA-A.

Pest code					**No.**	1	2	3	4	5	
MATIN (Tripleurospermum inodorum)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	14 DA-A	16.10.2023	5	plant		0,0	71,3	82,5	90,0	87,5	4,270
A.T/2023/041/RZO	14 DA-A	13.10.2023	15	plant		0,0	75,3	82,5	88,3	88,8	2,640
AH/23/RO/35/Mr/01	10 DA-A	12.10.2023	6	plant		0,0	92,5	95,0	97,0	97,0	4,390
AH/23/RO/35/Pr/02/a	9 DA-A	11.10.2023	5	plant		0,0	86,3	88,8	90,0	90,0	3,410
AH/23/RO/35/Pr/03	10 DA-A	12.10.2023	5	plant		0,0	83,8	86,3	88,8	90,0	4,720
AH/23/RO/35/Ka/04	12 DA-A	18.10.2023	6	plant		0,0	80,0	83,8	82,5	86,3	4,930
AH/23/RO/35/Ma/05	7 DA-A	12.10.2023	5	plant		0,0	86,3	88,8	90,0	90,0	3,990
AH/23/RO/35/JaW/06	12 DA-A	17.10.2023	8	plant		0,0	83,8	85,0	90,0	90,0	4,830
AH/23/RO/35/Zl/07	12 DA-A	23.10.2023	5	plant		0,0	81,3	85,0	91,3	91,3	4,240
Min.			5			0,00	71,3	82,5	82,5	86,3	
Max.			15			0,00	92,5	95,0	97,0	97,0	
Average			6,7			0,00	82,3	86,4	89,8	90,1	

Table 5.17. The efficacy of AMINO 30 SL in control of Tripleurospermum inodorum (MATIN) at 34-53 DA-A.

Pest code					**No.**	1	2	3	4	5	
MATIN (Tripleurospermum inodorum)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	44 DA-A	15.11.2023	6	plant		0,0	78,8	85,0	92,5	93,3	3,670
A.T/2023/041/RZO	53 DA-A	21.11.2023	15	plant		0,0	81,3	85,0	90,8	91,3	4,160
AH/23/RO/35/Mr/01	36 DA-A	07.11.2023	6	plant		0,0	98,5	100,0	100,0	100,0	2,400
AH/23/RO/35/Pr/02/a	35 DA-A	06.11.2023	5	plant		0,0	92,5	95,0	99,0	99,0	2,910
AH/23/RO/35/Pr/03	38 DA-A	09.11.2023	5	plant		0,0	97,0	98,5	100,0	100,0	3,630
AH/23/RO/35/Ka/04	41 DA-A	16.11.2023	6	plant		0,0	88,8	90,0	93,8	95,0	3,710
AH/23/RO/35/Ma/05	34 DA-A	08.11.2023	5	plant		0,0	96,0	98,3	100,0	99,8	2,840
AH/23/RO/35/JaW/06	41 DA-A	15.11.2023	8	plant		0,0	98,5	100,0	100,0	100,0	2,400
AH/23/RO/35/Zl/07	36 DA-A	16.11.2023	5	plant		0,0	92,5	96,0	99,8	100,0	3,370
Min.			5			0,00	78,8	85,0	90,8	91,3	
Max.			15			0,00	98,5	100,0	100,0	100,0	
Average			6,8			0,00	91,5	94,2	97,3	97,6	

Table 5.18. The efficacy of AMINO 30 SL in control of Tripleurospermum inodorum (MATIN) at 197-207 DA-A.

Pest code					**No.**	1	2	3	4	5	
MATIN (Tripleurospermum inodorum)					**Name**	Untreated Check	AMINO 30 SL	AMINO 30 SL	AMINO 30 SL	Runway	LSD (P=.05)
Report code	DA-A	date	weeds #/m2	part assessed	**Rate**		0,16 l/ha	0,2 l/ha	0,267 l/ha	0,267 l/ha	
A.T/2023/040/RZO	200 DA-A	19.04.2024	6	plant		0,0	80,0	90,0	97,5	97,5	3,270
A.T/2023/041/RZO	207 DA-A	23.04.2024	15	plant		0,0	87,5	91,3	100,0	100,0	2,750
AH/23/RO/35/Mr/01	203 DA-A	22.04.2024	5	plant		0,0	99,5	100,0	100,0	100,0	0,580
AH/23/RO/35/Pr/02/a	204 DA-A	23.04.2024	5	plant		0,0	96,0	97,8	99,8	99,5	2,710
AH/23/RO/35/Pr/03	204 DA-A	23.04.2024	5	plant		0,0	97,0	99,3	100,0	100,0	2,710
AH/23/RO/35/Ka/04	203 DA-A	26.04.2024	6	plant		0,0	88,8	90,0	98,0	95,0	3,360
AH/23/RO/35/Ma/05	200 DA-A	22.04.2024	5	plant		0,0	96,0	98,3	100,0	100,0	2,920
AH/23/RO/35/JaW/06	197 DA-A	19.04.2024	8	plant		0,0	98,5	100,0	100,0	100,0	2,400
AH/23/RO/35/Zl/07	198 DA-A	26.04.2024	5	plant		0,0	93,5	96,3	100,0	100,0	4,940
Min.			5			0,00	80,0	90,0	97,5	95,0	
Max.			15			0,00	99,5	100,0	100,0	100,0	
Average			6,7			0,00	93,0	95,9	99,5	99,1	

Appendix 6: Summary of phytotoxicity trials data in summary form

Table 1 – data from selectivity trials

Report code	Treatment	Dose [L/ha]	Phytotoxicity in %					
A.T/2023/042/RZO	**Timing of assess-ment**	**DA-A**	**10 DA-A**	**17 DA-A**	**175 DA-A**	**203 DA-A**	-	
	date		**09.10.2023**	**16.10.2023**	**22.03.2024**	**19.04.2024**	-	
	1. Untreated Check		0	0	0	0	-	
	2. Amino 30 SL	0,267	0	0	6,3	0	-	
	3. Amino 30 SL	0,534	0	0	16,3	0	-	
	4. Runway	0,267	0	0	10	0	-	
	5. Runway	0,534	0	0	17,5	0	-	
	LSD (P=.05)	-	-	-	5,84	-	-	
A.T/2023/043/RZO	**Timing of assess-ment**	**DA-A**	**7 DA-A**	**14 DA-A**	**31 DA-A**	**53 DA-A**	**172 DA-A**	**201 DA-A**
	date		**06.10.2023**	**13.10.2023**	**30.10.2023**	**21.11.2023**	**19.03.2024**	**17.04.2024**
	1. Untreated Check		0	0	0	0	0	0
	2. Amino 30 SL	0,267	0	0	0	0	0	0
	3. Amino 30 SL	0,534	0	0	0	0	0	0
	4. Runway	0,267	0	0	0	0	0	0
	5. Runway	0,534	0	0	0	0	0	0
	LSD (P=.05)	-	-	-	-	-	-	-
AH/23/RO/35/Zł/01	**Timing of assess-ment**	**DA-A**	**7 DA-A**	**14 DA-A**	**43 DA-A**	**170 DA-A**	**192 DA-A**	**204 DA-A**
	date		**09.10.2023**	**16.10.2023**	**14.11.2023**	**20.03.2024**	**11.04.2024**	**23.04.2024**
	1. Untreated Check		0	0	0	0	0	0
	2. Amino 30 SL	0,267	0	0	0	0	0	0
	3. Amino 30 SL	0,534	0	0	0	0	0	0
	4. Runway	0,267	0	0	0	0	0	0

	5. Runway	0,534	0	0	0	0	0	0
	LSD (P=.05)	-	-	-	-	-	-	-
AH/23/RO/35/Pr/02/b	**Timing of assess-ment**	**DA-A**	**7 DA-A**	**14 DA-A**	**43 DA-A**	**172 DA-A**	**193 DA-A**	
	date		**09.10.2023**	**16.10.2023**	**14.11.2023**	**22.03.2024**	**12.04.2024**	
	1. Untreated Check		0	0	0	0	0	
	2. Amino 30 SL	0,267	0	0	0	0	0	
	3. Amino 30 SL	0,534	0	0	0	0	0	
	4. Runway	0,267	0	0	0	0	0	
	5. Runway	0,534	0	0	0	0	0	
	LSD (P=.05)	-	-	-	-	-	-	
AH/23/RO/35/Br/03	**Timing of assess-ment**	**DA-A**	**7 DA-A**	**14 DA-A**	**70 DA-A**	**174 DA-A**	**195 DA-A**	**209 DA-A**
	date		**06.10.2023**	**13.10.2023**	**08.12.2023**	**21.03.2024**	**11.04.2024**	**25.04.2024**
	1. Untreated Check		0	0	0	0	0	0
	2. Amino 30 SL	0,267	0	0	0	0	0	0
	3. Amino 30 SL	0,534	0	0	0	0	0	0
	4. Runway	0,267	0	0	0	0	0	0
	5. Runway	0,534	0	0	0	0	0	0
	LSD (P=.05)	-	-	-	-	-	-	-
AH/23/RO/35/Ma/04	**Timing of assess-ment**	**DA-A**	**7 DA-A**	**14 DA-A**	**41 DA-A**	**172 DA-A**	**193 DA-A**	**207 DA-A**
	date		**12.10.2023**	**19.10.2023**	**15.11.2023**	**25.03.2024**	**15.04.2024**	**29.04.2024**
	1. Untreated Check		0	0	0	0	0	0
	2. Amino 30 SL	0,267	0	0	0	0	0	0
	3. Amino 30 SL	0,534	0	0	0	0	0	0
	4. Runway	0,267	0	0	0	0	0	0
	5. Runway	0,534	0	0	0	0	0	0
	LSD (P=.05)	-	-	-	-	-	-	-
AH/23/RO/35/JaW/05	**Timing of assess-**	**DA-A**	**7 DA-A**	**14 DA-A**	**43 DA-A**	**172 DA-A**	**190 DA-A**	**204 DA-A**

	ment							
	date		**12.10.2023**	**19.10.2023**	**17.11.2023**	**25.03.2024**	**12.04.2024**	**26.04.2024**
	1. Untreated Check		0	0	0	0	0	0
	2. Amino 30 SL	0,267	0	0	0	0	0	0
	3. Amino 30 SL	0,534	0	0	0	0	0	0
	4. Runway	0,267	0	0	0	0	0	0
	5. Runway	0,534	0	0	0	0	0	0
	LSD (P=.05)	-	-	-	-	-	-	-
AH/23/RO/35/Ka/06	**Timing of assess-ment**	**DA-A**	**7 DA-A**	**14 DA-A**	**43 DA-A**	**175 DA-A**	**192 DA-A**	**207 DA-A**
	date		**09.10.2023**	**16.10.2023**	**14.11.2023**	**25.03.2024**	**11.04.2024**	**26.04.2024**
	1. Untreated Check		0	0	0	0	0	0
	2. Amino 30 SL	0,267	0	0	0	0	0	0
	3. Amino 30 SL	0,534	0	0	0	0	0	0
	4. Runway	0,267	0	0	0	0	0	0
	5. Runway	0,534	0	0	0	0	0	0
	LSD (P=.05)	-	-	-	-	-	-	-
AH/23/RO/35/Da/07	**Timing of assess-ment**	**DA-A**	**7 DA-A**	**14 DA-A**	**43 DA-A**	**170 DA-A**	**192 DA-A**	**204 DA-A**
	date		**09.10.2023**	**16.10.2023**	**14.11.2023**	**20.03.2024**	**11.04.2024**	**23.04.2024**
	1. Untreated Check		0	0	0	0	0	0
	2. Amino 30 SL	0,267	0	0	0	0	0	0
	3. Amino 30 SL	0,534	0	0	0	0	0	0
	4. Amino 30 SL	0,267	0	0	0	0	0	0
	5. Runway	0,534	0	0	0	0	0	0
	LSD (P=.05)	-	-	-	-	-	-	-

Table 2 - data from selectivity trials

Test report (1)	**Testing Unit GEP (2)**	**Country Region (3)**	**Dates of trials and GS (4)**	**Cultivar F/G (5) N/A (6)**	**Experimental design Test method (7) Replicates**	**Remarks**
A.T/2023/042/RZO	A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno	Laskownica Mała / Poland	29.09.2023 BBCH 14-16	winter oilseed rape / Kuga F N	Randomized blocks EPPO PP 1/49 (3) 4	Soil type: loamy sand pH 6,3
A.T/2023/043/RZO	A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno	Zamarte / Poland	29.09.2023 BBCH 15-17	winter oilseed rape / ES DESIRO F N	Randomized blocks EPPO PP 1/49 (3) 4	Soil type: sandy loam pH 6,6
AH/23/RO/35/Zł/01	Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland	Złotniki / Poland	02.10.2023 BBCH 13-14	winter oilseed rape / Architect F N	Randomized blocks EPPO PP 1/49 (3) 4	Soil type: loamy sand pH 5,9
AH/23/RO/35/Pr/02/b	Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland	Przybroda / Poland	02.10.2023 BBCH 13-14	winter oilseed rape / SY Florian F N	Randomized blocks EPPO PP 1/49 (3) 4	Soil type: loamy sand pH 6
AH/23/RO/35/Br/03	Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland	Brody / Poland	29.09.2023 BBCH 14	winter oilseed rape / Ambassador F N	Randomized blocks EPPO PP 1/49 (3) 4	Soil type: loamy sand pH 6,6
AH/23/RO/35/Ma/04	Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland	Machary / Poland	05.10.2023 BBCH 14	winter oilseed rape / Graf F N	Randomized blocks EPPO PP 1/49 (3) 4	Soil type: loamy sand pH 5,9

AH/23/RO/35/JaW/05	Poznań University of Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland	Janowiec Wielkopolski / Poland	05.10.2023 BBCH 16	winter oilseed rape / Berny F N	Randomized blocks EPPO PP 1/49 (3) 4	Soil type: loamy sand pH 6
AH/23/RO/35/Ka/06	Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland	Kaźmierz / Poland	02.10..2023 BBCH 16	winter oilseed rape / Dominator F N	Randomized blocks EPPO PP 1/49 (3) 4	Soil type: loamy sand pH 6,1
AH/23/RO/35/Zł/07	Poznań University of Life Sciences Research Center Złotniki Wojska Polskiego 28 60-637 Poznań Poland	Dalekie / Poland	02.10.2023 BBCH 16-17	winter oilseed rape / Chrobry F N	Randomized blocks EPPO PP 1/49 (3) 4	Soil type: loamy sand P3H 5,9

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

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

None

Appendix 8: Summary of data on succeeding crop

None