

**REGISTRATION REPORT**  
**Part B**  
**Section 3**  
**Efficacy Data and Information**  
Concise Summary

Product code: F7B-39-30

Product name: Rinpode

Chemical active substance:

Florpyrauxifen-benzyl (trademark: Rinskor® active), 25 g/L

Central Zone

Zonal Rapporteur Member State: Poland

**CORE ASSESSMENT**

Applicant: Corteva Agriscience

Submission date: March 2023 **Updated December 2023**

zRMS Assessment date: 09/01/2024

**Following commenting round : 10/04/2024**

References correction : 31/07/2024

## Version history

When	What
March 2023	Submission to zRMS and concerned Member States
December 2023	Updated by the applicant Corteva (highlighted in green) to address supplementary requests from zRMS
January 2024	zRMS assessment
April 2024	Following commenting round
July 2024	References correction

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

This document has been prepared to support the application of F7B-39-30 25.05gai/l EC (trademark Rinpode 25g ai/l Neo EC) under the Regulation (EC) 1107/2009 by Corteva Agriscience for the control of broadleaved weeds in field crops of sugar beet, fodder beet, and the sugar beet varieties of Conviso® Smart in the Central regulatory zone. This new product F7B-39-30 25.05g ai/l EC is formulated as an emulsifiable concentrate (EC) and contains the active substance florpyrauxifen-benzyl at 25.05g ai/L.

The zonal GAP envelope for CEU countries foresees the maximum application of 80 ml/ha/season (2g ai/ha) of F7B-39-30 25.05g ai/l EC. The product can be applied from 1 to 4 applications at the doses of 80 to 20ml/ha (2-0.5g ai/ha according to number of applications). The developmental stage of the crop at the application should be between BBCH10 and BBCH19 (cotyledon to 9 leaves).

It should be noted that in this biology assessment dossier the formulation code of F7B-39-30 25.05gai/ha Neo EC will be used in the whole dossier, text, and tables. However, the trials were conducted with a formulation coded as GF-3206 25.05gai/l Neo EC, as can be seen on the single trial reports submitted with this Biology Dossier.

Both formulations F7B-39-30 and GF-3206 are identical on the concentration of the active ingredient florpyrauxifen-benzyl at 25.05 gai/L and of antifoam, emulsifiers, solvents, adjuvant but the formulation F7B-39-30 contains a color dye at a concentration of 0.0005 % (%w/w). Based on the EPPO GD 1307(1) *Efficacy considerations and data generation when making changes to the chemical composition or formulation type of plant protection products*, the applicant considers, following the recommendation of the guidance, that it is not necessary to conduct trials to compare performance of the formulations' efficacy and/or selectivity trials, based on the proposed biologically non-significant changes in chemical composition - Adding (or changes to) a marker co-formulant (e.g. dye). In addition, the concentration of this dye is so low in the formulation that no impact at all is expected by the application on the product performance.

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

##### Abstract

###### ZRMS conclusion:

The overall assessment was performed according to the uniform principles.

The applicant has not included in the GAP table the use of the product F7B-39-30 as a mixture with other authorised on the markets herbicides. In the dRR/BAD, the Applicant explained that data concerning use of the product in programs are supporting data and no claim for the inclusion of specific programs on the proposed label will be made. The only intention is to include in the label proposal that F7B-39-30 may be generally tank mixed with any current sugar-beet protection herbicide present on the market.

The Applicant has presented limited data showing efficacy, selectivity mixture of herbicides with and without F7B-39-30 in three programs A, B, C. In each program, different set of herbicides was used to prove improvement of efficacy after an addition of F7B-39-30. The efficacy was tested in the split applications – 3 and 4 applications against: CHEAL, ATECY, ABUTH, GALAP, GASPA, MERAN, CAPBP, LAMPU and PAPRH. The final decision whether that data is sufficient is up to CMSs.

###### the NE EPPO climate zone (Poland)

CHEAL - – all applications

There is a noticeable variation in the efficacy of the product in PL and neighboring countries against CHEAL. Therefore, in order to confirm the moderately susceptible efficacy of the product and its consistent performance in PL,

it is necessary to submit post-registered 2-3 trials conducted in the climatic zone of PL- NE, in the country of registration and placing on the market of the product.

ABUTH – all applications

All presented trials were conducted in the neighboring country (CZ), with high efficacy. Taking into account above explanation for CHEAL, rules presented in the Guidelines of Polish Ministry and the reduce number of trials for 2 and 4 applications, it is necessary to submit post-authorized 2 trials conducted in the climatic zone of PL- NE, in the country of registration and placing on the market of the product to confirm efficacy for PL.

#### LAMPU

the Applicant presented only 2 trials for all applications. Since the product performed with high and consistent efficacy (100%) especially for split doses, and better than the reference product (20-30%), therefore a reduced number of trials can be accepted conditionally. In order to confirm the efficacy of the product and its consistent performance, it is necessary to submit post-registered 2-3 trials conducted in the climatic zone of PL- NE, in the country of registration and placing on the market of the product.

The applicant should have presented 2 selectivity trials to confirm the product use in fodder beet. It is necessary to submit post-authorized 2 selectivity trials for fodder beet conducted in the climatic zone of PL- NE, in the country of authorisation and placing on the market of the product, to confirm safety of fodder beet.

The application of F7B-39-30 can cause chlorosis, deformations and growth inhibitions when product applied in one or split applications without impact on yield and quality of crop.

ZRMS can agree to place information about the product rainfastness period of 1 hour on the PL label conditionally to the time of post-authorized presenting studies confirming rainfastness of the product with the claimed dose rates for sugar beet.

On the PL label should be place information that phytotoxicity cannot be excluded. The information on the polish label has been added that the product is not intended for use in the protection of sugar beet for seed production. Consult the authorisation holder for information related to impact on seed from sugar beet.

Taking into account above mentioned information, ZRMS considers that the data provided support the following uses: 1-5 with restriction describe in the GAP table for PL.

#### **the Maritime EPPO climate zone**

The applicant presented results where number of trials per one weed species 1-2. In ZRMS opinion it is insufficient to confirm efficacy. In accordance with the PP 1/226 (3) Number of efficacy trials, the appropriate number of trials to confirm efficacy should be 6-15 for major pest in major crop. Data for CHEAL might be seen as sufficient. What is more interval between application should be 7-9 days. Nevertheless the acceptance of number of trials, if less than 6 and acceptance of inconsistent efficacy against CHEAL, are at the discretion of CMS.

In ZRMS opinion, efficacy data from sugar beet can be extrapolated to fodder beet.

The application of F7B-39-30 can cause chlorosis, deformations and growth inhibitions when product applied in one or split applications without impact on yield and quality of crop.

There is no knowledge whether detectable residues occur in harvested seed from sugar beet for seed, protected by the product. CMS are invited to take the necessary measures.

CMS are invited to decide whether presented data for rainfastness are relevant for this product.

Generally, the data provided may not be sufficient for authorization of the product in CMSs. The decision is up to CMS.

#### **the SE EPPO climate zone**

The applicant presented results where number of trials per one weed species 1-2. In ZRMS opinion it is insufficient to confirm efficacy. In accordance with the PP 1/226 (3) Number of efficacy trials, the appropriate number of trials to confirm efficacy should be 6-15 for major pest in major crop. What is more interval between application should be 7-9 days. Nevertheless the acceptance of number of trials, if less than 6 is at the discretion of CMS.

In ZRMS opinion, efficacy data from sugar beet can be extrapolated to fodder beet.

The application of F7B-39-30 can cause chlorosis, deformations and growth inhibitions when product applied in one or split applications without impact on yield and quality of crop.

There is no knowledge whether detectable residues occur in harvested seed from sugar beet for seed, protected by the product. CMS are invited to take the necessary measures.

CMS are invited to decide whether presented data for rainfastness are relevant for this product.

Generally, the data provided may not be sufficient for authorization of the product in CMSs. The decision is up to CMS.

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. *	Member state(s)	Crop and/ or situation  (crop destination / purpose of crop)	F, Fn, G, Gnp or I **	Pests or Group of pests controlled  (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks:  e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha  min / max			
Zonal uses (field or outdoor uses, certain types of protected crops)														
1	Central Zone: Poland, Belgium, The Netherlands, Luxemburg, Hungary, Germany, Austria, Czech Republic, Romania, Slovakia	Sugar beet: <i>Beta vulgaris</i> (BEAVA). Fodder beet (BEAVC)	F	<i>Chenopodium album</i> (CHEAL), <i>Aethusa cynapium</i> (AETCY), <i>Galium aparine</i> (GALAP), <i>Galisonga parviflora</i> (GASPA), <i>Abutilon theophrasti</i> (ABUTH) and other species	Overall, foliar spray	BBCH 10 to 19	a) 1 b) 1	N/A	a) 0.08 L pr/ha b) 0.08 L pr/ha	a) 2.0 b) 2.0	100-300	N/A	A maximum of 1 application at a dose range of 2.0 g ai/ha and per season.	C: Belgium, The Netherlands, Luxemburg, Hungary, Germany, Austria, Czech Republic, Romania, Slovakia; N: NL, AT, SK; R: PL - CHEAL, GALAP, ABUTH LAMPU;
2	Central Zone: Poland, Belgium, The Netherlands, Luxemburg, Hungary, Germany, Austria, Czech Republic, Romania, Slovakia	Sugar beet: <i>Beta vulgaris</i> (BEAVA). Fodder beet (BEAVC)	F	<i>Chenopodium album</i> (CHEAL), <i>Aethusa cynapium</i> (AETCY), <i>Galium aparine</i> (GALAP), <i>Galisonga parviflora</i> (GASPA), <i>Abutilon theophrasti</i> (ABUTH) and other species	Overall, foliar spray	BBCH 10 to 19	a) 2 b) 2	5-7 days 7-9 days	a) 0.04 L pr/ha b) 0.08 L pr/ha	a) 1.0 b) 2.0	100-300	N/A	A maximum of 2 applications at a dose of 1.0 gai/ha per application, with a total maximum dose of 2.0 g ai per ha and per season.	C: Belgium, The Netherlands, Luxemburg, Hungary, Germany, Austria, Czech Republic, Romania, Slovakia; N: NL, AT, SK; R: PL - CHEAL, GALAP, ABUTH LAMPU

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. *	Member state(s)	Crop and/ or situation  (crop destination / purpose of crop)	F, Fn, Fnp G, Gn, Gnp or I **	Pests or Group of pests controlled  (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks:  e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha  min / max			
3	Central Zone: Poland, Belgium, The Netherlands, Luxemburg, Hungary, Germany, Austria, Czech Republic, Romania, Slovakia	Sugar beet: <i>Beta vulgaris</i> (BEAVA). Fodder beet (BEAVC)	F	<i>Chenopodium album</i> (CHEAL), <i>Aethusa</i> <i>cynapium</i> (AETCY), <i>Galium aparine</i> (GALAP), <i>Galisonga</i> <i>parviflora</i> (GASPA), <i>Abutilon theophrasti</i> (ABUTH) and other species	Overall, foliar spray	BBCH 10 to 19	a) 3 b) 3	5-7 days 7-9 days	a) 0.026 L pr/ha b) 0.08 L pr/ha	a) 0.66 b) 2.0	100-300	N/A	A maximum of 3 applications at a dose of 0.66 g ai/ha per application, with a total maximum dose of 2.0 g ai per ha and per season.	C: Belgium, The Netherlands, Luxemburg, Hungary, Germany, Austria, Czech Republic, Romania, Slovakia; N: AT, SK; R: PL - CHEAL, GALAP, ABUTH LAMPUI; NL - CHEAL
4	Central Zone: Poland, Belgium, The Netherlands, Luxemburg, Hungary, Germany, Austria, Czech Republic, Romania, Slovakia	Sugar beet: <i>Beta vulgaris</i> (BEAVA). Fodder beet (BEAVC)	F	<i>Chenopodium album</i> (CHEAL), <i>Aethusa</i> <i>cynapium</i> (AETCY), <i>Galium aparine</i> (GALAP), <i>Galisonga</i> <i>parviflora</i> (GASPA), <i>Abutilon theophrasti</i> (ABUTH) and other species	Overall, foliar spray	BBCH 10 to 19	a) 4 b) 4	5-7 days 7-9 days	a) 0.02 L pr/ha b) 0.08 L pr/ha	a) 0.5 b) 2.0	100-300	N/A	A maximum of 4 applications at a dose of 0.5 g ai/ha per application, with a total maximum dose of 2.0 g ai per ha and per season.	C: Belgium, The Netherlands, Luxemburg, Hungary, Germany, Austria, Czech Republic, Romania, Slovakia; N: AT, SK; R: PL - CHEAL, GALAP, ABUTH LAMPUI; NL - CHEAL;
5	Central Zone: Poland, Belgium, The Netherlands,	Sugar beet: <i>Beta vulgaris</i> (BEAVA). Fodder	F	<i>Chenopodium album</i> (CHEAL), <i>Aethusa</i> <i>cynapium</i> (AETCY),	Overall, foliar spray	BBCH 10 to 19	a) 1 - 4 b) 1 - 4	5-7 days 7-9 days	a) 0.02 – 0.08 L pr/ha b) 0.02 - 0.08 L	a) 0.5 – 2.0 b) 0.5 – 2.0	100-300	N/A	A maximum of 4 applications at a dose of 0.5 – 2.0 g	C: Belgium, The Netherlands, Luxemburg,

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. *	Member state(s)	Crop and/ or situation  (crop destination / purpose of crop)	F, Fn, Fnp G, Gn, Gnp or I **	Pests or Group of pests controlled  (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks:  e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha  min / max			
	Luxemburg, Hungary, Germany, Austria, Czech Republic, Romania, Slovakia	beet (BEAVC)		<i>Galium aparine</i> (GALAP), <i>Galisona parviflora</i> (GASPA), <i>Abutilon theophrasti</i> (ABUTH) and other species					pr/ha				ai/ha per application, with a total maximum dose of 2.0 g ai per ha and per season.	Hungary, Germany, Austria, Czech Republic, Romania, Slovakia; N: AT, SK; R: PL - CHEAL, GALAP, ABUTH LAMPUI; NL – CHEAL, 3- 4 application a) per use b) per crop/season;
6	Germany	Sugar beet: <i>Beta vulgaris</i> (BEAVA). Fodder beet (BEAVC)	F	annual dicotyledonous weeds	Overall, foliar spray	BBCH 10 to 19	a) 1 b) 1	N/A	a) 0.08 L pr/ha b) 0.08 L pr/ha	a) 2.0 b) 2.0	100-300	N/A	A maximum of 1 application at a dose range of 2.0 g ai/ha and per season.	A
7	Germany	Sugar beet: <i>Beta vulgaris</i> (BEAVA). Fodder beet (BEAVC)	F	annual dicotyledonous weeds	Overall, foliar spray	BBCH 10 to 19	a) 2 b) 2	7-14 days	a) 0.04 L pr/ha b) 0.08 L pr/ha	a) 1.0 b) 2.0	100-300	N/A	A maximum of 2 applications at a dose of 1.0 g ai/ha per application, with a total maximum dose of 2.0 g ai per ha and per season.	A
8	Germany	Sugar beet:	F	annual dicotyledonous weeds	Overall, foliar spray	BBCH 10 to 19	a) 3 b) 3	7-14 days	a) 0.026 L pr/ha b) 0.08 L pr/ha	a) 0.66 b) 2.0	100-300	N/A	A maximum of 3 applications at a dose of 0.66 g ai/ha	A

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. *	Member state(s)	Crop and/ or situation  (crop destination / purpose of crop)	F, Fn, Fnp G, Gn, Gnp or I **	Pests or Group of pests controlled  (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks:  e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	zRMS Conclusion (efficacy)
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha  min / max			
		<i>Beta vulgaris</i> (BEAVA). Fodder beet (BEAVC)											per application, with a total maximum dose of 2.0 g ai per ha and per season.	
9	Germany	Sugar beet, <i>Beta vulgaris</i> (BEAVA). Fodder beet (BEAVC)	F	annual dicotyledonous weeds	Overall, foliar spray	BBCH 10 to 19	a) 4 b) 4	7-14 days	a) 0.02 L pr/ha b) 0.08 L pr/ha	a) 0.5 b) 2.0	100-300	N/A	A maximum of 4 applications at a dose of 0.5 g ai/ha per application, with a total maximum dose of 2.0 g ai per ha and per season.	A
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														
Minor uses according to Article 51 (field uses)														
6														
Minor uses according to Article 51 (interzonal uses)														

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

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



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Column 15: zRMS conclusion.

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

## 3.2 Efficacy data (KCP 6)

### Introduction

This document has been prepared to support the application of plant protection product F7B-39-30 25.05g/L EC containing florpyrauxifen-benzyl. This is a new herbicide for the control of broadleaves in sugar beet crops. The zRMS for the Central regulatory zone countries is Poland.

F7B-39-30 25.05g/L EC is an emulsifiable concentrate (NeoEC™) containing 25 grams per litre (g/l) florpyrauxifen-benzyl for use on sugar beet and fodder beets, commercially referred to RINPODE™.

The zonal GAP envelope for CEU countries foresees the maximum application dose of 80ml/ha/season (2g ai/ha) of F7B-39-30 25.05gai/l EC. The product can be applied from 1 to 4 applications at the doses of 80 to 20ml/ha (2-0.5g ai/ha according to the number of applications). The developmental stage of the crop at the application should be between BBCH10 and BBCH19 (cotyledon to 9 leaves).

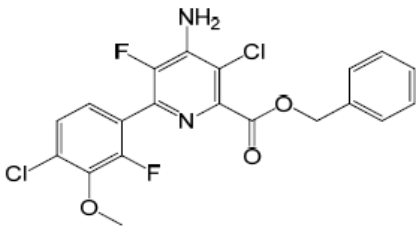
All trials presented by the applicant were performed by acknowledged GEP trial contractor organizations and by Corteva Agriscience following in all case the GEP guidelines. The trials were performed between 2021 and 2022 in the countries of the Maritime, North-East and South-East EPPO climatic zones that belong to the Central European Zone.

**Table 3.2-1: Overview of countries acting as zRMS and cMS**

	Countries
zRMS	Poland
cMS	Belgium, Netherlands, Hungary, Germany, Austria, Czech Republic, Slovakia, Romania

### Description of active substances

**Table 3.2-2: Details of the active substances**

Active substance:	Florpyrauxifen-benzyl (XDE-848 Benzyl Ester)
Concentration	25 g/L
Chemical group:	Arylpicolinate
Herbicide Group:	HRAC group 4 (Synthetic Auxins)
IUPAC name (if applicable):	Benzyl 4-amino-3-chloro-6-(4-chloro-2-fluoro-3-methoxyphenyl)-5-fluoropyridine-2-carboxylate
Chemical structure	
Biological Action	Herbicide (foliar)
Mode of Action:	IAA regulator. Florpyrauxifen-benzyl exhibits unique molecular interaction to auxin receptors as compared to other auxin herbicides Unique synthetic auxin herbicide chemotype

Plant translocation:	Systemic herbicide that translocates through the phloem and xylem and accumulates in the meristematic tissue
----------------------	--------------------------------------------------------------------------------------------------------------

### Mode of action

Florpyrauxifen-benzyl, is an herbicide used in agriculture for control of broadleaf weeds in rice, grassland, sugar beet and fodder beet. Florpyrauxifen-benzyl is a systemic herbicide belonging to the group of the Arylpicolinate substances.

Florpyrauxifen-benzyl is the last member of the unique synthetic auxin herbicide chemotype, the Arylpicolinate. Florpyrauxifen-benzyl exhibits unique molecular interaction to auxin receptors as compared to other auxin herbicides<sup>1</sup>. Florpyrauxifen-benzyl is classified by HRAC in group 4 (former group O) and represents an alternative mode of action for utility in sugar beet crops.

Natural auxins are used by the plant to regulate the hormones which bind to specific receptor proteins turning on and off vital plant processes. Florpyrauxifen-benzyl moves systemically throughout the target weed binding to receptor sites normally used by these plant hormones. This causes a disruption of normal plant growth processes via the binding of florpyrauxifen-benzyl to the receptors. This binding results in the deregulation of plant growth metabolic pathways and thus causes uneven cell division and growth, culminating in plant death.

With post-emergence applications, florpyrauxifen-benzyl enters the plant through the foliage and moves through the phloem and xylem towards the growing point where it exerts its herbicide action.

Symptoms of florpyrauxifen-benzyl in susceptible broadleaf weeds are epinastics growth which is typical from other synthetic auxins.

Synthetic growth regulators that mimic the natural plant hormone indole-3-acetic acid (IAA) demonstrate plant growth regulation and induce various growth effects when applied to plant tissue.

Auxin hormones and synthetic auxins interact with a protein family known as F-box proteins resulting in weed control of the dicot plant species<sup>2</sup>. Two of these auxin signalling F-box proteins include transport inhibitor response 1 (TIR1) and auxin signalling F-box protein 5 (AFB5). In *Arabidopsis thaliana*, mutant alleles of the *tir1* and *afb5* genes have been identified as *tir1-1* and *afb5-1*.

The *afb5-1* mutant demonstrated increased resistance to herbicides picloram, DAS 534, DAS 729 and DAS 848 (florpyrauxifen-benzyl) compared to *tir1-1*. The *tir1-1* mutant demonstrated a slight increase in vegetative resistance to 2,4-D compared to *afb5-1*. The *afb5-1* mutant had a multiple fold increase in resistance to DAS 729 and DAS 848 (florpyrauxifen-benzyl) compared to *tir1-1*.

Resistance of the *Arabidopsis* mutant *afb5-1* to DAS 729 and DAS 848 (florpyrauxifen-benzyl) demonstrates that both herbicides have binding affinity to the AFB5 protein. The high level of resistance of the *afb5-1* mutant over the *tir1-1* mutant demonstrates that:

- DAS 729 and DAS 848 (florpyrauxifen-benzyl) have higher preference for the AFB5 protein compared to the TIR1 protein,
- DAS 729 and DAS 848 (florpyrauxifen-benzyl) do not provide herbicidal activity through interaction with the TIR1 protein.

One of the major molecular interactions for DAS 848 (florpyrauxifen-benzyl) leading to herbicidal activity is via binding to the F-box protein AFB5.

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<sup>1</sup> Reference report: Robinson, A.E., Schmitzer, P.R., Toft, A.J., Mutations in an auxin receptor homolog AFB5 confers resistance to XDE-848. Dow AgroSciences, unpublished report Number DAI 1331. 3 Jun 2014. (KCP 6\_3.2\_Robinson\_2014\_DAI 1331)

<sup>2</sup> Reference report: Robinson, A.E., Schmitzer, P.R., Toft, A.J., Mutations in an auxin receptor homolog AFB5 confers resistance to XDE-848. Dow AgroSciences, unpublished report Number DAI 1331. 3 Jun 2014. (KCP 6\_3.2\_Robinson\_2014\_DAI 1331)

### Description of the plant protection product

F7B-39-30 (florpyrauxifen-benzyl) is a new post-emergence foliar herbicide for use in sugar beet and fodder beet. F7B-39-30 can be applied in conventional sugar beet and fodder beet varieties or in Conviso® Smart sugar beet varieties.

It is used as post-emergence foliar herbicide for the control for the broadleaf weeds frequently damaging sugar beet crops in the European Union. It has the flexibility to be used from 1 to 4 applications from the cotyledon to the 9 leaves of the sugar beet crops (BBCH 10 to 19).

The recommended rate is a minimum of 2ml/ha/ (0.5 g a.s./ha) per application, with a maximum number of 4 applications per season, which bring a total amount of F7B-39-30 of 80ml/ha (2ga.s/ha) with a minimum of 5-7 days interval between applications.

**Table 3.2-3: Simplified table of currently registered uses and requested uses for the product code.**

Uses		Member State	Requested rate(s)	Comments / Other relevant details on GAPs
Crop(s)	Target(s)			
<u>Sugar beet</u> <i>Beta vulgaris</i> (BEAVA). Fodder beet (BEAVC)	<u>Broadleaved weeds:</u> <i>Abutilon theophrasti</i> (ABUTH), <i>Capsella bursa-pastoris</i> (CAPBP), <i>Chenopodium album</i> (CHEAL), <i>Aethusa cynapium</i> (AETCY), <i>Galium aparine</i> (GALAP), <i>Galinsoga parviflora</i> (GASPA), <i>Lamium purpureum</i> (LAMPU), <i>Mercurialis annua</i> (MERAN), <i>Papaver rhoeas</i> (PAPRH), <i>Viola arvensis</i> (VIOAR)		A maximum of 4 applications at a dose of 0.5 – 2.0 g a.s./ha per application, with a total maximum dose of 2.0 g a.s /ha and per season.	With a minimum of 5-7 days interval between applications

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

EPPO code	Scientific name
ABUTH	<i>Abutilon theophrasti</i>
CAPBP	<i>Capsella bursa-pastoris</i>
CHEAL	<i>Chenopodium album</i>
AETCY	<i>Aethusa cynapium</i>
GALAP	<i>Galium aparine</i>
GASPA	<i>Galinsoga parviflora</i>
LAMPU	<i>Lamium purpureum</i>
MERAN	<i>Mercurialis annua</i>
PAPRH	<i>Papaver rhoeas</i>
VIOAR	<i>Viola arvensis</i>

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

Crop and/or situation	Crop status		Pests or group of pests controlled	Pest status	
	Major	minor		Major	minor
Sugar beet & Fodder beet	Poland, Belgium, Netherlands, Hungary, Germany, Austria, Czech Republic, Romania, Slovakia		<u>Broadleaved weeds:</u> <i>Abutilon theophrasti</i> (ABUTH), <i>Capsella bursa-pastoris</i> (CAPBP), <i>Chenopodium album</i> (CHEAL), <i>Aethusa cynapium</i> (AETCY), <i>Galium aparine</i> (GALAP), <i>Galinsoga parviflora</i> (GASPA), <i>Lamium purpureum</i> (LAMPU), <i>Mercurialis annua</i> (MERAN), <i>Papaver rhoeas</i> (PAPRH), <i>Viola arvensis</i> (VIOAR)	Poland, Belgium, Netherlands, Hungary, Germany, Austria, Czech Republic, Romania, Slovakia	

### Compliance with the Uniform Principles

Data to support the label claims, and which are summarized in this biological dossier, were generated in trials carried out by contract companies, and Corteva Agriscience which follow the EPPO standards and are officially recognized by the competent authorities to carry out field registration trials in accordance with the principles of Good Experimental Practice (GEP) and following the published EPPO guidelines standards, PP 1/52 (*Weeds in sugar and fodder beet and industrial chicory*), PP 1/152 (*Design and analysis of efficacy evaluation trials*), PP 1/135 (*Phytotoxic assessment*), PP 1/181 (*Conduct and reporting of efficacy evaluation trials including good experimental practice*), PP 1/214 (*Principles of acceptable efficacy*) and PP 1/225 (*Minimum effective dose*) and PP 1/239 (*Dose expression*). The Central regulatory zone covers all three climatic zones as described in EPPO standard PP 1/241 (*Guidance on comparable climates*). The confirmation of trial conductance by officially recognized organisations under GEP is available in the Material and Method chapter of the efficacy section.

As proposed on the EPPO DG PP 1/241 (2) *Guidance on comparable climates*, is the intent of the applicant to make a climatic comparison between trials generate in Germany, Czech Republic and Poland and use these data to support registration of F7B-39-30 in sugarbeet in Poland.

Data on the climatic and on the edaphic conditions presented on these trials (already included in the Biology Assessment Dossier) are shown here below:

Table 3.2-A. Edaphic soil condition of the trials included in the F7B-39-30 BAD- Efficacy section.

trial Code	%sand	% Silt	% Clay	pH	%OM	Soil type
EA21F7B039H-DPR015	71	8	21	7.5	2.1	SANDY CLAY
PL22F7B022-BTA33C	78	20	2	7.5	2.2	LOAMY SAND
PL22F7B022-BTA34	77	20	3	6.1	1.7	LOAMY SAND
PL22F7B022-BTA35	63	29	8	7.5	2.6	CLAY
PL22F7B022-BTA38C	80	9	11	6.2	2.7	LOAMY SAND
EA21F7B039H-TQS026	38	44	18	7.05	2.3	LOAM
CZ22F7B022-JMB21C	38	44	18	7.05	2.3	LOAM
CZ22F7B022-JMB22C	10	64	26	6.38	2.1	SILTY CLAY
CZ22F7B022-JMB23C	5	41	54	7.4	2.7	SILTY CLAY
DE22F7B022-WDI08	66	30	4	6.2	1.7	SILTY CLAY LOAM
DE22F7B022-NFR06C	13	72	15	6.7	2.8	SILTY CLAY
DE22F7B022-NFR07C	9	79	12	6.8	1.9	SILTY CLAY
DE22F7B022-NFR37C	80	14	6	6	1.9	LOAMY SAND

Table 3.2-B. Edaphic soil condition of the trials included in the F7B-39-30 BAD- Selectivity section.

trial Code	%sand	% Silt	% Clay	pH	%OM	Soil type
EA21F7B040H-DPR016	81	8	11	7.1	1.1	SANDY CLAY
PL22F7B024-BTA20C	78	20	2	7.5	2.2	LOAMY SAND
PL22F7B024-BTA21	75	22	3	6.8	2.6	LOAMY SAND
EA21F7B040H-TQS027	21	50	29	5.95	1.9	SILTY CLAY
CZ22F7B024-JMB12C	10	50	40	5.5	2.8	SILTY CLAY
CZ22F7B024-JMB13C	10	64	26	6.38	2.1	SILTY CLAY
DE22F7B024-NFR04C	12	33	55	7.4	3.1	SANDY CLAY LOAM
DE22F7B024-NFR05C	4	88	8	6.9	2.2	SILT LOAM

In tables 3.2-A and 3.2-B are presented the edaphic conditions (soil characteristic) from the trials conducted in Poland and those conducted in Czech Republic and Germany that are intent to be used as support of the Polish trials (Effectiveness and crop safety).

In general, it can be said that even if the trials located in Poland can be classified as more sandy, sandy-loam soil types than those from Czech Republic and Germany, the trials in Czech Republic and Germany are more balance soils classified as Silt-Clay-Loam. And for the soil characteristic of pH and % OM they are very similar between all the trials, with a soil pH neutral to slight acid soils (5.5-7.5), and a content of Organic Matter also similar between 1.1-3.

The trials in Czech Republic and Germany were done in a more divers soil types covering all potential soil conditions for growing sugarbeet crops, whereas the Polish trials located most of them on the area near Poznan, on soils contain a higher content in sand, are representing only a very specific type of soil which could generate more extreme conditions for effectiveness and crop safety. By putting all these trials together, Polish, Czech and German trials, for the evaluation of the effectiveness and crop safety of F7B-39-30 we bring a better overview of the product performance. Therefore, Corteva is of the opinion that considering the Czech and the German trials to support the registration of F7B-39-30 in Poland is acceptable.

Table 3.2-C. Climatic condition of the trials included in the F7B-39-30 BAD- Efficacy section

trial Code	Month											
	April			May			June			July		
	MAX	MIN	Averg	MAX	MIN	Averg	MAX	MIN	Averg	MAX	MIN	Averg
EA21F7B039H-DPR015	10.98	0.49	6.26	17.44	6.22	11.84	26.79	12.24	19.88			
PL22F7B022-BTA33C	12.79	4.18	8.83	20.26	8.64	14.85	25.32	13.41	19.59			
PL22F7B022-BTA34	13.57	2.69	8.22	20.08	6.92	13.80	25.72	11.81	18.97	25.50	12.64	19.33
PL22F7B022-BTA35	12.16	1.84	7.02	19.83	6.76	13.59	25.37	11.42	18.61	25.50	12.60	19.31
PL22F7B022-BTA38C	12.82	2.01	7.23	20.44	6.51	13.90	25.24	12.27	18.80	24.73	13.97	19.21
EA21F7B039H-TQS026				17.18	8.06	12.75	25.77	13.76	20.01	25.45	15.00	20.44
CZ22F7B022-JMB21C	14.47	4.03	9.26	22.04	9.92	16.13	25.96	13.35	19.93			
CZ22F7B022-JMB22C	11.61	0.61	6.01	22.35	7.57	15.33	26.14	12.31	19.65			
CZ22F7B022-JMB23C				26.04	7.60	16.59	31.83	12.56	21.49	30.14	12.24	21.04
DE22F7B022-WDI08	15.02	3.78	9.81	20.08	8.74	14.81	22.93	10.44	17.38			
DE22F7B022-NFR06C	15.34	3.54	9.69	23.76	10.11	17.13	27.39	13.07	20.54			
DE22F7B022-NFR07C	14.33	3.83	8.58	17.90	8.84	13.45	23.07	12.50	17.87	23.40	14.40	18.80
DE22F7B022-NFR37C	13.58	4.79	9.21	21.74	10.87	16.42	25.73	14.43	20.37	26.12	14.65	20.68

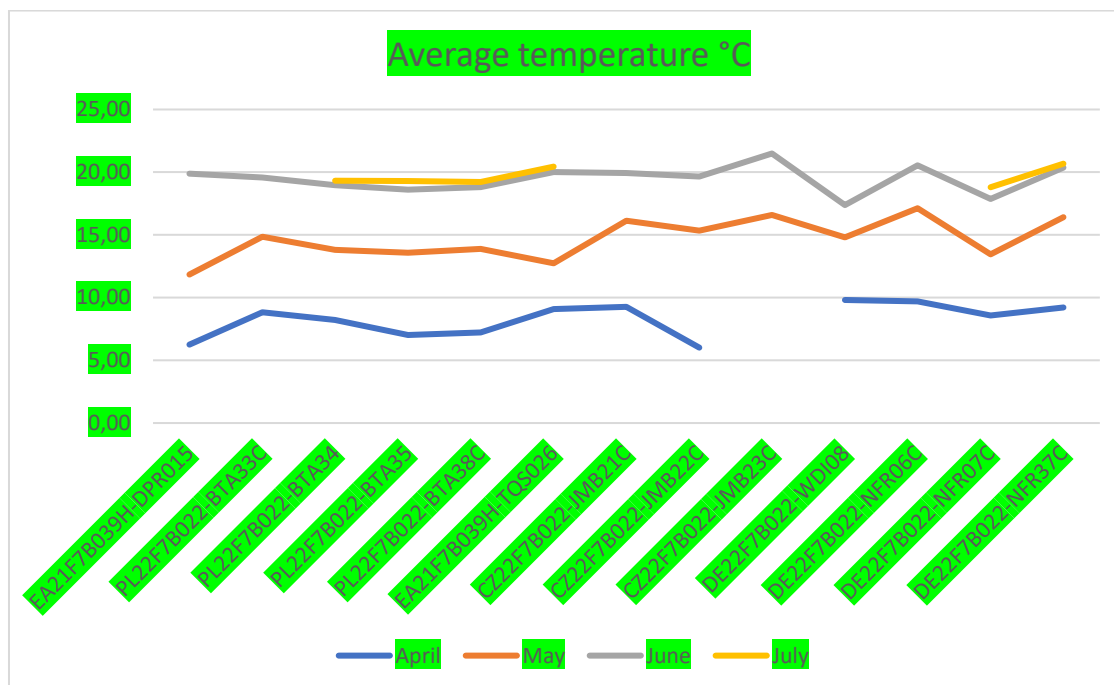


Fig 1. Average temperature by month across the country efficacy trials.

Table 3.2-D. Climatic condition of the trials included in the F7B-39-30 BAD- Selectivity section

trial Code	Month											
	April			May			June			July		
	MAX	MIN	Averg	MAX	MIN	Averg	MAX	MIN	Averg	MAX	MIN	Averg
EA21F7B040H-DPR016	12.91	1.60	7.86	17.44	6.22	11.84	26.38	12.20	19.61	26.48	14.41	20.49
PL22F7B024-BTA20C	12.79	4.18	8.83	20.26	8.64	14.85	25.32	13.41	19.59	25.56	14.38	19.95
PL22F7B024-BTA21	12.44	2.11	7.29	20.08	6.92	13.80	25.72	11.81	18.97	25.25	12.50	19.20
CZ22F7B024-JMB12C	14.99	1.75	9.00	21.75	6.82	14.52	25.82	11.29	18.70	25.66	11.36	18.56
CZ22F7B024-JMB13C	11.61	0.61	6.01	22.35	7.57	15.33	27.01	13.28	20.44			
DE22F7B024-NFR04C	14.30	3.87	9.26	20.58	9.71	15.58	25.20	12.93	19.37	26.39	14.06	20.61
DE22F7B024-NFR05C	13.47	4.53	9.10	21.48	10.65	16.19	25.50	14.30	20.07	27.53	15.33	21.67

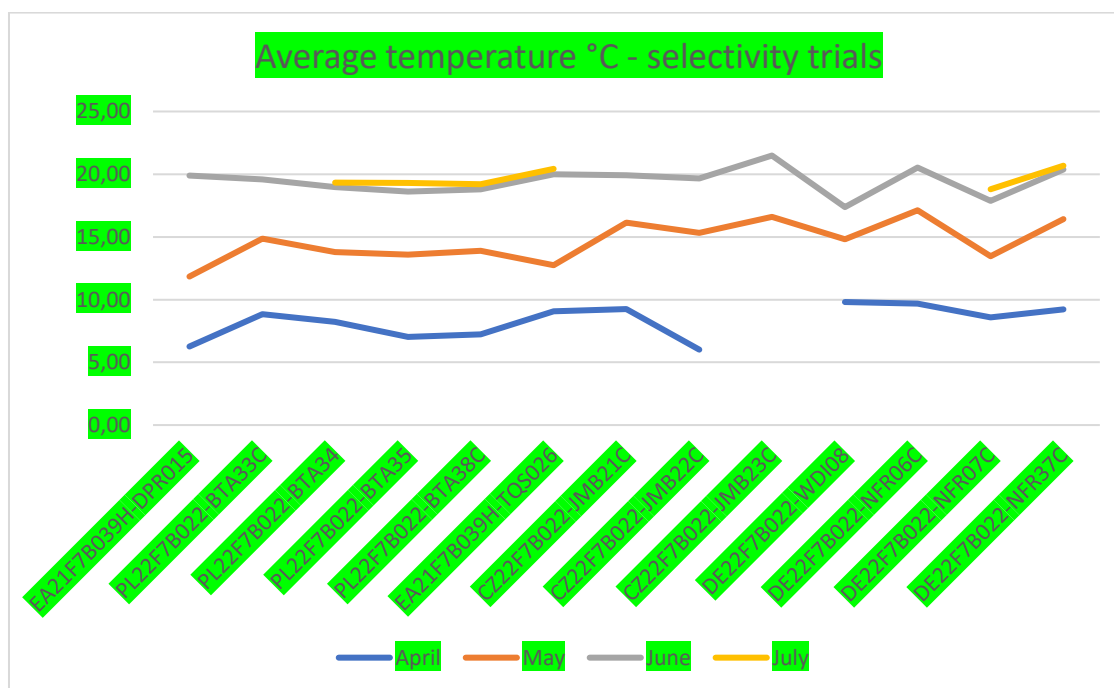


Fig 2. Average temperature by month across the country selectivity trials.

In the tables 3.2-C and 3.2-D are presented the climatic conditions of the Polish, Czech and German trials (effectiveness & crop safety) intent to be compared.

Weather condition during the month of April were in general for all the trials in those countries with a relatively low with temperature between 5-10 °C, and with wide variation of temperature between day and night.

Weather condition during the month of May were still low with an average temperature across all countries of 15 °C and with important temperature variation between day and night even more important than in April for all the locations in Poland, Czech Republic and Germany. And the weather conditions during the months of June and July were closer to normal for all the trials included in the comparison and very similar around 20 °C.

Table 3.2-E. Climatic condition, rainfall of the trials included in the F7B-39-30 BAD - Efficacy section

trial Code	Rainfall (mm)			
	Averg April	Averg May	Averg June	Averg July
EA21F7B039H-DPR015	0.24	2.56	0.33	
PL22F7B022-BTA33C	1.16	1.26	2.63	
PL22F7B022-BTA34	0.90	0.50	1.92	0.97
PL22F7B022-BTA35	0.86	0.51	1.83	1.00
PL22F7B022-BTA38C	1.14	2.01	1.64	4.32
EA21F7B039H-TQS026		0.18	2.85	3.03
CZ22F7B022-JMB21C	1.31	0.82	1.62	
CZ22F7B022-JMB22C	2.83	7.09	7.05	
CZ22F7B022-JMB23C		1.88	4.60	5.08
DE22F7B022-WDI08	0.64	0.94	1.17	
DE22F7B022-NFR06C	1.74	0.24	2.39	
DE22F7B022-NFR07C	0.00	0.95	0.85	4.50
DE22F7B022-NFR37C	2.68	3.03	4.72	4.80



Table 3.2-F. Climatic condition, rainfall of the trials included in the F7B-39-30 BAD - Selectivity section

	Rainfall (mm)				
	Averg April	Averg May	Averg June	Averg July	Averg August
EA21F7B040H-DPR016	0.10	2.56	0.58	1.12	
PL22F7B024-BTA20C	1.16	1.26	2.63	1.55	2.84
PL22F7B024-BTA21	0.91	0.50	1.92	0.85	2.93
CZ22F7B024-JMB12C	0.84	1.15	4.65	2.11	2.34
CZ22F7B024-JMB13C	2.83	7.09	7.63		
DE22F7B024-NFR04C	2.38	1.41	2.14	1.15	1.69
DE22F7B024-NFR05C	2.16	1.26	3.98	0.45	2.67

In tables 3.2-E and 3.2-F are presented the rainfall recorded on each of the efficacy and selectivity trials conducted in Czech Republic, Poland and Germany. As a summary, it can be said that in all the trials the level of rainfall from April to July was very low. April between 0.1-2.8 mm, May between 0.5-7 mm, June between 0.3-7 mm and July-August between 0.8-5 mm.

These edaphic and climatic data demonstrate that the trials from Poland, Czech Republic and Germany already included in this dRR/BAD present very similar conditions that could be considered as comparable. They will affect in equivalent manner the performance of F7B-39-30, allowing the use of all these trials to support the registration of F7B-39-30 in Poland.

### Information on trials submitted (3.1 Efficacy data)

A total of 21 trials were conducted between 2021 and 2022 across various countries and years to support the different chapters of this biological assessment dossier. Trial details are revealed in the upcoming tables. Applications were done between BBCH10 and BBCH19 in various commercial sugar beet varieties using randomized complete block design with 4 replicates and plot sizes between 13.75 and 27 m<sup>2</sup>. Thereby, several target broadleaved weeds in densities >5 individuals per m<sup>2</sup> were assessed. The evaluation assessments selected were between 35 and 63 days after the last applications. All field trials contained the comparison of different dose rates, different applications (1, 2, 3 and 4 applications) as well as reference products.

Table 3.2-6: Presentation of trials (efficacy trials, preliminary trials...)

Crop(s) *	Target(s) *	Country	Years	Type of trial*			Number of valid trials per EPPO Zone			GEP, non-GEP, official ***	Comments (any other relevant information)
				P	ME D	E	Mari-time	North-East	South-East		
<i>Beta vulgaris</i> (BEAVA) Fodder beet (BEAVC) , Post-emergenc	Broadleaf weeds	Czech Republic	2021	1	1	1	1			GEP	
			2022	1	3	3	3			GEP	
		Germany	2021	1	1	1	1			1	
			2022	1	4	4	4			GEP	
		Netherlan	2021	-	1	1	1			GEP	

Crop(s) *	Target(s) *	Country	Years	Type of trial*			Number of valid trials per EPPO Zone			GEP, non-GEP, official ***	Comments (any other relevant information)	
				P	MED	E	Maritime	North-East	South-East	-		
e - Spring		ds	2022	-	1	1	1				GEP	
		Poland	2021	1	1	1		1		1		
			2022	1	4	4		4		GEP		
		Hungary	2021	-	-	-			-	-		
			2022	-	2	2			2	GEP		
		United Kingdom	2021		-	-	-					
			2022		2	2	2					
		France	2021		-	-	-					
			2022		2	2	2					
		TOTAL Central zone		2021-22		17	17	10	5	2	GEP	
	TOTAL Central zone + UK		2021-22		19	19	12	5	2			
	TOTAL Central zone + UK + Southern zone		2021-22		21	21	14	5	2	GEP		

\* 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.

Trials highlighted in green from Germany and Czech Republic were used to support the registration of F7B-39-30 in Poland in sugarbeet

Table 3.2-7: Presentation of reference standards used in trials (efficacy trials, preliminary trials...)

Crop(s)	Reference standard	Active substance(s)	Formulation		Registered application rate <sup>(3)</sup>	Application rate in trials (per treatment)	Remark <sup>(4)</sup>
			Type <sup>(2)</sup>	Concentration of a.s.			
Sugar beet - <i>Beta vulgaris</i> (BEAVA) Fodder beet (BEAVC),	Betasana	phenmedipham	SC	160gai/l	960g/l	1 application = 960gai/l 2 applications = 480gai/l 3 application = 320gai/l 4 applications 240gai/l	

(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)

#### 3.2.1.1 Preliminary range-finding tests

##### Information on the insecticidal and fungicidal activity of Florpyrauxifen-benzyl

Preliminary glasshouse screening with florpyrauxifen-benzyl was conducted in 2013 to evaluate fungicidal and insecticidal activity of the compound. This can be summarized as follows: florpyrauxifen-benzyl has a lack of insecticidal and anti-fungal activity. Thus, florpyrauxifen-benzyl is considered as herbicide that will provide control of key broadleaf weeds at crop selective rates.

##### Insecticidal and Fungicidal activity:

High-throughput experiments were conducted in the first quarter of 2013. The studies were designed to assess the antifungal and insecticidal activity of florpyrauxifen-benzyl XDE-848 (parent acid, X11438848) and XDE-848 BE (benzyl ester, X11959130), to determine if an opportunity existed for insect or crop disease management or if further studies were needed to monitor for effects on insects or fungi<sup>3</sup>.

In high-throughput insecticide experiments the auxinic herbicides XDE-848 (parent acid, X11438848) and XDE-848 BE (benzyl ester, X11959130) were screened at a high concentration of 4000 µg/ml to evaluate insecticidal activity against beet armyworm (*Spodoptera exigua*) and the yellow fever mosquito (*Aedes aegypti*).

*In-vitro* anti-fungal efficacy was assessed at rates of 10, 2, 0.4 and 0.08 ppm on plant pathogenic fungi from two taxonomic classes:

- the ascomycetes *Pyricularia oryzae* (PYRIOR), the causal agent of rice blast and *Septoria tritici* (SEPTTR), the causal agent of wheat leaf spot,
- the basidiomycete *Ustilago maydis* (USTIMA), the causal agent of maize smut.

##### **High-Throughput Insecticidal Screening of XDE-848 and XDE-848 BE**

The level 1 high-throughput insecticide assays are designed to give the test compound the best chance of inducing insect mortality. The high concentration of compound combined with prolonged insect exposure to the test compound and the possibility of ingestion increase the likelihood of finding a positive result if one exists.

This assay evaluated the contact and/or ingestion toxicity of experimental compounds applied to beet armyworm eggs and larvae maintained on an artificial diet and to the aquatic larvae of the yellow fever mosquito. Each treatment was replicated six times at a concentration of 4000 µg/ml. Spinosad and Cypermethrin were used as positive controls and were tested at a rate of 50 µg/ml, each control was replicated six times. In addition, a solvent blank was replicated twelve times as a negative control.

In both the beet armyworm and yellow fever mosquito assays, there was no observed insect mortality in response to treatment with XDE-848 and XDE-848 BE, showing lack of insecticidal activity.

The summarized results of the level 1 high throughput insecticidal activity assays are presented in the tables below.

**Table 3.2-8: Insecticidal activity in beet armyworm (*Spodoptera exigua*) high throughput assay.**

Material ID	Compound	Concentration (µg/ml)	N	Average % Mortality
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<sup>3</sup> Wessels, F., Davis, G.E., Schmitzer, P. Insecticidal and Fungicidal Assessment of XDE-848 and XDE-848 benzyl ester. Dow AgroSciences, unpublished report Number DAI 1193, 13 May 2013

X11438848	XDE-848	4000	6	0
X11959130	XDE-848 BE	4000	6	0
X507190	Spinosad	50	6	100
X50523	Cypermethrin	50	6	100
Blank	Blank	0	12	0

**Table 3.2-9: Insecticidal activity in yellow fever mosquito (*Aedes aegypti*) high throughput assay.**

Material ID	Compound	Concentration (µg/ml)	N	Average % Mortality
X11438848	XDE-848	4000	6	0
X11959130	XDE-848 BE	4000	6	0
X507190	Spinosad	50	6	100
X50523	Cypermethrin	50	6	100
Blank	Blank	0	12	0

***In-vitro Anti-Fungal Screening of XDE-848 and XDE-848 BE***

Cultures of test fungi are maintained on suitable media such as potato dextrose agar or rice flour agar depending on the organism. Growth inhibition is evaluated in liquid minimal media.

Inoculum was prepared by flooding culture plates with assay media and scraping with a sterile cell lifter to release conidia.

Test compounds at rates of 10, 2, 0.4 and 0.08 ppm were dispensed into wells of 96 well polystyrene microliter plates in 2µL DMSO and then diluted to final concentrations by addition of 200 µL of inoculum suspension. Azoxystrobin was applied at rates of 5 and 0.05 ppm, while tebuconazole was applied at 5 and 0.5 ppm.

For each of the three target fungi tested, no useful levels of fungal growth inhibition were observed for either XDE-848 or XDE-848 BE, showing lack of anti-fungal activity. The summary of the anti-fungal results is shown in the table below.

**Table 3.2-10: In-vitro percent growth inhibition by XDE-848 and XDE-848 BE .**

Material ID	Compound	Concentration (µg/ml)	Average % Growth Inhibition		
			PYRIOR	SEPTTR	USTIMA
X11438848	XDE-848	10	0	10	0
		2	10	0	10
		0.4	10	0	10
		0.08	0	0	0
X11959130	XDE-848 BE	10	10	10	0
		2	0	0	0
		0.4	0	0	0
		0.08	10	0	0
X199930	Tebuconazole	5	90	80	100
		0.5	80	70	100
X538237	Azoxystrobin	5	80	100	100
		0.5	80	90	90
Blank	Solvent blank	0	0	2	0

**Summary and conclusions**

The lack of insecticidal activity associated with XDE-848 and XDE-848 BE in these assays strongly suggests that these compounds are not acutely toxic to the insect species tested. Due to the lack of activity and because of the potential for confounding effects due to the herbicidal activity of the molecules, further tests were not pursued.

Anti-fungal high-throughput screening for crop disease hits is typically conducted at a rate of 5 ppm. The lack of anti-fungal activity at rates of up to 10 ppm in these tests indicates that these compounds are not acutely toxic to the fungal species tested representing two fungal classes.

comments of zRMS: dRR point 3.2.1.1	The applicant has submitted preliminary glasshouse screening trials where fungicidal and insecticidal activities of the active substance in form of parent acid benzyl ester were assessed. The results showed the lack of insecticidal activity and the lack of fungicidal activity up to 10 ppm. The present dossier will be evaluated for herbicidal properties of the active substance/the plant protection product.
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### 3.2.1.2 Bridging Formulations

No bridging tests between the formulations F7B-39-30 and GF-3206 will be presented in this dossier following the guidance from the EPPO GD 1307 (1) as the addition of a marker or co-formulant (e.g dye) is considered as a no-significant change in the chemical composition and hence no efficacy or /and selectivity trials are required.

comments of zRMS: dRR point 3.2.1.2	The difference between both formulation F7B-39-30 and GF-3206 is addition of a marker co-formulant – dye in formulation GF-3206. In accordance with PP 1/307(2) Efficacy considerations and data generation when making changes to the chemical composition or formulation type of plant protection products, such the change is considered biologically nonsignificant and it does not affect efficacy of the product.
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### 3.2.1.3 Justification for the active substances in the formulation

No data will be presented on this preliminary section, as there is only florpiauxifen-benzyl as an active in the formulation.

### 3.2.1.4 Justification of safener inclusion

No data will be presented on this section of the preliminary section, as there is no safener in F7B-39-30

### 3.2.1.5 Justification of adjuvant

No data will be presented on this section of the preliminary section, as there is no adjuvant recommendation for the formulation F7B-39-30.

## 3.2.2 Minimum effective dose tests (KCP 6.2)

The aim of this section is to demonstrate that the minimum effective dose (MED) required for F7B-39-30 25.05g ai/L EC to control most relevant weeds in sugar beet crops is the dose of 0.08 L (2 gai/ha) of formulated product per hectare. This can be done as of 1 application at a dose of 2.0g ai/ha, as of 2 applications at a dose of 1g ai/ha per application, as of 3 applications at a dose of 0.66g ai/ha per application, and as of 4 applications at a dose of 0.5g ai/ha per application, with a total maximum dose of 2g ai/ha and per season in all cases.

A total of seventeen (17) trials were established in the Central regulatory zone to validate the minimum effective dose of F7B-39-30 for the control of broadleaf weeds in sugar beet. In addition, to support the minimum effective dose, two trials (2) from the Southern registration zone of Maritime EPPO climatic zone

were added and two trials (2) from the UK. This means that in total twenty-one (21) trials were used to define the minimum effective dose.

One application at 2g ai/ha: F7B-39-30 EC was tested at three different doses 1 g ai/ha, 1.5 g ai/ha and 2 g ai/ha.

Two applications at 1g ai/ha: F7B-39-30 EC was tested at two different doses 0.5 g ai/ha and 1 g ai/ha.

Three applications at 0.66g ai/ha: F7B-39-30 EC was tested at three different doses 0.335 g ai/ha, 0.503 g ai/ha and 0.66 g ai/ha.

Four applications at 0.5g ai/ha: F7B-39-30 EC was tested at three different doses 0.25 g ai/ha, 0.375 g ai/ha and 0.5 g ai/ha.

All these trials were carried out in accordance with the EPPO standard PP 1/225 ‘Minimum effective dose’.

Only trials with significant pest density were considered and included in the analysis in this minimum effective dose section.

Standard reference material was included. Commercial reference was selected upon its relevance in the sugar beet market of Central Europe where sugar beet is economically relevant, and for comparable timing of application and spectrum of efficacy. Trials were designed for orthogonal comparison of rates and references within the same trial.

## Sugar and fodder beet

### Testing facility or organisation

Data to demonstrate that the minimum effective dose (MED) required for F7B-39-30 of 25.05 g a.i/L EC to control the most relevant weeds in sugar beet crops is 0.08 L/ha (2 g a.i/ha) of the formulated product per hectare was generated in 17 trials in the Central regulatory zone, carried out in Czech Republic, Germany, The Netherlands, Poland and Hungary with additionally, as supportive data, 2 trials from the Maritime EPPO zone in France (Southern regulatory zone) and 2 trials from the Maritime EPPO zone in UK, non-EU regulatory zone. All these 21 trials were conducted during the period of 2021-2022. Trials were carried out by Corteva Agrisciences and contractor companies, all of which follow the EPPO standards and are officially recognized by the competent authorities to carry out field registration trials in accordance with the principles of Good Experimental Practice (GEP).

The Central regulatory zone covers all three climatic zones as described in EPPO standard PP 1/241. This analysis includes data from the Maritime, North-East and South-East EPPO zones. Details of testing facilities included in the minimum effective dose analysis of F7B-39-30 EC against broadleaves in sugar beet are present in the Biology Assessment dossier, as well as site details of these trials and application details, respectively in Table 3.2-13, Table 3.2-14 and Table 3.2-15.

**Table 3.2-11: Trial distribution throughout EPPO zones for (MED and efficacy)**

EPPO zone	Year	2021	2022	Total EPPO zone
	Country			
Maritime	Czech Republic	1	3	14
	Germany	1	4	
	Netherlands	1	1	
	United Kingdom	-	2	
	France	-	2	
North-East	Poland	1	4	5
South-East	Hungary	-	2	2
Total Central zone		3	14	17
Total UK		-	2	2
Total Southern zone		-	2	2
Total Central + Southern zone +UK		3	18	21

**Trials highlighted in green from Germany and Czech Republic were used to support the registration of F7B-39-30 in Poland in sugarbeet**

## Guidelines

Guidelines	General guidelines	PP 1/135, PP 1/152, PP 1/181, PP 1/225, PP 1/214
	Specific guidelines	PP 1/52, PP 1/278

**Table 3.2-12: Details on trial methodology**

Guidelines	General guidelines	EPPO PP 1/152, 1/135, 1/181, 1/223, 1/225, 1/226, 1/278, 1/214, 1/291
	Specific guidelines	EPPO PP 1/52
Experimental design	Plot design	Randomised complete block (RCB)
	Plot size	13.75 – 27 m <sup>2</sup>
	Number of replications	4
Crop	Crop	Sugar beet (BEAVA)
	Crop varieties	<u>Conventional sugar beet varieties</u> : BTS-555 (2), BTS-9975 (1), BTS-1140 (1), BTS-4190 RHC (1), BTS-5770 (1), Hanibal (1), Lisanna (1), Lunella (1), KWS Florentina (1), Fresbee (1), Totem (1), Annemartha (1), Klara (1), Kujawa (1), Coati (1), Panorama (1)  <u>Conviso® SMART varieties</u> : BTS SMART 9145 N (1), Smart Renja KWS (1), Kipunji Smart (1), Smart Belamia KWS (1)
	Sowing period	spring 2021 - spring 2022
Application	Crop stage (BBCH) at application	Application A=10-14, B=10-16, C=10-19, D=16-37
	Timing Pest stage (BBCH) at application	CHEAL Application A=10-23, B=10-34, C=10-51, D=10-61 AETCY Application A=09-12 B=10-14, C=10-16, D=12-30 ABUTH Application A=10-12, B=10-11, C=10-21, D=10-23 GALAP Application A=09-12, B=10-12, C=12-23, D=26-28 GASPA Application A=10, B=10-16, C=12-24, D=51-61
	Pest density (pl/m <sup>2</sup> )	CHEAL, Application A=7-50, B=7-50, C=7-50, D=7-50 AETCY, Application A=5-14, B=5-14, C= 10-16, D= 12-30 ABUTH, Application A=4-9, B= 47-52, C=10-21, D= 12-30 GALAP Application A=4, B=12, C=20, D=20 GASPA Application A=3-42, B=5-49, C=8-53, D=13-55
	Number of applications Intervals between applications	4, request 5-7 days interval
	Spray volumes	100, 150, 200, 243 & 300 L/ha
	Spray pressure	200-270
	Temperature (°C)	8 - 29.7
	Soil temperature (°C)	6.2 - 26
	Humidity (%)	21 - 88
Soil	Soil type	Clay, clay loam, loam, loamy sand, sand, sandy clay, sandy clay loam, silt, silty clay,
	pH	6 - 8.3
	% OM	10.9-11.4

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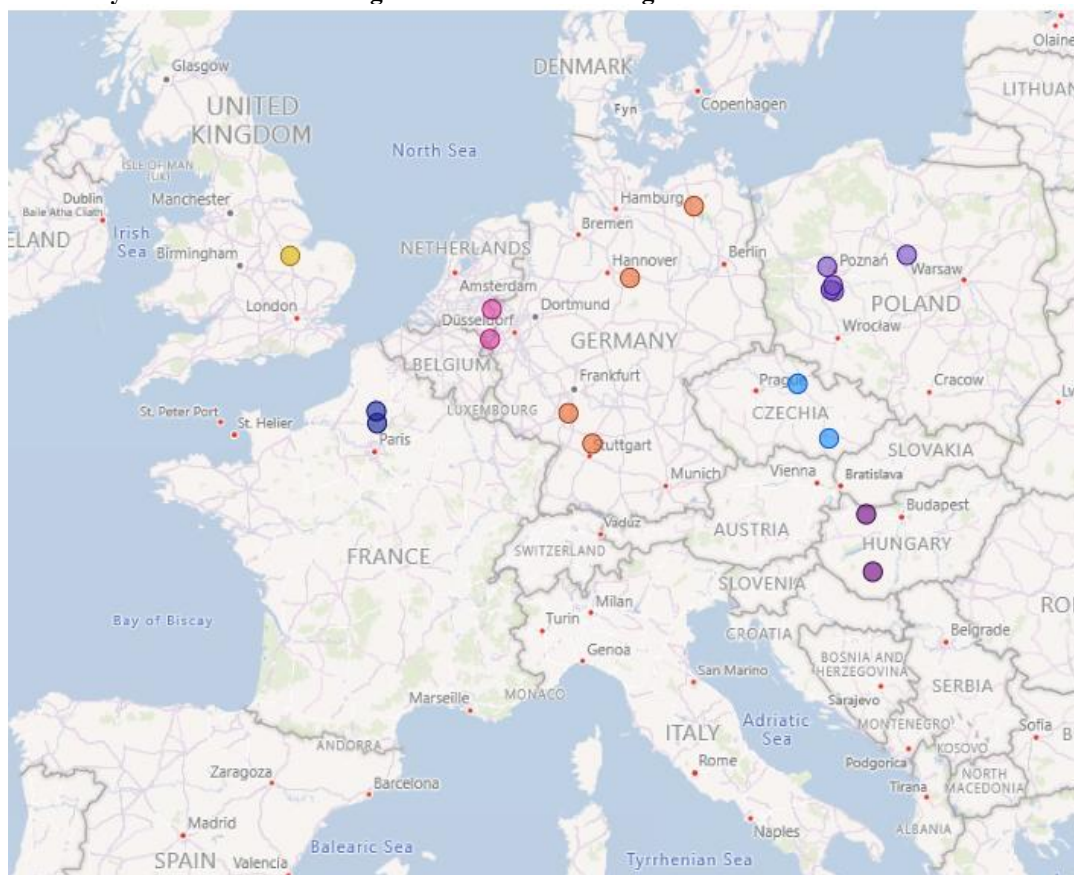
	Tillage type	Conventional tillage (plough, disking, and harrows to prepare seed bed) and Minimum tillage
<b>Assessment</b>	Assessment types	% visual control relative to the untreated control on a 0-100 linear scale whereby 0% = no control and 100% = plant death.
	Assessment dates	7 days after each application timing and before the next application timing then at regular intervals, up to 56 days after application D

### Application methods

Treatments were applied to all trials using a backpack sprayer compressed air or a bicycle sprayer compressed air, calibrated to apply a spray volume of **175-300 L/ha** using different types of nozzles (FLAT FAN: flat fan; FLATFANA: flat fan, air induction).



**Figure 3.2-1: Location map of the testing trials used for the determination of the minimum effective dose rate analysis of F7B-39-30 EC against broadleaves in sugar beet**



#### Formulations applied and application rates

The MED for F7B-39-30 applied at 2 g a.i/ha through post-emergence application has been determined using the following broad leaved weed species: *Chenopodium album*, *Aethusa cynapium*, *Abutilon theophrasti*, *Galium aparine* and *Galinsoga parviflora*, all of which are weeds in sugar beet. In all cases, the rates reflect the proposed label rate and 50% and 75% of the full recommended rate of F7B-39-30, in accordance with the EPPO standard PP 1/225 'Minimum effective dose'.

Only trials with significant pest infestation were considered and included in the analysis in this Biological Assessment Dossier.

Details of the formulations tested in the efficacy trials for the minimum effective dose are provided in Table 3.2-13.

**Table 3.2-13: Formulations tested in the efficacy trials used for minimum effective dose rate of Product A in crop**

Reference (trademark)	Form. Type	Form. concentration	Active substance	Application timing	Rate used in reported trials (g a.s./ha)	Rate used in reported trials (L or Kg f.p./ha)
F7B-39-30	EC	25.05 gai/L	florpyrauxifen-benzyl	BBCH 10-19 for 2022 field trials BBCH10-39 for 2021 field trials	0.25, 0.335, 0.375, 0.5, 0.66, 1, 1.5, 2	0.01, 0.0134, 0.015, 0.02, 0.0264, 0.04, 0.06, 0.08
Betasana	SC	160 gai/L	phenmedipham	BBCH 10-19 for 2022 field trials	240, 320, 480, 960	1.5, 2, 3, 6

				BBCH10-39 for 2021 field trials		
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### Assessment methods

Assessments were carried out according to the EPPO guidelines Weeds in sugar and fodder beet and industrial chicory PP 1/52, PP 1/135 “*Phytotoxicity assessment*”, PP 1/152 “*Design and analysis of field evaluation trials*” and PP 1/181 “*Conduct and reporting of efficacy evaluation trials including good experimental practice*”.

In all trials, regular visual assessments on the efficacy were conducted approximately 7 days after each application timing and before the next application timing, afterwards at regular intervals, up to 56 days after the last applications. The percentage of visual control was compared to the untreated control on a 0-100 linear scale 0% = no control and 100% = plant death.

**Table 3.2-14: Proposed efficacy scale for herbicides to be used in efficacy section according to SANCO/10055/2013 Rev.4**

Weed species susceptibility	Proposed EU scale for zonal BAD and labels
Highly Susceptible (HS)	95 – 100%
Susceptible (S)	85 – 94.9%
Moderately Susceptible (MS)	70 – 84.9%
Moderately Tolerant (MT)	50 – 69.9%
Tolerant (T)	0 – 49.9%

### Statistical Analysis

Data was analysed using the Tukey mean comparison test (P=0.05). Means followed by the same letter do not differ significantly.

### Summary and evaluation of individual trials results

#### One application at 2 gai/ha

F7B-39-30 was tested at 1, 1.5 and 2 g a.i/ha of florypyrauxifen-benzyl for the control of the target weeds. The rates reflect a dose response for 50%, 75% and 100% of the full-recommended rate, in accordance with the EPPO standard PP 1/225 ‘*Minimum effective dose*’. The standard included in the trials was Betasana SC at 960 g of phenmediphan/ha.

#### Two applications at 1 gai/ha

F7B-39-30 was tested at 0.5 and 1 g a.i/ha of florypyrauxifen-benzyl for the control of the target weeds. The rates reflect a dose response for 50% and 100% of the full-recommended rate, in accordance with the EPPO standard PP 1/225 ‘*Minimum effective dose*’. The standard included in the trials was Betasana SC at 480 g of phenmediphan /ha.

#### Three applications at 0.66 gai/ha

F7B-39-30 was tested at 0.335, 0.503 and 0.66 g a.i/ha of florypyrauxifen-benzyl for the control of the target weeds. The rates reflect a dose response for 50%, 75% and 100% of the full-recommended rate, in accordance with the EPPO standard PP 1/225 ‘*Minimum effective dose*’. The standard included in the trials was Betasana SC at 320 g of phenmediphan/ha.

#### Four applications at 0.5 gai/ha

F7B-39-30 was tested at 0.25, 0.375 and 0.5 g a.i/ha of florypyrauxifen-benzyl for the control of the target weeds. The rates reflect a dose response for 50%, 75% and 100% of the full-recommended rate, in accordance with the EPPO standard PP 1/225 ‘*Minimum effective dose*’. The standard included in the trials

was Betasana SC at 240 g of phenmediphan/ha.

Trials have been conducted in sugar beet crop in 2021 and 2022 in Czech Republic, Germany, The Netherlands, Poland, Hungary, United Kingdom (non-EU) and France (Southern regulatory zone), covering the three EPPO climatic zones in the Central regulatory zone, Maritime, North-East and South-East.

## SUMMARY TABLE

For each of the three weeds, orthogonal average data comparison among tested formulations doses and reference is presented by EPPO zone and across the different EPPO zones inside the same Regulatory zone.

The following tables summarize dose response observed for F7B-39-30 on five key weeds, selected for their relevance in Maritime, South-East and North-East EPPO climatic zones in the Central regulatory zone. Results are validated and consistent in an ample range of climatic conditions and infestation densities observed across all considered EPPO climatic zones.

**3.2.2.1 One application at 2g ai/ha per season**

A summary of the dose response results across trials against *Chenopodium album*, *Abutilon theophrasti*, *Aethusa cynapium*, *Galium aparine* and *Galinsoga parviflora* achieved by F7B-39-30 applied once at post-emergence in sugar beet is provided at Table 3.2-15.

The table includes the proposed target dose of 2g ai/ha (100%) as well as 75% and 50% of the full dose applied once, at post-emergence in sugar beet.

Even though in some trials the density of certain weeds was inferior to 5 plants/m<sup>2</sup> at the time of the application, trials were included in the summary. The reason is that at the time of evaluation the number of plants present met or exceeded the required 5 m<sup>2</sup> and the trial is considered valid. Also, for a weed like Abutilon, the size of this weed can grow 1 to 2.5 m tall, and generate a significant number of seeds. The applicant considers that even low populations of this weed are considered important, and therefore their trials are included in the analysis.

**Table 3.2-15: SUMMARY TABLE - One application A: Minimum effective dose of F7B-39-30 at proposed label rate (100%) and 50% and 75% of proposed label rate against broadleaves in sugar beet crop.**

Target (EPPO code)	EPPO and/or Administrative Zone	N. of trials	Assessme nt DAA A	Infestation of the untreated control (plants/m²) at evaluation	Pest stage at application A* (BBCH)	% Control of F7B-39-30 - post-emergence application							
						1 g a.i/ha		1.5 g a.i/ha		2 g a.i/ha		BETASANA SC @960 g a.i/ha	
						(50% of full rate)		(75% of full rate)		(100% of full rate)			
						Min - Max	Min - Max	Mean	Min - Max	Mean	Min - Max	Mean	Min - Max
CHEAL	Maritime	11	31-82	7-50	B10-23	48.30	5-87	64.85	7-95	71.45	15-100	69.74	25-100
	South-East	2	38-43	18-45	B10	53.5	30-77	55.6	34-77	72.2	54-90	70.3	49-92
	North-East	4	32-49	13-35	B10-14	55.00	30-77	63.88	51-79	65.95	52.5-82.5	25.33	0-61
	North-East + CZ & GER support data	11	31-82	7-35	B10-23	44.7	5-87	57.8	7.5-90	64.6	15-100	48.9	0-100
	CZ+UK	17	31-82	7- 50	B10-23	50.49	5-87	63.54	7.5 -94.5	70.24	15-100	59.35	0-100
AETCY	Maritime CZ	2	44-81	9-14	B09-12	80	77-82	91	87-95	93.7	92-95	18	14-22
	GER to Support North- East	2	44-54	0-14	B09-12	80	77.5-82.5	91	87-95	93.75	92.5-95	18.15	13-22.5
	Maritime CZ +SZ	4	44-81	5-14	B09-12	80.9	76-87	83	67-95	88	77-95	12	0-22
ABUTH	Maritime	3	37-59	8-9	B10-12	44	37-55	72	52-99	79.6	65-100	6.7	0-20
	South-East	1	35	4	B10	10	10	15	15	71.3	71.3	17.5	17.5

Target (EPPO code)	EPPO and/or Administrative Zone	N. of trials	Assessme nt DAA A	Infestation of the untreated control (plants/m²) at evaluation	Pest stage at application A* (BBCH)	% Control of F7B-39-30 - post-emergence application							
						1 g a.i/ha		1.5 g a.i/ha		2 g a.i/ha		BETASANA SC @960 g a.i/ha	
						(50% of full rate)		(75% of full rate)		(100% of full rate)			
						Min - Max	Min - Max	Mean	Min - Max	Mean	Min - Max	Mean	Min - Max
	Central zone +UK	4	35-59	4-9	B10-12	35.6	10-55	57.9	15-99	77.5	65-100	9	0-20
GALAP	Maritime	1	59	8	B10	52.5	52.5	100	100	100	100	0	0
	North-East	2	55-82	8-20	B9-10	40	12.5-67.5	45.15	19-71.3	56.25	27.5-85	19.4	0-39
	CZ & support to N-E zone	3	55-82	8-20	B9-10	44.2	12.5-67.5	63.4	19-71.3	70.83	27.5-100	12.93	0-39
	Central zone	3	55-82	8-20	B9-10	44.2	12.5-67.5	63.4	19-71.3	70.83	27.5-100	12.93	0-39
GASPA	Maritime	2	33-63	3-42	B10	52.9	22.5-83.3	51.3	23-78	56.9	32-81	62.75	37-88
	North-East	1	40	11.5	B10-12	85.0	85	86.3	86.3	88.8	88.8	0	0
	GER to support North- east	2	4-63	3-11.5	B10	53.7	22.5-85	55.0	23.8-83.6	60.65	32.5-88.8	18.7	0-37.5
	Central zone	3	33-63	3-42	B10-12	63.60	22-85	62.97	23.8-86	67.53	32-88.8	41.83	0-88

\* 1 Application

### 3.2.2.2 Two applications at 1g ai/ha per season

A summary of the dose response results across trials against *Chenopodium album*, *Abutilon theophrasti*, *Aethusa cynapium*, *Galium aparine* and *Galinsoga parviflora* achieved by F7B-39-30 applied twice at 50% and 100% of the full rate at post-emergence in sugar beet is provided at Table 3.2-16.

Even though in some trials the density of certain weeds was inferior to 5 plants/m<sup>2</sup> at the time of the application, trials were included in the summary. The reason is that at the time of evaluation the number of plants present met or exceeded the required 5 m<sup>2</sup> and the trial is therefore considered valid. Also, for a weed like *Abutilon*, this weed can grow up 1 to 2.5 m tall, and generate a significant number of seeds. The applicant considers that even low populations of this weed are considered important, and therefore their trials are included in the analysis.

**Table 3.2-16: SUMMARY TABLE – Two applications AB: Minimum effective dose. Efficacy of F7B-39-30 at proposed label rate (100%) and 50% of proposed label rate against broadleaves at sugar beet crop**

Target (EPPO code)	EPPO and/or Administrative Zone	N. of trials	Assessment DAA B	Infestation of the untreated control (plants/m <sup>2</sup> ) at evaluation*	Pest stage at application B* (BBCH)	% Control of F7B-39-30 - post-emergence application					
						1 g a.i/ha (0.5 +0.5)		2 g a.i/ha (1+1)		BETASANA SC 960 g ai/ha (480+480)	
						(50% of full rate)		(100% of full rate)			
				Min - Max	Min - Max	Mean	Min - Max	Mean	Min - Max	Mean	Min - Max
CHEAL	Maritime	9	26-76	7-50	B10-34	68	28-90	81.8	38-100	76.8	42-100
	South-East	2	34-35	18-47	B10-14	76.4	76	84	73-95	87.4	84-90
	North-East	4	46-53	13-35	B10-16	47.13	0-71	61.63	20-86	25.63	0-57
	North East + CZ & GER support	10	34-76	8-40	B10-22	59.62	0-90	74.07	20-100	55.01	0-100
	Central zone +UK	15	26-76	7-50	B10-34	63.57	0 -100	76.7	20-100	64.6	10-100
AETCY	Maritime CZ	2	31-81	9-14	B10-14	89	80-98	97	95-99	28	16-40
	Maritime CZ	2	31-81	9-14	B10-14	89	80-98	97	95-99	28	16-40
	Maritime CZ +SZ	4	31-81	5-14	B10-14	86	80-98	95	90-99	20	0-40
ABUTH	Maritime	2	47-52	8-9	B10-11	96	92-100	98	96-100	16	0-32
	South-East	1	47	9	B10-11	99.5	99.5	98.8	98.8	20	20
	Central zone	3	47-52	8-9	B10-11	97.3	92-100	98.3	96-100	17	0-32
GALAP	Maritime	1	52	8	B10-11	90.0	100	100	100	0	0
	North-East	1	74	8	B11-12	47.5	100	100	100	0	0
	North East + Czech support	2	52-74	8	B10-12	68.75	47.5-90	100	100	0	0
	Central zone	2	52-74	8	B10-12	68.75	47.5-90	100	100	0	0
GASPA	Maritime	1	53	5	B10-12	68.8	68.8	85.0	85.0	97.5	97.5
	North-East	1	53	15	B10-16	95.0	95.0	93.8	93.8	32.5	32.5
	North East + GER support	2	53	5-15	B10-16	81.9	68.8-95	89.4	85-93.8	65	32-97.5
	Central zone	2	53	5-15	B10-16	81.9	68.8-95	89.4	85-93.8	65	32-97.5

### **3.2.2.3 Three applications at 0.66g ai/ha per season**

A summary of the dose response results across trials against *Chenopodium album*, *Abutilon theophrasti*, *Aethusa cynapium*, *Galium aparine* and *Galinsoga parviflora* achieved by F7B-39-30 applied three times at post-emergence in sugar beet is provided at

Table 3.2-17. The table includes the proposed target dose of 0.66 g ai/ha (100%) as well as 75% and 50% of the full dose applied once, at post-emergence in sugar beet.

Even though in some trials the density of certain weeds was inferior to 5 plants/m<sup>2</sup> at the time of the application, trials were included in the summary. The reason is that at the time of evaluation the number of plants present met or exceeded the required 5 m<sup>2</sup> and the trial is therefore considered valid. Also, for a weed like Abutilon, this weed can grow up 1 to 2.5 m tall, and generate a significant number of seeds. The applicant considers that even low populations of this weed are considered important, and therefore their trials are included in the analysis.



**Table 3.2-17: SUMMARY TABLE – Three applications ABC: Minimum effective dose. Efficacy of F7B-39-30 at proposed label rate (100%) and 50% and 75% of proposed label rate against broadleaves at sugar beet crop**

Target (EPPO code)	EPPO and/or Administrative Zone	N. of trials	Assessm ent DAA C	Infestation of the untreated control at (plants/m <sup>2</sup> ) evaluation	Pest stage at application C (BBCH)	% Control of F7B-39-30 - post-emergence application							
						1 g a.i/ha (0.335+ 0.335+0.335)		1.5 g a.i/ha (0.503 +0.503+0.503)		2 g a.i/ha (0.503 +0.503+0.503)		BETASANA SC @960 g a.i/ha (320+320+320)	
						50% of full rate		75% of full rate		100% of full rate		100% of full rate	
				Min - Max	Min - Max	Mean	Min - Max	Mean	Min - Max	Mean	Min - Max	Mean	Min - Max
CHEAL	Maritime	11	30-54	7-50	B10-51	62.97	27-91.3	74.0	36.3- 100	80.3	37-100	68.4	25-100
	South East	2	37-51	18-48	B12-32	41	18-65	60	50-70	85	82-88.8	80.7	75-86
	North East	4	28-64	13-35	B14-51	37.5	0-70	51.25	0-82.5	64.4	20-85	32.5	15-57.5
	North East + CZ & GER support	11	28-64	5-40	B12-19	55.9	0-91	64.6	0-100	73.9	20-100	58.0	15-100
	Central zone +UK	17	28-64	7-50	B10-51	54.4	0-91	67	0-100	77.2	20-100	61.4	15-100
AETCY	Maritime CZ	2	29-72	7-50	B14-16	97	95-99	97	95-99	97	95-99	34	16-52
	Maritime support with Czech trial North-east zone	2	29-72	7-50	B14-16	97	95-99	97	95-99	97	95-99	34	16-52
	Maritime CZ +SZ	4	29-72	5-14	B10-16	93.8	86-99	94.7	90-99	94.7	90-99	22	0-52
ABUTH	Maritime	3	43-46	8-9	B10-21	91.3	84-100	97	92-100	98.5	95-100	10	0-30
	South East	1	37	9	B11-14	97.5	97.5	100	100	99.5	99.5	47.5	47.5
	Central zone +UK	4	37-46	8-9	B10-21	92.8	84-100	97.9	92-100	98.8	95-100	19	0-47.5
GALAP	Maritime	1	43	8	B10-12	90.0	90	93.8	93.8	99.8	99.8	0	0
	North-East	2	64-66	8-20	B12-23	90.65	86.3-95	95	90-100	98.15	96.3- 100	37.5	0-75
	North East + GER support	3	43-66	8-20	B10-23	90.43	86.3-95	94.6	90-100	98.7	96.3- 100	25	0-75
	Central zone	3	43-66	8-20	B10-23	90.43	86.3-95	94.6	90-100	98.7	96.3- 100	25	0-75
GASPA	Maritime	2	30-42	8-53	B12-18	94.7	91-98	96.25	94-98	97.9	97-98	87.5	75-100
	North-East	1	49	29	B12-24	72.5	72.5	91.3	91.3	91.3	91.3	27.5	27.5

Target (EPPO code)	EPPO and/or Administrative Zone	N. of trials	Assessm ent DAA C	Infestation of the untreated control at (plants/m <sup>2</sup> ) evaluation	Pest stage at application C (BBCH)	% Control of F7B-39-30 - post-emergence application							
						1 g a.i/ha (0.335+ 0.335+0.335)		1.5 g a.i/ha (0.503 +0.503+0.503)		2 g a.i/ha (0.503 +0.503+0.503)		BETASANA SC @960 g a.i/ha (320+320+320)	
						50% of full rate		75% of full rate		100% of full rate		100% of full rate	
				Min - Max	Min - Max	Mean	Min - Max	Mean	Min - Max	Mean	Min - Max	Mean	Min - Max
	North East + GER support	2	30-49	8-53	B12-24	87.3	72.5-98	94.60	91-98	95.70	91-98	67.5	27-100
	Central zone	3	30-49	8-53	B12-24	87.3	72.5-98	94.60	91-98	95.70	91-98	67.5	27-100

### 3.2.2.4 Four applications at 0.5g ai/ha per season

A summary of the dose response results across trials against *Chenopodium album*, *Abutilon theophrasti*, *Aethusa cynapium*, *Galium aparine* and *Galinsoga parviflora* achieved by F7B-39-30 applied four times at post-emergence in sugar beet is provided at Table 3.2-18.

The table include the proposed target dose of 0.5g ai/ha (100%) as well as 75% and 50% of the full dose applied once, at post-emergence in sugar beet. Even though in some trials the density of certain weeds was inferior to 5 plants/m<sup>2</sup> at the time of the application, trials were included in the summary. The reason is that at the time of evaluation the number of plants present met or exceeded the required 5 m<sup>2</sup> and the trial is therefore considered valid. Also, for a weed like Abutilon, this weed can grow up 1 to 2.5 m tall, and generate a significant number of seeds. The applicant considers that even low populations of this weed are considered important, and therefore their trials are included in the analysis.

**Table 3.2-18: SUMMARY TABLE – Four applications ABCD: Minimum effective dose. Efficacy of F7B-39-30 at proposed label rate (100%) and 50% and 75% of proposed label rate against broadleaves at sugar beet crop**

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Target (EPPO code)	EPPO and/or Administrative Zone	N. of trials	Assessment DAA D	Infestation of the untreated control (plants/m <sup>2</sup> ) at Timing D*	Pest stage at application D* (BBCH)	% Control of F7B-39-30 - post-emergence application							
						1 g a.i/ha (0.25+0.25+0.25+ 0.25)		1.5 g a.i/ha (0.375+0.375+0.375+ 0.375)		2 g a.i/ha (0.5 +0.5+0.5 + 0.5)		BETASANA SC @960 g a.i/ha (240 +240 +240 + 240)	
						50% of full rate		75% of full rate		100% of full rate		100% of full rate	
				Min - Max	Min - Max	Mean	Min - Max	Mean	Min - Max	Mean	Min - Max	Mean	Min - Max
CHEAL	Maritime	10	28-45	7-50	B10-55	52.2	0-82	60.1	36-95	79.4	37-100	65.2	17-91
	South-East	2	27-42	18-48	B14-35	41.2	17-65	33.8	3-65	56.3	26-86	58	50-66
	North-East	4	35-57	13-35	B26-61	38.13	0-70	55	20-85	600	25-95	21	10-30
	North East + CZ & GER support	10	28-57	7-35	B10-61	48.0	0-80	56.8	20-95	70.6	25-100	47.0	10-91
	Central zone +UK	15	27-57	7-50	B10-61	46.9	0-82	54.5	25-95	71	25-100	52.5	10-91.5
AETCY	Maritime CZ	2	23-65	9-14	B12-30	99	95-99	99	99	97	95-99	24	22-26
	Maritime CZ	2	23-65	9-14	B12-30	99	95-99	99	99	97	95-99	24	22-26
	Maritime CZ +SZ	4	23-65	5-14	B12-30	93	85-99	93.4	87-99	94.5	88- 99	17.7	0-26
ABUTH	Maritime	2	35-56	9-10	B10-23	90	80- 100	97.5	95-100	100	100	15	0-3-
	South-East	1	27	9	B12-18	93	93	77.5	77.5	99.3	99.3	25.8	25.8
	Central zone +UK	3	27-56	9-10	B10-23	91	80- 100	90.8	77-100	99.8	99-100	25.8	0-47
GALAP	Maritime	1	35	9	B10-16	88.2	88.2	95	95	99.5	99.5	0	0
	North-East	1	57	10	B26-28	96.5		100		100		0	
	CZ (North-east with Czech support)	2	35-57	9-10	B10-28	88	80-96	95	90-100	99.5	99-100	0	0
	Central zone	2	35-57	9-10	B10-28	88	80- 96.5	95	90-100	99.5	99-100	0	0
GASPA	Maritime	1	35	13	55-61	92.5	92.5	.	.	97.5	97.5	100	100
	North-East	1	57	31	55-59	57.5	57.5.	77.5	77.5	91.3	91.3	20	20
	North East + GER support	2	35-57	13-31	55-61	75	57.5- 92.5	77.5	77.5	94.4	91.3-97.5	60	20-100
	Central zone	2	35-57	13-31	55-61	75	57.5- 92.5	77.5	77.5	94.4	91.3-97.5	60	20-100

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

*Chenopodium album*, *Aethusa cynapium*, *Abutilon theophrasti*, *Galium aparine* and *Galinsoga parviflora* are very important weed species in sugar beet crops in the Central European regulatory zone and are good candidates to justify the minimum effective dose for F7B-39-30.

In 21 trials, F7B-39-30 was tested at rates reflecting the proposed label rate and the 50% and the 75% of the full-recommended rate, in accordance with the EPPO standard PP 1/225 'Minimum effective dose'.

F7B-39-30 provided a clear dose response, only when the recommended dose of 2 g a.i/ha was applied, 1, 2, 3, and 4 times, the product provided an optimum control and was equivalent or even superior to the tested reference product. A reduction of the dose rate below 2 g a.i/ha of F7B-39-30 decrease the efficacy and increased the variability of efficacy levels.

**According to the presented results, the dose of 2 g a.i/ha of F7B-39-30 applied as a single or split application up to 4 applications provided the optimum overall control and should be considered as as the minimum effective dose for the control against these 3 important weeds species (*Chenopodium album*, *Aethusa cynapium*, *Abutilon theophrasti*, *Galium aparine* and *Galinsoga parviflora*), for which activity of F7B-39-30 is claimed.**

dRR point 3.2.2	Minimum effective dose tests
<p>ZRMS conclusion:</p> <p>The claimed dose rate are:</p> <ul style="list-style-type: none"> <li>• 0,08 l/ha for one application,</li> <li>• 0,04 l/ha for two applications,</li> <li>• 0,026 l/ha for three applications,</li> <li>• 0,02 l/ha for four applications</li> </ul> <p>for NE, SE and Maritime EPPO climate zones.</p> <p>The doses justification of F7B-39-30 has been supported by data from 21 efficacy trials conducted in the Maritime climate zone (14 trials), NE climate zone (for PL: 5 PL trials plus 4 CZ and 4 DE trials were taken into account) and the SE climate zone (2 trials) against following weeds:</p> <ol style="list-style-type: none"> <li>1. The Maritime EPPO climate zone: CHEAL, AETCY, ABUTH, GASPA, GALAP;</li> <li>2. The NE EPPO climate zone: CHEAL, AETCY, GASPA, GALAP;</li> <li>3. The SE EPPO climate zone: CHEAL, ABUTH</li> </ol> <p>50%, 75% and 100% of the full-recommended rate were tested in the trials.</p> <p>For the SE EPPO climate zone data are limited. It is proposed to take into account also data from other climate zones. The decision remains with CMS.</p> <p>It can be concluded that the full dose rate (applied once and in split applications) showed a higher level of efficacy than reduced rates and can be considered the minimum effective dose.</p>	

### **3.2.3 Efficacy tests (KCP 6.2)**

Data to support the label claims, and which are summarized in this biological dossier, were generated in a total of 21 trials, carried out in Czech Republic, Germany, France, Hungary, Netherlands, Poland and UK during the period 2021 to 2022. Trials were carried out covering the Maritime, North-East and South-East EPPO zone. Of the 21 trials, 2 trials were conducted in the Southern registration zone, and 2 in a non-EU registration zone but they were all 4 located in the Maritime EPPO zone and therefore results were considered relevant for this dossier.

Trials were carried out by Corteva Agriscience and contractor companies, all of which followed the EPPO standards and are officially recognized by the competent authorities to carry out field registration trials in accordance with the principles of Good Experimental Practice (GEP).

The proposed GAP rate of F7B-39-30 is the 0.08 L (2 gai/ha) of formulated product per hectare. This can be achieved as of 1 application at a dose of 2.0g ai/ha and per season, as of 2 applications at a dose of 1g ai/ha per application, as of 3 applications at a dose of 0.66g ai/ha per application, and as of 4 applications at a dose of 0.5g ai/ha per application, with a total maximum dose of 2g ai/ha and per season in all cases.

Only trials with significant pest density were considered and included in the analysis in this Biological Assessment Dossier

Standard reference material was included for completeness of information, commercial reference was selected upon its relevance for farmers in considered area of Central Europe where sugar beet is economically relevant, and for comparable timing of application and spectrum of efficacy.

Data are presented in the following section for a number of weed species which include, CAPBP, GALAP, GASPA, LAMPU, MERAN, PAPRH and VIOAR. Data for CHEAL, AETCY and ABUTH were already presented in the section of Minimum Effective Dose (**Błąd! Nie można odnaleźć źródła odwołania.**). Data for CAPBP, GALAP, GASPA, LAMPU, PAPRH and VIOAR has been included for completeness of the efficacy section, as assessments were included for these species in trials presented in support of the proposed label. Data for DATST, AMARE, MATCH, STEME, VERHE, and VERPE is also contained in single trial reports (STR) submitted in support of this request. However, data presented for these species are not presented in this dossier because of the low levels of efficacy recorded in these trials.

Also, in this efficacy section the benefit of F7B-39-30 when use in program with other sugar beet herbicides will be presented and summarized. On this part of the efficacy section, common sugar beet herbicide program will be tested with and without F7B-39-30 to demonstrate the value and interest to include this new herbicide on the current herbicide program to control weeds that are not completed well controlled today with current herbicides solutions in sugar beet.

### **Proposed zonal label text for F7B-39-30 25.05 EC at the dose of 0.08L/ha (2 g.ai/ha)**

**Table 3.2-19: Efficacy of F7B-39-30 25.05 EC in sugar beet**

Susceptibility	F7B-39-30 at 2 g a.i/ha 1 application Total dose 2 g ai/ha	F7B-39-30 1 g a.i/ha 2 applications Total dose 2 g a.i/ha	F7B-39-30 0.66 g a.i/ha 3 applications Total dose 2 g a.i/ha	F7B-39-30 0.5 g a.i/ha 4 applications Total dose 2 g a.i/ha
Highly susceptible species efficacy from 95 to 100%	PAPRH	AETCY, ABUTH, GALAP, GASPA, LAMPU, PAPRH	ABUTH, GALAP, AETCY, GASPA, CAPBP, LAMPU, PAPRH	ABUTH, GALAP, AETCY, GASPA, LAMPU, PAPRH
Susceptible species: efficacy from 85 to 94.9%	AETCY	AETCY, GASPA	AETCY	GASPA, AETCY, CAPBP
Moderately susceptible species efficacy from 70 to 84.9%	CHEAL, ABUTH, GALAP, GASPA	CHEAL, MERAN, VIOAR, CAPBP	CHEAL, MERAN	CHEAL, MERAN, VIOAR
Moderately tolerant species from 50-69.9 %	MERAN, VIOAR, CAPBP, LAMPU, CHEAL, GASPA	VIOAR	VIOAR	VIOAR

Weeds highlighted in green are the proposed claimed weed spectrum for Polish label

### **Testing facility or organization**

Data to support the label claims, and which are summarized in this biological dossier, were generated in a total of 21 trials that were described earlier in the section of the Minimum effective dose tests (3.2.2).

Trials were carried out by Corteva Agrisciences and contractor companies, all of which follow the EPPO standards and are officially recognized by the competent authorities to carry out field registration trials in accordance with the principles of Good Experimental Practice (GEP).

The EU central regulatory zone covers all three climatic zones as described in EPPO standard PP 1/241.

**Table 3.2-20 Trial distribution throughout EPPO zone**

EPPO zone	Year	2021	2022	Total EPPO zone
	Country			
Maritime	Czech Republic	1	3	14
	Germany	-	4	
	Netherlands	1	1	
	United Kingdom	-	2	
	France	-	2	
North-East	Poland	1	4	5
South-East	Hungary	-	2	2
Total Central zone		3	14	17
Total UK		-	2	2
Total Southern zone		-	2	2
Total Central + Southern zone +UK		3	18	21

Trials highlighted in green are intent to be used for the registration of F7B-39-30 in sugarbeet in Poland

**Guidelines**

<b>Guidelines</b>	General guidelines	PP 1/135, PP 1/152, PP 1/181, PP 1/225, PP 1/214
	Specific guidelines	PP 1/52, PP 1/278

To avoid duplication, Details of testing facilities, Site and application details tables are already presented in the section of Material and Methods of the Minimum effective dose section (Minimum effective dose tests (KCP 6.2)).

**Table 3.2-21: Details on trial methodology**

<b>Guidelines</b>	General guidelines	EPPO PP 1/152, 1/135, 1/181, 1/223, 1/225, 1/226, 1/278, 1/214, 1/291
	Specific guidelines	EPPO PP 1/52
<b>Experimental design</b>	Plot design	Randomised complete block (RCB)
	Plot size	13.75 – 27m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Crop	Sugar beet (BEAVA)
	Crop varieties	<u>Conventional sugar beet varieties</u> : BTS-555 (2), BTS-9975 (1), BTS-1140 (1), BTS-4190 RHC (1), BTS-5770 (1), Hanibal (1), Lisanna (1), Lunella (1), KWS Florentina (1), Fresbee (1), Totem (1), Annemartha (1), Klara (1), Kujawa (1), Coati (1), Panorama (1)  <u>Convviso® SMART varieties</u> : BTS SMART 9145 N (1), Smart Renja KWS (1), Kipunji Smart (1), Smart Belamia KWS (1)
	Sowing period	Spring 2021 -spring 2022
	Crop stage (BBCH)* at application	Application A=10-14, B=10-16, C=10-19, D=16-37
<b>Application</b>	Timing Pest stage (BBCH)* at application	CHEAL Application A=10-23, B=10-34, C=10-51, D=10-61 AETCY Application A=09-12 B=10-14, C=10-16, D=12-30 ABUTH Application A=10-12, B=10-11, C=10-21, D=10-23 GALAP Application A=09-12, B=10-12, C=12-23, D=26-28 GASPA Application A=10, B=10-16, C=12-24, D=51-61 MERAN Application A=09-12, B=10-14, C=12-51, D=10-65 CAPBP Application A=09-10, B=12-14, C=14-19, D=39-73 LAMPU Application A=09-10, B=10-11, C=10-22, D=10-24 PAPRH Application A=10, B=10-14, C=14-18, D=19-30 VIOAR Application A=10-12, B=10-16, C=10-21, D=28-65
	Pest density (pl/m2)	CHEAL, Application A=7-50, B=7-50, C=7-50, D=7-50 AETCY, Application A=5-14, B=5-14, C= 10-16, D= 12-30 ABUTH, Application A=4-9, B= 47-52, C=10-21, D= 12-30 GALAP Application A=4, B=12, C=20, D=20 GASPA Application A=3-42, B=5-49, C=8-53, D=13-55 MERAN Application A=1-37, B=4.5-37, C=5-39, D=5-39 CAPBP Application A=5-8, B=5-10, C=6-15, D=6-18 LAMPU Application A=6-10, B=8-18, C=9-22, D=10-25 PAPRH Application A=3-4, B=4-6, C=9-12, D=9-12 VIOAR Application A=11.75, B=22.5, C=17.5, D=25.5
	Number of applications Intervals between applications	4, request 5-7 days of interval
	Spray volumes	100, 150, 200, 243 & 300 L/ha
	Spray pressure	200-270
	Temperature (°C)	8 - 29.7
	Soil temperature (°C)	6.2 - 26
	Humidity (%)	21 - 88
<b>Soil</b>	Soil type	Clay, clay loam, loam, loamy sand, sand, sandy clay, sandy clay loam, silt, silty clay,
	pH	6 - 8.3
	% OM	10.9-11.4
	Tillage type	Conventional tillage (plough, disking, and harrows to prepare seed bed)



		and Minimum tillage
<b>Assessment</b>	Assessment types	% visual control relative to the untreated control on a 0-100 linear scale whereby 0% = no control and 100% = plant death.
	Assessment dates	7 days after each application timing and before the next application timing then at regular intervals, up to 56 days after application D
<b>Other relevant information</b>	Field trials	-

### Formulations applied and application rates

Details of the formulations tested in the efficacy trials for the efficacy test are provided in the table below.

**Table 3.2-22: Formulations tested in the efficacy trials used for efficacy trials of F7B-39-30 in sugar beet**

Reference (trademark)	Form. Type	Form. concentration	Active substance	Application timing	Rate used in reported trials (g a.s./ha)	Rate used in reported trials (L or Kg f.p./ha)
F7B-39-30	EC	25.05 gai/L	florpyrauxifen-benzyl	BBCH10-39 (2021 trials) BBCH 10-19 (2022 trials)	0.5, 0.66, 1, 2	0.02, 0.0264, 0.04, 0.08
Betasana®	SC	160 gai/l	phenmedipham	Till BBCH 39	240, 320, 480, 960	1.5, 2, 3, 6

### Assessment methods

Only trials with significant weed infestation were considered and included in the analysis for this document.

Assessments were carried out according to the EPPO guidelines PP 1/135 “*Phytotoxicity assessment*”, PP 1/152 “*Design and analysis of field evaluation trials*” and PP 1/181 “*Conduct and reporting of efficacy evaluation trials including good experimental practice*”.

In all trials, regular visual assessments on the efficacy were conducted approximately 7 days after each application timing and before the next application timing, afterwards at regular intervals, up to 56 days after the last applications. The percentage of visual control was compared to the untreated control on a 0-100 linear scale 0% = no control and 100% = plant death.

Assessments chosen and presenting here are at least four-weeks or 30 days after the application. This minimum interval is considered appropriate to allow tested herbicides to effectively be absorbed and move within the plants to reach the site of action and reach effective efficacy.

For each weed data is presented in orthogonal comparison among tested rates of F7B-39-30, (2 g ai/ha – 1 application; 1 g ai/ha – 2 applications; 0.66 g ai/ha – 3 applications and 0.5 gai/ha – 4 applications, at 5 to 7 days interval between applications) and the adopted reference, minimum-maximum observed range, and trial grouping by species.

Efficacy was tested under a range of environmental conditions to fully challenge the product.

While only susceptible biotypes were the intended targets, some trial data present efficacy value below the moderately susceptible scale range. Those data are presented and averaged within all assessed data as, other than describing a tolerance condition, they provide more insights and fair evaluation of the submitted F7B-39-30 in different and challenging conditions, further confirming the appropriate rate required to effectively control a broader range of key weeds.

The intent, in fact, is to describe the efficacy within an expected interval of observations, depending on the

biology of the target and its growth in relation to optimal expression of either F7B-39-30 and reference (Betasana<sup>®</sup> SC) control level within each trial as mentioned before.

### Data Analysis

Efficacy data are described as average by target species within EPPO climatic zone and summarized by regulatory zone (Southern & Central) if more than one climatic zone data is included. Minimum and maximum range is also provided for evaluation of variability and consistency of observed data.

Following Tables summarize efficacy of F7B-39-30 (25.05 g a.i/L EC) at the timing of assessment, in Central Europe across EPPO climatic zones (Maritime, North-East and South-East) for broadleaf weeds after single application and split applications, where three or more data points (trials) are proposed for summarization with the most representative standard, in terms of data availability and spectrum of efficacy.

Summary tables, single target weed tables are presented detailing efficacy data at trial level with orthogonal comparisons with all tested standards, relative averages, and minimum/maximum interval.

#### 3.2.3.1 F7B-39-30 applied SOLO

The table below shows a summary of the control (%) of all weed species (*C. album*, *A. cynapium*, *A. theophrasti*, *C. bursa-pastoris*, *G. aparine*, *G. parviflora*, *L. purpureum*, *P. rhoeas*, *M. annua* and *V. arvensis*) presented in this dossier.

Trials have been conducted between 2021 and 2022 in Czech Republic, Germany, France, Hungary, Netherlands, Poland and UK representing the Maritime, North-East and South-East EPPO climatic zones. F7B-39-30 was applied at the proposed GAP of

- 1 application at a dose of 2.0 g a.i/ha and per season.
- 2 applications at a dose of 1 g a.i/ha per application.
- 3 applications at a dose of 0.66 g a.i/ha per application.
- 4 applications at a dose of 0.5 g a.i/ha per application

A total maximum dose of 2 g a.i/ha was applied per season in all cases. The standard reference material, Betasana SC, was included for completeness of information. Data presented in this section demonstrates a rate of 2 g a.i/ha applied at either a single or split dose was equivalent to/superior to the efficacy of Betasana SC against, *C. album*, *A. cynapium*, *A. theophrasti*, *C. bursa-pastoris*, *G. aparine*, *G. parviflora*, *L. purpureum*, *P. rhoeas*, *M. annua* and *V. arvensis*.

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**Table 3.2-23: Summary efficacy of F7B-39-30 across all the weeds and by EPPO zone – One application**

Species	EPPO and/or Administrative Zone	N° of trials	Infestation of the untreated control (plants/m²)	Pest stage application A (BBCH)	Crop stage at application A (BBCH)	% Control with F7B-39-30				No of trials where F7B-39-30 is >, <, = compared to standard
						Total dose g a.i/ha				
			F7B-39-30 @ 2 g a.i/ha		Betasana@ 960 g a.i/ha					
			Mean	Min-Max	Mean	Min-Max				
CHEAL	Maritime	11	7-50	10-23	10-12	71.45	15-100	69.74	25-100	4>Betasana 2=Betasana 5<Betasana
	South-East	2	18-45	10	09-10	72.2	54-90	70.3	49-92	1>Betasana 1<Betasana
	North-East	4	13-35	10-14	10-12	65.95	52.5-82.5	25.33	0-61	4>Betasana
	North-East + CZ & GER support data	11	31-82	7-35	B10-23	64.6	15-100	48.9	0-100	8>Betasana 1=Betasana 2<Betasana
	CZ+UK	17	7- 50	10-23	10-12	70.24	15-100	59.35	0-100	9>Betasana 2=Betasana 6<Betasana
AETCY	Maritime CZ	2	9-14	09-12	10-16	93.7	92-95	18	14-22	2>Betasana
	GER to Support North-East	2	44-54	0-14	B09-12	93.75	92.5-95	18.15	13-22.5	2>Betasana
	Maritime CZ +SZ	4	5-14	09-12	10-16	88	77-95	12	0-22	4>Betasana
ABUTH	Maritime	3	8-9	10-12	10-11	79.6	65-100	6.7	0-20	3>Betasana
	South-East	1	4	B10	09-10	71.3	71.3	17.5	17.5	1>Betasana
	Central Zone +UK	4	4-9	10-12	09-11	77.5	65-100	9	0-20	4>Betasana
GALAP	North-East	2	12 (4*-20)	09-12	10-11	56	27-85	19	0-39	1>Betasana
	CZ & support to N-E zone	3	55-82	8-20	B9-10	70.83	27.5-100	12.93	0-39	3>Betasana
	Central Zone	3	14.5 (4-20)	09-12	10-11	70.8	27-100	12.9	0-39	2>Betasana
GASPA	Maritime	2	22.5(3*-42)	10	10	56.9	32-81	62.75	37.5-88	3>Betasana
	North-East	1	11.5	10	11-12	88.8	.	0	0	2<Betasana
	GER to support North-east	2	4-63	3-11.5	B10	60.65	32.5-88.8	18.7	0-37.5	1>Betasana 1<Betasana
	Central Zone	3	19.8 (3*-42)	10	10-12	67.5	32.5-88.8	41.8	0-88	1>Betasana
MERAN	Maritime CZ	4	5.8 (2*-10)	0.9-12	10-12	64.78	33.8-82.5	6.58	0-26.3	1>Betasana 2<Betasana
	North-east Zone with the support of Czech & Germany	4	5.8 (2*-10)	0.9-12	10-12	64.8	33.8-82.5	6.58	0-26.3	4>Betasana
	South-East	1	25	0.9-10	10	60	60	0	0	4>Betasana

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	Central (Maritime CZ&SZ) Zone	6	13.67 (2*-3)	0.9-12	10-12	63.18	33.8-82.5	8.55	0-26.3	1>Betasana
VIOAR	Maritime	2	20.5 (4-37)	10-12	10-12	75	55-95	76.9	58.8-095	6>Betasana
	North-East	1	3*	10	10-11	25	25	30	30	1=Betasana 1<Betasana
	North-east Zone with the support of Germany	2	4-20	10-12	10-12	40	25-55	17	30-58.8	2<Betasana
	Central Zone	3	22 (3-37)	10-12	10-12	58.33	25-95	61.3	30-95	1<Betasana
CAPBP	Maritime	1	5	10	10	65	65	98.8	98.8	1=Betasana 2<Betasana
	North-East	1	8	0.9	10	65	65	40	40	1<Betasana
	Central Zone (North-East +Germ support)	2	12.5 (5-8)	0.9 -10	10	65	65	51.9	5-98.8	1>Betasana 1<Betasana
	Central Zone	2	12.5 (5-8)	0.9 -10	10	65	65	51.9	5-98.8	1>Betasana
LAMPU	Maritime	1	6	10	10	100	100	90	90	1>Betasana 1<Betasana
	North-East	1	10	09	10	22.5	22.5	0	0	1>Betasana
	Central Zone (north-east +Czech support)	2	8(6-10)	09-10	10	61.2	22.5-100	45	0-90	2>Betasana
	Central Zone	2	8(6-10)	09-10	10	61.2	22.5-100	45	0-90	1>Betasana
PAPRH	Maritime	1	4	10	10	100	100	100	100	2>Betasana
	North-East	1	3*	10	11	90	90	30	30	1=Betasana
	Central Zone (North-East +Germ support)	2	3.5	10	10-11	95	90-100	65	30-100	2>Betasana
	Central Zone	2	3.5	10	10-11	95	90-100	65	30-100	1>Betasana

Table 3.2-24: Summary efficacy of F7B-39-30 across all the weeds and by EPPO zone – Two applications

Species	EPPO and/or Administrative Zone	N° of trials	Infestation of the untreated control at AB (plants/m²)	Pest stage Application at AB (BBCH)	Crop stage at application AB (BBCH)	% Control with F7B-39-30				No of trials where F7B-39-30 is >. <. = compared to standard
						Total dose g ai/ha				
						F7B-39-30 @ 2 g a.i/ha (1+1)		BETASANA SC @960 g ai/ha (480+480)		
						Mean	Min-Max	Mean	Min-Max	
CHEAL	Maritime	9	7-50	10-34	10-16	81.8	38-100	76.8	42-100	3>Betasana 3=Betasana 3<Betasana
	South-East	2	18-47	10-14	12-14	84	73-95	87.4	84-90	1>Betasana 1<Betasana
	North-East	4	13-35	10-16	10-14	61.63	20-86	25.63	0-57	3>Betasana 1<Betasana
	North East + CZ & GER support	10	34-76	8-40	B10-22	74.07	20-100	55.01	0-100	6>Betasana 1=Betasana

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Species	EPPO and/or Administrative Zone	N° of trials	Infestation of the untreated control at AB (plants/m²)	Pest stage Application at AB (BBCH)	Crop stage at application AB (BBCH)	% Control with F7B-39-30				No of trials where F7B-39-30 is >. <. = compared to standard
						Total dose g ai/ha				
						F7B-39-30 @ 2 g a.i/ha (1+1)		BETASANA SC @960 g ai/ha (480+480)		
						Mean	Min-Max	Mean	Min-Max	
										3<Betasana
	CZ+UK	15	7-50	10-34	10-16	76.7	20-100	64.6	10-100	7>Betasana 3=Betasana 5<Betasana
AETCY	Maritime CZ	2	9-14	10-14	12-16	97	95-99	28	16-40	4>Betasana
	Maritime CZ (North-east with Germ Support)	2	9-14	10-14	12-16	97	95-99	28	16-40	2>Betasana
	Maritime CZ +SZ	4	5-14	10-14	12-16	95	90-99	20	0-40	4>Betasana
ABUTH	Maritime	2	8-9	10-11	10-12	98	96-100	16	0-32	2>Betasana
	South-East	1	9	10-11	11-14	98.8	98.8	20	20	1>Betasana
	Central Zone	3	8-9	10-11	10-14	98.3	96-100	17	0-32	3>Betasana
GALAP	Maritime	1	6	10-11	10-12	100	100	0	0	1>Betasana
	North-East	2	4	11-12	12-14	100	100	36.9	0-73.8	1>Betasana 1=Betasana
	North-east with Germ Support	2	5 (4-6)	10-12	10-14	100	100	24.6	0-73.8	2>Betasana
	Central Zone	3	5 (4-6)	10-12	10-14	100	100	24.6	0-73.8	2>Betasana 1=Betasana
GASPA	Maritime	2	5	10-12	12-16	89.4	85-93.8	86.25	75-97.5	1>Betasana 1<Betasana
	North-East	1	15	10-16	12-14	93.8	93.8	89.4	89.4	1>Betasana
	North-east with Germ Support	2	10 (5-15)	10-16	12-16	90.8	85-93.8	87.3	75-97.5	2>Betasana
	Central Zone	3	10 (5-15)	10-16	12-16	90.8	85-93.8	87.3	75-97.5	2>Betasana 1=Betasana
MERAN	Maritime CZ	3	10.5 (5-11)	10-12	12-14	77	70-81.5	20.87	0-33.8	3>Betasana 1<Betasana
	South-East	1	37	09-14	10-12	81.5	81.5	0	0	1>Betasana
	North-east Zone with the support of Czech & Germany	4	5.8 (2*-10)	0.9-12	10-12	77	70-81	15	0-33	4>Betasana
	Central (Maritime CZ&SZ) Zone	5	13(5-37)	09-14	10-14	79.1	70-86.3	25.23	0-88.8	4>Betasana 1<Betasana
VIOAR	Maritime	2	22.5 (6-39)	10-16	12-16	80.65	66.3-95	97.5	95-100	1>Betasana 1<Betasana
	North-east Zone with the support of Germany	1	4-11	10-14	10-14	63	-	100	-	1<Betasana
	Central Zone	2	22.5 (6-39)	10-16	12-16	80.65	66.3-95	97.5	95-100	1>Betasana 1<Betasana

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Species	EPPO and/or Administrative Zone	N° of trials	Infestation of the untreated control at AB (plants/m²)	Pest stage Application at AB (BBCH)	Crop stage at application AB (BBCH)	% Control with F7B-39-30				No of trials where F7B-39-30 is >. <. = compared to standard
						Total dose g ai/ha				
						F7B-39-30 @ 2 g a.i/ha (1+1)		BETASANA SC @960 g ai/ha (480+480)		
			Mean	Min-Max	Mean	Min-Max				
CAPBP	Maritime	1	5	12-14	12-16	80	80	98	98	1<Betasana
	North-East	1	10	10-11	12-14	85	85	37.5	37.5	1>Betasana
	Central Zone (North-East +Germ support)	2	7.5 (5-10)	10-14	12-16	82.5	80-85	67.5	37.5-98	1>Betasana 1<Betasana
	Central Zone	2	7.5 (5-10)	10-14	12-16	82.5	80-85	67.5	37.5-98	1>Betasana 1<Betasana
LAMPU	Maritime	1	8	10-11	10-12	100	100	60	60	1>Betasana
	North-East	1	18	10-11	12-14	100	100	0	0	1>Betasana
	Central Zone (north-east +Czech support)	2	24(8-18)	10-11	10-14	100	100	30	0-60	2>Betasana
	Central Zone	2	24(8-18)	10-11	10-14	100	100	30	0-60	2>Betasana
PAPRH	Maritime	1	6	12-14	12-16	100	100	100	100	1=Betasana
	North-East	1	4	12-13	12	96	96	76	76	1>Betasana
	Central Zone (North-East +Germ support)	2	56	12-14	12-16	98	96-100	88	76-100	1>Betasana 1=Betasana
	Central Zone	2	56	12-14	12-16	98	96-100	88	76-100	1>Betasana 1=Betasana

Table 3.2-25: Summary efficacy of F7B-39-30 across all the weeds and by EPPO zone – Three applications

Species	EPPO and/or Administrative Zone	N° of trials	Infestation of the untreated control at ABC (plants/m²)	Pest stage At application ABC (BBCH)	Crop stage at application ABC (BBCH)	% Control with F7B-39-30				No of trials where F7B-39-30 is >. <. = compared to standard
						Total dose g a.i/ha				
						F7B-39-30 @ 2 g a.i/ha (0.66 + 0.66 + 0.66)		BETASANA SC @960 g ai/ha (360 + 360+360)		
						Mean	Min-Max	Mean	Min-Max	
CHEAL	Maritime	11	0.5-50	10-51	10-18	80.3	37-100	68.4	25-100	6>Betasana 2=Betasana 3<Betasana
	South East	2	18-48	12-32	14-16	85	82-88.8	80.7	75-86	1>Betasana 1<Betasana
	North East	4	13-35	14-51	12-14	64.4	20-85	32.5	15-57.5	3>Betasana 1<Betasana

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Species	EPPO and/or Administrative Zone	N° of trials	Infestation of the untreated control at ABC (plants/m²)	Pest stage At application ABC (BBCH)	Crop stage at application ABC (BBCH)	% Control with F7B-39-30				No of trials where F7B-39-30 is >. <. = compared to standard
						Total dose g a.i/ha				
						F7B-39-30 @ 2 g a.i/ha (0.66 + 0.66 + 0.66)		BETASANA SC @960 g ai/ha (360 + 360+360)		
						Mean	Min-Max	Mean	Min- Max	
	North East + CZ & GER support	11	28-64	5-40	B12-19	73.9	20-100	58.0	15-100	7>Betasana 1=Betasana 3<Betasana
	CZ+UK	17	0.5-50	10-51	10-18	77.2	20-100	61.4	15-100	10>Betasana 2=Betasana 5<Betasana
AETCY	Maritime CZ	2	7-50	14-16	14-18	97	95-99	34	16-52	4>Betasana
	Germany to support North-east	2	29-72	7-50	B14-16	97	95-99	34	16-52	2>Betasana
	Maritime CZ +SZ	4	5-14	10-16	14-18	94.7	90-99	22	0-52	4>Betasana
ABUTH	Maritime	3	8-9	10-21	12-16	98.5	95-100	10	0-30	3>Betasana
	South East	1	9	11-14	14-16	99.5	99.5	47.5	47.5	1>Betasana
	CZ+UK	4	8-9	10-21	12-16	98.8	95-100	19	0-47.5	4>Betasana
GALAP	Maritime	1	8	10-12	10-16	99.8	99.8	0	0	1>Betasana
	North-East	2	12.5(5-20)	12-23	14-16	97.5	96.3-98.7	50	25-75	2>Betasana
	North East + GER support	3	43-66	8-20	B10-23	98.7	96.3-100	25	0-75	3>Betasana
	Central Zone	3	16.5 (5-20)	12-23	10-16	98.27	96-98.8	33	0-75	3>Betasana
GASPA	Maritime	2	30.5 (8-53)	12-18	14-16	97.9	97.5-98.3	87.5	75-100	1>Betasana 1<Betasana
	North-East	1	29	12-24	14-16	91.3	91.3	27.5	27.5	1>Betasana
	North East + GER support	2	30-49	8-53	B12-24	95.70	91-98	67.5	27-100	2>Betasana
	Central Zone	3	30 (8-53)	12-24	14-16	95.7	91.30-98.3	67.5	27.5 -100	2>Betasana 1<Betasana
MERAN	Maritime CZ	4	6.75 (5-10)	12-33	12-16	80.53	73.8 – 85.8	14.08	0-28.8	4>Betasana
	South-East	1	39	19-51	12-14	86.3	86.3	7.5	7.5	1>Betasana
	North-east Zone with the support of Czech & Germany	4	5.8 (2*-10)	0.9-12	10-12	80	74-86	14	0-29	4>Betasana
	Central (Maritime CZ&SZ) Zone	6	17 (5-39)	12-51	12-16	79.3	70-86.3	14.80	0-28.8	6>Betasana
VIOAR	Maritime	2	24(8-40)	10-21	14-16	75	55-95	97.5	95-100	1=Betasana 1<Betasana
	North-East	1	9	12-16.	14-16	35	35	27.5	27.5.	1>Betasana
	North-east Zone with the support of Germany	2	4-11	10-16	10-16	45	32-55	63	27-100	1>Betasana 1<Betasana



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Species	EPPO and/or Administrative Zone	N° of trials	Infestation of the untreated control at ABC (plants/m²)	Pest stage At application ABC (BBCH)	Crop stage at application ABC (BBCH)	% Control with F7B-39-30				No of trials where F7B-39-30 is >. <. = compared to standard
						Total dose g a.i/ha				
						F7B-39-30 @ 2 g a.i/ha (0.66 + 0.66 + 0.66)		BETASANA SC @960 g ai/ha (360 + 360+360)		
						Mean Min-Max	Min-Max	Min-Max	Mean	
	Central Zone	3	17.6(8-40)	10-21	14-16	61.67	35-95	74.2	27.5-100	1>Betasana 1=Betasana 1<Betasana
CAPBP	Maritime	1	6	14-19	14-16	95.8	95.8	100	100	1<Betasana
	North-East	1	15	16-18	14-16	95	95	40	40	1>Betasana
	Central Zone (North-East +Germ support)	2	6-15	14-19	14-16	95.4	95	70	40-100	1>Betasana 1<Betasana
	Central Zone	2	10.5 (6-15)	14-19	14-16	95.4	95-95.8	70	40-100	1>Betasana 1<Betasana
LAMPU	Maritime	1	9	10-12	12-16	100	100	40	40	1>Betasana
	North-East	1	22	22	14-16	100	100	0	0	1>Betasana
	Central Zone (north-east +Czech support)	2	9-22	10-22	12-16	100	100	20	0-40	2>Betasana
	Central Zone	2	15.5 (9-22)	10-22	12-18	100	100	20	0-40	2>Betasana
PAPRH	Maritime	1	9	14-16	14-16	100	100	100	100	1=Betasana
	North-East	1	12	14-18	14-16	96.3	96.3	91.3	91.3	1>Betasana
	Central Zone (North-East +Germ support)	2	9-12	14-18	14-16	98.1	96-100	95.5	91-100	1>Betasana 1=Betasana
	Central Zone	2	10.5(9-12)	14-18	14-16	98.15	96.3-100	95.6	91.3	1=Betasana

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**Table 3.2-26: Summary efficacy of F7B-39-30 across all the weeds and by EPPO zone – Four applications**

Species	EPPO and/or Administrative Zone	N° of trials	Infestation of the untreated ABCD (plants/m²)	Pest stage application ABCD (BBCH)	Crop stage at application ABCD (BBCH)	% Control with F7B-39-30				No of trials where F7B-39-30 is >, <, = compared to standard
						Total dose g ai/ha				
						F7B-39-30 @ 2 g a.i/ha (0.5 +0.5+0.5+0.5)		BETASANA SC @ 960 g ai/ha (240+240+240+240)		
						Mean Min-Max	Min-Max	Min-Max	Mean	
CHEAL	Maritime	10	7-50	10-55	16-19	79.4	37-100	65.2	17-91	7>Betasana 3<Betasana
	South East	2	18-48	14-35	16-19	56.3	26-86	58	50-66	1>Betasana 1<Betasana
	North East	4	13-35	26-61	16-31	600	25-95	21	10-30	2>Betasana 2=Betasana
	North East + CZ & GER support	10	28-57	7-35	B10-61	70.6	25-100	47.0	10-91	6>Betasana 2=Betasana 2<Betasana
	CZ+UK	15	7-50	10-61	16-31	71	25-100	52.5	10-91.5	10>Betasana 2=Betasana 4<Betasana
AETCY	Maritime CZ	2	9-14	12-30	15-37	97	95-99	24	22-26	4>Betasana
	Maritime CZ	2	23-65	9-14	B12-30	97	95-99	24	22-26	2>Betasana
	Maritime CZ +SZ	4	5-14	12-30	15-37	94.5	88- 99	17.7	0-26	4>Betasana
ABUTH	Maritime	2	9-10	10-23	16-18	100	100	15	0-3-	2>Betasana
	South East	1	9	12-18	19-31	99.3	99.3	25.8	25.8	1>Betasana
	CZ+UK	3	9-10	10-23	16-31	99.8	99-100	25.8	0-47	3>Betasana
GALAP	Maritime	1	9	10-16	16-17	99	99	0	0	1>Betasana
	North-East	2	10	26-28	16-17	98.5	97-100	38.1	0-76	2>Betasana
	North-east Zone + Czech Support	2	35-57	9-10	B10-28	99.5	99-100	0	0	2>Betasana
	Central Zone	3	9.5 (9-10)	10-28	10-17	98.67	97-100	25.4	0-76	3>Betasana
GASPA	Maritime	2	13	55-61	18-19	96.2	95-97	.	.	1>Betasana 1<Betasana
	North-East	1	31	55-59	16-19	91.3	91.3	20	20	1>Betasana
	North East + GER support	2	13-31	55-61	B16-19	94.4	91-97	60	20-100	1>Betasana 1<Betasana
	Central Zone	3	22(13-31)	55-61	16-19	94.6	91.3- 97.5	60	20-100	2>Betasana 1<Betasana
MERAN	Maritime CZ	3	8.7 (5-14)	10-55	16-18	74.8	66.3-85.8	17.03	0-36.3	4>Betasana
	North-east Zone with the support of Czech & Germany	4	5.8 (2*-10)	0.9-12	10-12	78.3	66-88.8	17.0	0-36	4>Betasana

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Species	EPPO and/or Administrative Zone	N° of trials	Infestation of the untreated ABCD (plants/m²)	Pest stage application ABCD (BBCH)	Crop stage at application ABCD (BBCH)	% Control with F7B-39-30				No of trials where F7B-39-30 is >. <. = compared to standard
						Total dose g ai/ha				
			Mean Min-Max	Min-Max	Min-Max	F7B-39-30 @ 2 g a.i/ha (0.5 +0.5+0.5+0.5)		BETASANA SC @ 960 g ai/ha (240+240+240+240)		
						Mean	Min-Max	Mean	Min-Max	
	South-East	1	39	51-65	16-19	92.5	92.5	0	0	1>Betasana
	Central (Maritime CZ&SZ) Zone	5	20.4 (5-39)	10-65	16-19	77.4	66.3-92.5	18.02	0-36	5>Betasana 1<Betasana
VIOAR	Maritime	2	25.5 (11-40)	28-65	18-19	73.7	52-95	95.1	95-95.3	1>Betasana 1=Betasana
	North-east Zone with the support of Germany	1	4-11	10-16	10-16	52.5	█	95.5	█	1>Betasana
	Central Zone	2	25.5 (11-40)	28-65	18-19	73.7	52-95	95.1	95-95.3	1>Betasana 1=Betasana
CAPBP	Maritime	1	6	63-73	18-19	86.3	86.3	100	100	1<Betasana
	North-East	1	18	39-61	16-17	100	100	40	40	1>Betasana
	Central Zone (North-East +Germ support)	2	6-15	14-19	14-16	93.1	86-100	70	40-100	1<Betasana 1>Betasana
	Central Zone	2	12 (6-18)	39-73	16-19	93	86-100	70	40-100	1>Betasana 1<Betasana
LAMPU	Maritime	1	10	10-16	16-17	100	100	40	40	1>Betasana
	North-East	1	25	22-24	16-17	100	100	20	20	1>Betasana
	Central Zone (north-east +Czech support)	2	9-22	10-22	12-16	100	100	20	20-40	2>Betasana
	Central Zone	2	17.5 (10-25)	10-24	16-17	100	100	30	20-40	2>Betasana
PAPRH	Maritime	1	9	19-30	18-19	100	100	100	100	1=Betasana
	North-East	1	12	16-19	16.18	92.5	92.5	86.3	86.3	1>Betasana
	Central Zone (North-East +Germ support)	2	9-12	14-18	14-16	96	92-100	86	86-100	1>Betasana 1=Betasana
	Central Zone	2	9	19-30	18-19	96	92-100	93	86.3-100	1>Betasana 1=Betasana

**Summary and conclusions on the efficacy of F7B-39-30 when is applied alone in sugar beet**

Data to support the label claims, and which are summarized in this draft Registration Report, were generated in a total of 21 trials, carried out in Czech Republic (4), Germany (4), France (2), Hungary (2), Netherlands (2), Poland (4) and UK (2) under Maritime (14), North-East (4) and South-East (2) EPPO climatic zones.

F7B-39-30 applied at a total doses of 2 g a.i/ha applied as either a single or split dose provide better than or comparable of the following weed species CHEAL, AETCY, ABUTH, GALAP, GASPA, MERAN, LAMPU and PAPRH to the commercial standard Betasana SC.

**Summary and conclusions on the efficacy of F7B-39-30 when is applied alone in fodder beet**

In addition to sugar beet, this document also seeks approval in fodder beet. Sugar beet and fodder beet belong to the same subspecies, i.e. *Beta vulgaris* subsp. *vulgaris*. All cultivated beets belong to this subspecies, but different cultivar groups are distinguished. The sugar beet corresponds with *Beta vulgaris* subsp. *vulgaris* var. *altissima*, whereas the fodder beet with *Beta vulgaris* subsp. *vulgaris* var. *crassa*. Both beet types are very similar in growth and development and are cultivated in temperate climates. Sugar and fodder beet grow more slowly than most weeds and are therefore poor competitors to weeds, especially from emergence until canopy closure. It is therefore recommended to keep the beet free of weed during this early stage. They also share the same weed spectrum, including *Chenopodium album* (CHEAL), *Aethusa cynapium* (AETCY), *Galium aparine* (GALAP), *Galinsoga parviflora* (GASPA), *Papaver rhoeas* (PAPRH) whereby the weeds in fodder beet are applied at comparable growth stages and calendar dates to those in sugar beet.

Due to the above reasons, we consider that the efficacy data obtained in the efficacy trials of sugar beet can be extrapolated to fodder beet. Therefore we conclude that 0.08 L/ha of F7B-39-30, applied in minimum 1 and maximum 4 applications, can be used to control the same label weeds in both sugar and fodder beet.

**Proposed zonal label text for F7B-39-30 at total dose of 2 g a.i/ha applied as either a single or split application in sugar beet and fodder beet**

F7B-39-30 is a post-emergence systemic herbicide for the control of a range of annual broad-leaved weeds in sugar beet and fodder beet.

A total dose of 2 F7B-39-30/ha can be applied as either a single or split dose for the control of annual broadleaved weeds.

Susceptibility	F7B-39-30 at 2 g a.i/ha 1 application Total dose 2 g ai/ha	F7B-39-30 1 g a.i/ha 2 applications Total dose 2 g a.i/ha	F7B-39-30 0.66 g a.i/ha 3 applications Total dose 2 g a.i/ha	F7B-39-30 0.5 g a.i/ha 4 applications Total dose 2 g a.i/ha
Highly susceptible species efficacy from 95 to 100%	PAPRH	AETCY, ABUTH, GALAP, GASPA, LAMPU, PAPRH	ABUTH, GALAP, AETCY, GASPA, CAPBP, LAMPU, PAPRH	ABUTH, GALAP, AETCY, GASPA, LAMPU, PAPRH
Susceptible species: efficacy from 85 to 94.9%	AETCY	AETCY, GASPA	AETCY	GASPA, AETCY, CAPBP
Moderately susceptible species efficacy from 70 to 84.9%	CHEAL, ABUTH, GALAP, GASPA	CHEAL, MERAN, VIOAR, CAPBP	CHEAL, MERAN	CHEAL, MERAN, VIOAR
Moderately tolerant species from 50-69.9 %	MERAN, VIOAR, CAPBP, LAMPU, CHEAL, GASPA	VIOAR	VIOAR	VIOAR

Weeds highlighted in green are the proposed claimed weed spectrum for Polish label

## **Conclusion**

**Data presented in this section supports the use of F7B-39-30 applied at a total dose of 2 g a.i/ha applied as a single or split dose for the control of the target weeds stated above in sugar beet and fodder beet.**

dRR point 3.2.3.1	Efficacy tests Sugar beet: efficacy of F7B-39-30 applied alone								
<p>ZRMS conclusion:</p> <p style="text-align: center;"><b><u>Control of weeds in the NE EPPO climate zone (Poland)</u></b></p> <p>The applicant submitted 13 trials carried out in 2021, 2022 on different varieties of sugar beet (BTS SMART 9145 N, BTS-555, Lisanna, Hanibal, KWS Florentina, Lunella, BTS 9975, Smart Renja KWS, Klara, Coati, Panorama, Kujawa) in PL, DE and CZ.</p> <p>The Applicant presented a climatic comparison between trials carried out in Germany, Czech Republic and Poland and to use this data from neighbours countries of Poland to support registration of F7B-39-30 in Poland, showing similarity of edaphic and climatic data in mentioned countries.</p> <p>Efficacy trials were carried out by organizations that are officially recognized as competent to carry out efficacy testing in accordance with Regulation (EC) 284/2013 by the authorities in the relevant countries. All trials have been conducted according to GEP.</p> <p>The efficacy trials were designed, conducted and reported according to the following EPPO guidelines:</p> <ol style="list-style-type: none"> <li>1. PP 1/226 Number of efficacy trials;</li> <li>2. PP 1/181 Conduct and reporting of efficacy evaluation trials including good experimental practice.</li> <li>3. PP 1/135 Phytotoxicity assessment</li> <li>4. PP 1/52 Weeds in sugar and fodder beet and industrial chicory</li> <li>6. PP 1/152 Design and analysis of efficacy evaluation trials</li> </ol> <p>The minimal number of an individual weed per m<sup>2</sup> in the trials at the time of application should be 4-5, to include such trials in the assessment. In the following reports the number of weeds per m<sup>2</sup> were not adequate, so those trials were excluded from the assessment:</p> <p>DE22F7B022-NFR06C: MERAN – 2,75 pl./ m<sup>2</sup></p> <p>DE22F7B022-NFR07C: MERAN – 1,5 pl. /m<sup>2</sup></p> <p>DE22F7B022-NFR37C: GASPA - 3 pl./ m<sup>2</sup></p> <p>EA21F7B039H-DPR015: PAPRH, VIOAR - 3 pl./ m<sup>2</sup></p> <p>DE22F7B022-WD108: AETCY – 0 pl./ m<sup>2</sup></p> <p>F7B-39-30 is a new product on the polish market. In accordance with the Guidelines of Polish Ministry, the minimal number of trials per one weed for weeds more harmful should be 6 and for others 3 trials per weed. Taking into account that rule, the Applicant has present too few trials for the following weed species to prove the product efficacy :</p> <ol style="list-style-type: none"> <li>1. One application at 2 g a. i./ha: AETSY (1 valid trial), GASPA (1 valid trial), MERAN (2 valid trials), VIOAR (1 valid trial), CAPBP (2 trials), LAMPU (2 trials), PAPRH (1 valid trial)</li> <li>2. Two application at 1 g a. i./ha: AETSY (1 valid trial), GASPA (1 valid trial), MERAN (2 valid trials), VIOAR (1 valid trial), CAPBP (2 trials), LAMPU (2 trials), PAPRH (1 valid trial)</li> <li>3. Three application at 0,66 g a. i./ha: AETSY (1 valid trial), GASPA (1 valid trial), MERAN (2 valid trials), VIOAR (1 valid trial), CAPBP (2 trials), LAMPU (2 trials), PAPRH (1 valid trial)</li> <li>4. Four application at 0,5 g a. i./ha: AETSY (1 valid trial), GASPA (1 valid trial), MERAN (2 valid trials), VIOAR (1 valid trial), CAPBP (2 trials), LAMPU (2 trials), PAPRH (1 valid trial)</li> </ol> <p>The susceptibility of weeds were evaluated according to the criteria presented below, established for PL.</p> <p><u>Weed species are classified as:</u></p> <table> <tr> <td>susceptible (S) –</td><td>85%</td></tr> <tr> <td>moderately susceptible (MS) -</td><td>70-85%</td></tr> <tr> <td>moderately tolerant (MT)</td><td>60 -70%</td></tr> <tr> <td>tolerant (T)</td><td>&lt; 60%</td></tr> </table> <p>The tested herbicide was applied at the rates:</p>		susceptible (S) –	85%	moderately susceptible (MS) -	70-85%	moderately tolerant (MT)	60 -70%	tolerant (T)	< 60%
susceptible (S) –	85%								
moderately susceptible (MS) -	70-85%								
moderately tolerant (MT)	60 -70%								
tolerant (T)	< 60%								

- 0,08 l/ha for one application,
  - 0,04 l/ha for two applications
  - 0,026 l/ha for three applications,
  - 0,02 l/ha for four applications
- (spray volume 100 – 300 l/ha) in sugar beet (BBCH 10-14, at the first application) as post-emergence application against weeds.

Efficacy was assessed 7 days after application before next application and then at regular intervals up to 56 days after last application. In two-three trials assessment was conducted late - on 74 day after last application.

Weed species	Efficacy [%] 31- 74 days after last application (the best results presented):			
	1 appl. no. of trials	2 appl. no. of trials	3 appl. no. of trials	4 appl. no. of trials
CHEAL	64,6 (15,0 -100) 11	74,1 (20,0-100) 10	73,9 (20,0-100) 11	70,6 (25,0-100) 10
ABUTH	79,6 (65,0-100) 3	98,0 (96,0-100) 2	98,5 (95,5-100) 3	100 2
GALAP	70,8 (27,5-85,0) 3	100 2	98,2 (96,3-100) 3	99,5 (99,0-100) 2
LAMPU	62,6 (22,5 – 100) 2	100 2	100 2	100 2

#### CHEAL:

##### 1 application:

4 trials were conducted in PL and 7 trials were conducted in CZ (4) and DE (3). The efficacy in PL trials was on the level of 66% (52,5-82,5) MT. Product controlled weeds better than the reference product (25,3%). Efficacy in 3 DE trials was very low (30,0%) and comparable to the efficacy of reference product. On the contrary, in 4 CZ trials CHEAL was susceptible (89,1%) and the reference product performed a little worse.

##### 2 applications:

4 trials were conducted in PL and 6 trials were conducted in CZ (3) and DE (3). The efficacy in PL trials was on the level of 61,3% (20,0-86,5)- MT. Product controlled weeds better than the reference product (25,6%). Efficacy in 3 DE trials was also low (67,2%) and a little better than the reference product. On the contrary, in 3 CZ trials CHEAL was susceptible (97,5%) and the reference product performed a little worse.

##### 3 applications:

4 trials were conducted in PL and 7 trials were conducted in CZ (4) and DE (3). The efficacy in PL trials was on the level of 64,4% (20,0-85,0)- MT. Product controlled weeds better than the reference product (32,5%). Efficacy in 3 DE trials was also low (64,1%) and better than the reference product. On the contrary, in 4 CZ trials CHEAL was susceptible (90,7%) and the reference product performed a little worse.

##### 4 applications:

4 trials were conducted in PL and 6 trials were conducted in CZ (3) and DE (3). The efficacy in PL trials was on the level of 60,0% (25,0-100,0)- MT. Product controlled weeds better than the reference product (21,3%). Efficacy in 3 DE trials was on the level of 70,7% and the product performed better than the reference product. On the contrary, in 3 CZ trials CHEAL was susceptible (85%) and the reference product performed a little worse.

There is a noticeable variation in the efficacy of the product in PL and neighboring countries against CHEAL. Therefore, in order to confirm the moderately susceptible efficacy of the product and its consistent performance in PL, it is necessary to submit post-registered 2-3 trials conducted in the climatic zone of PL- NE, in the country of registration and placing on the market of the product.

#### ABUTH – all applications

All presented trials were conducted in the neighboring country (CZ), with high efficacy. Taking into account above explanation for CHEAL, rules presented in the Guidelines of Polish Ministry and the reduce number of trials for 2 and 4 applications, it is necessary to submit post-authorized 2 trials conducted in the climatic zone of PL- NE, in the country of registration and placing on the market of the product to confirm efficacy for PL.

#### **GALAP**

For 2 and 4 applications, the Applicant presented only 2 trials. For 1 and 3 applications the number of trials is appropriate. Since the product performed with high efficacy, especially for split doses, therefore a reduced number of trials for 2 and 4 applications can be considered.

#### **LAMPU**

the Applicant presented only 2 trials for all applications. Since the product performed with high and consistent efficacy (100%) especially for split doses, and better than the reference product (20-30%), therefore a reduced number of trials can be accepted conditionally. In order to confirm the efficacy of the product and its consistent performance, it is necessary to submit post-registered 2-3 trials conducted in the climatic zone of PL- NE, in the country of registration and placing on the market of the product.

31-74 days after last application the following target weed species were categorized as:

1. 1 applic.: CHEAL (MT), ABUTH (MS), GALAP (MS), LAMPU (MT)
2. 2 applic.: CHEAL (MS), ABUTH (S), GALAP (S), LAMPU (S)
3. 3 applic.: CHEAL (MS), ABUTH (S), GALAP (S), LAMPU (S)
4. 4 applic.: CHEAL (MS), ABUTH (S), GALAP (S), LAMPU (S)

In accordance with The Polish Ministry Guideline efficacy data from sugar beet can be extrapolated to fodder beet. However 2 selectivity trials carried out on fodder beet varieties have to be submitted.

To sum up, it might be concluded that the post-emergence application of F7B-39-30 at claimed dose rates (spray volume 100 - 300 l/ha) controlled weeds in sugar beet comparable or better than the standard product Betasana SC. The split applications gave better results in comparison to one application of the product.

#### **Control of weeds in the Maritime EPPO climate zone**

The applicant submitted 14 trials carried out in 2021, 2022 on different varieties of sugar beet (BTS SMART 9145 N, BTS-555, Lisanna, Hanibal, KWS Florentina, Lunella, BTS 4190 RHC, Smart Renja KWS, Fressbee, Totem, BTS 1140, BTS 5770, Annemartha) in CZ, DE, NL, FR, UK.

Efficacy trials were carried out by organizations that are officially recognized as competent to carry out efficacy testing in accordance with Regulation (EC) 284/2013 by the authorities in the relevant countries. All trials have been conducted according to GEP.

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

1. PP 1/226 Number of efficacy trials;
2. PP 1/181 Conduct and reporting of efficacy evaluation trials including good experimental practice.
3. PP 1/135 Phytotoxicity assessment
4. PP 1/52 Weeds in sugar and fodder beet and industrial chicory
6. PP 1/152 Design and analysis of efficacy evaluation trials

The minimal number of an individual weed per m<sup>2</sup> in the trials at the time of application should be 4-5, to include such trials in the assessment. In the following reports the number of weeds per m<sup>2</sup> were not adequate, so those trials were excluded from the assessment:

DE22F7B022-NFR06C: MERAN – 2,75 pl./ m<sup>2</sup>

DE22F7B022-NFR07C: MERAN – 1,5 pl. /m<sup>2</sup>

DE22F7B022-NFR37C: GASPA - 3 pl./ m<sup>2</sup>

FR22F7B022-YLA03C: AETCY – 0,5 pl./m<sup>2</sup>

DE22F7B022-WD108: AETCY – 0 pl./ m<sup>2</sup>

#### **Weed species are classified as:**

very susceptible (VS) -	95 - 100%
susceptible (S) –	85 - 94,9%
moderately susceptible (MS) -	70 - 84,9%
moderately tolerant (MT) -	50 – 69,9%
tolerant (T)	< 49,9%

The tested herbicide was applied at the rates:

- 0,8 l/ha for one application



- 0,4 l/ha for two applications,
- 0,026 l/ha for three applications,
- 0,02 l/ha for four applications

(spray volume 100 – 300 l/ha) in sugar beet (BBCH 10-14, at the first application) as post-emergence application against weeds.

Efficacy was assessed 7 days after application before next application and then at regular intervals up to 56 days after last application. In two trials assessment was conducted late -on 70-76 days after last application and in one trial on 82 days after last application. In one trial assessment was conducted 28 days after application.

Weed species	Efficacy [%] 28- 82 days after last application (the best results presented)			
	1 appl. no. of trials	2 appl. no. of trials	3 appl. no. of trials	4 appl. no. of trials
CHEAL	71,5 (15,0 -100) 11	81,3 (37,8-100) 9	80,3 (37,0-100) 11	79,4 (37,5-100) 10
AETCY	85,0 (77,5-92,5) 2	97,0 (95,0 -99,0) 2	97,0 (95,0 -99,0) 2	97,0 (95,0 -99,0) 2
ABUTH	79,6 (65,0-100) 3	98,0 (96,0-100) 2	98,5 (95,5-100) 3	100 2
GASPA	81,3 1	-	97,5 1	-
GALAP	100 1	100 1	98,8 1	99,5 (99,0-100) 2
MERAN	72,5 (60,0-82,5) 3	79,2 (70,0-86,3) 3	74,6 (70,0 – 80,0) 3	77,1 (70,0-88,8) 3
VIOAR	75,0 (55,0-95,0) 2	80,7 (66,3-95,0) 2	75,0 (55,0-95,0) 2	73,8 (52,5-95,0) 2
CAPBP	65,0 1	80,0 1	95,8 1	86,3 1
LAMPU	100 1	100 1	100 1	100 1
PAPRH	100 1	100 1	100 1	100 1

**CHEAL:**

1 application:

Efficacy in 3 DE trials was very low (30,0%) and comparable to the efficacy of reference product.

2 applications:

In one DE trial, the product perform worse with the efficacy of 37,8% and comparable to the reference product.

3 applications:

In two DE trials, the product perform worse with the efficacy of 37,0% and 67,5% and better than the reference product.

4 applications:

In one DE trial, the product perform worse with the efficacy of 37,5% and comparable to the reference product.

28-82 days after last application the following target weed species were categorized as:

1. 1 applic.: CHEAL (MS), ABUTH (MS), MERAN (MS)
2. 2 applic.: CHEAL (MS), ABUTH (VS), MERAN (MS)
3. 3 applic.: CHEAL (MS), ABUTH (VS), MERAN (MS)
4. 4 applic.: CHEAL (MS), ABUTH (VS), MERAN (MS)

The number of trials per one weed species 1-2 is insufficient to confirm efficacy. In accordance with the PP 1/226 (3) Number of efficacy trials, the appropriate number of trials to confirm efficacy should be 6-15 for major pest in major crop. Acceptance of number of trials, if less than 6 and acceptance of inconsistent efficacy against CHEAL, are at the discretion of CMS.

In ZRMS opinion, efficacy data from sugar beet can be extrapolated to fodder beet.

Generally, the data provided may not be sufficient for authorization of the product in CMSs. The decision is up to CMSs.



### Control of weeds in the SE EPPO climate zone

The applicant submitted 2 trials carried out in 2022 on 2 varieties of sugar beet (Kipunji, Smart Belamia KWS) in HU.

Efficacy trials were carried out by organizations that are officially recognized as competent to carry out efficacy testing in accordance with Regulation (EC) 284/2013 by the authorities in the relevant countries. All trials have been conducted according to GEP.

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

1. PP 1/226 Number of efficacy trials;
2. PP 1/181 Conduct and reporting of efficacy evaluation trials including good experimental practice.
3. PP 1/135 Phytotoxicity assessment
4. PP 1/52 Weeds in sugar and fodder beet and industrial chicory
6. PP 1/152 Design and analysis of efficacy evaluation trials

The minimal number of an individual weed per m<sup>2</sup> in the trials at the time of application should be 4-5, to include such trials in the assessment. In the one report the number of weeds per m<sup>2</sup> were not adequate, so that trial was excluded from the assessment:

HU22F7B022-JPA26C: ABUTH – 0,5 pl./ m<sup>2</sup>, CHEAL- 1,0 pl. /m<sup>2</sup>

#### Weed species are classified as:

very susceptible (VS) -	95 - 100%
susceptible (S) –	85 - 94,9%
moderately susceptible (MS) -	70 - 84,9%
moderately tolerant (MT) -	50 – 69,9%
tolerant (T)	< 49,9%

The tested herbicide was applied at the rates:

- 0,8 l/ha for one application
- 0,4 l/ha for two applications,
- 0,026 l/ha for three applications,
- 0,02 l/ha for four applications

(spray volume 243 – 300 l/ha) in sugar beet (BBCH 9-10, at the first application) as post-emergence application against weeds.

Efficacy was assessed 7 days after application before next application and then at regular intervals up to 56 days after last application.

Weed species	Efficacy [%] 27- 51 days after last application (the best results presented)			
	1 appl. no. of trials	2 appl. no. of trials	3 appl. no. of trials	4 appl. no. of trials
CHEAL	72,2 (53,8-90,5) 2	87,4 (84,3-90,5) 2	85,3 (81,8-88,8) 2	56,3 (26,3-86,3) 2
MERAN	60,0 1	81,5 1	86,3 1	92,5 1

#### 27-51 days after last application the following target weed species were categorized as:

1. 1 applic.: CHEAL (MS), MERAN (MT)
2. 2 applic.: CHEAL (S), MERAN (MS)
3. 3 applic.: CHEAL (S), MERAN (S)
4. 4 applic.: CHEAL (MT), MERAN (VS)

The number of trials per one weed species 1-2 is insufficient to confirm efficacy. In accordance with the PP 1/226 (3) Number of efficacy trials, the appropriate number of trials to confirm efficacy should be 6-15 for major pest in major crop. Acceptance of number of trials, if less than 6 is at the discretion of CMS.

In ZRMS opinion, efficacy data from sugar beet can be extrapolated to fodder beet.

Generally, the data provided may not be sufficient for authorization of the product in CMSs. The decision is up to CMSs.

### 3.2.3.2 F7B-39-30 applied in PROGRAM

In a lot of countries in the European Central zone, the control of weeds in sugar beet consists of weed control programs in which various actives are combined. F7B-39-30 was added to the most frequently applied herbicide programs with the aim to see if the efficacy can be improved on target species CHEAL, AETCY, ABUTH, GALAP, GASPA, MERAN, CAPBP, LAMPU and PAPRH without any negative impacts on crop selectivity.

The applicant would like to stress that data on the efficacy of F7B-39-30 in program is only presented as supporting data and no claim for the inclusion of specific programs on the proposed label are made. The applicant intention is to claim in the label proposal that F7B-39-30 may be generally tank mixed with any current herbicide present in the sugar-beet market.

Data are presented from a total of 13 trials to demonstrate that F7B-39-30 at the requested rate of 2 g a.i/ha can be used in an herbicide program to improve efficacy on target species CHEAL, AETCY, ABUTH, GALAP, GASPA, MERAN, CAPBP, LAMPU and PAPRH without any negative impacts on crop selectivity.

The trials were conducted between 2021 and 2022 in Czech Republic, Germany, Netherlands, Poland and Hungary which are representative of the Central regulatory zone. EPPO zones covered are Maritime (8), North-East (4) and South-East (1) EPPO zone. The distribution of trials by location and year are described in Table 3.2-27. **Błąd! Nie można odnaleźć źródła odwołania.** and in Figure 3.2-2.

**Table 3.2-27: Trial distribution throughout EPPO zone of trials with F7B-39-30 applied in PROGRAMS**

Year	2021	2022	Total
Country			
Czech Republic	.	2	2
Germany	2	1	3
Netherland	1	2	3
Poland	1	3	4
Hungary	.	1	1
<b>Total</b>	<b>4</b>	<b>9</b>	<b>13</b>
<b>Total per Maritime zone</b>	<b>8</b>		
<b>Total per North-East zone</b>	<b>4</b>		
<b>Total per South-East Zone</b>	<b>1</b>		

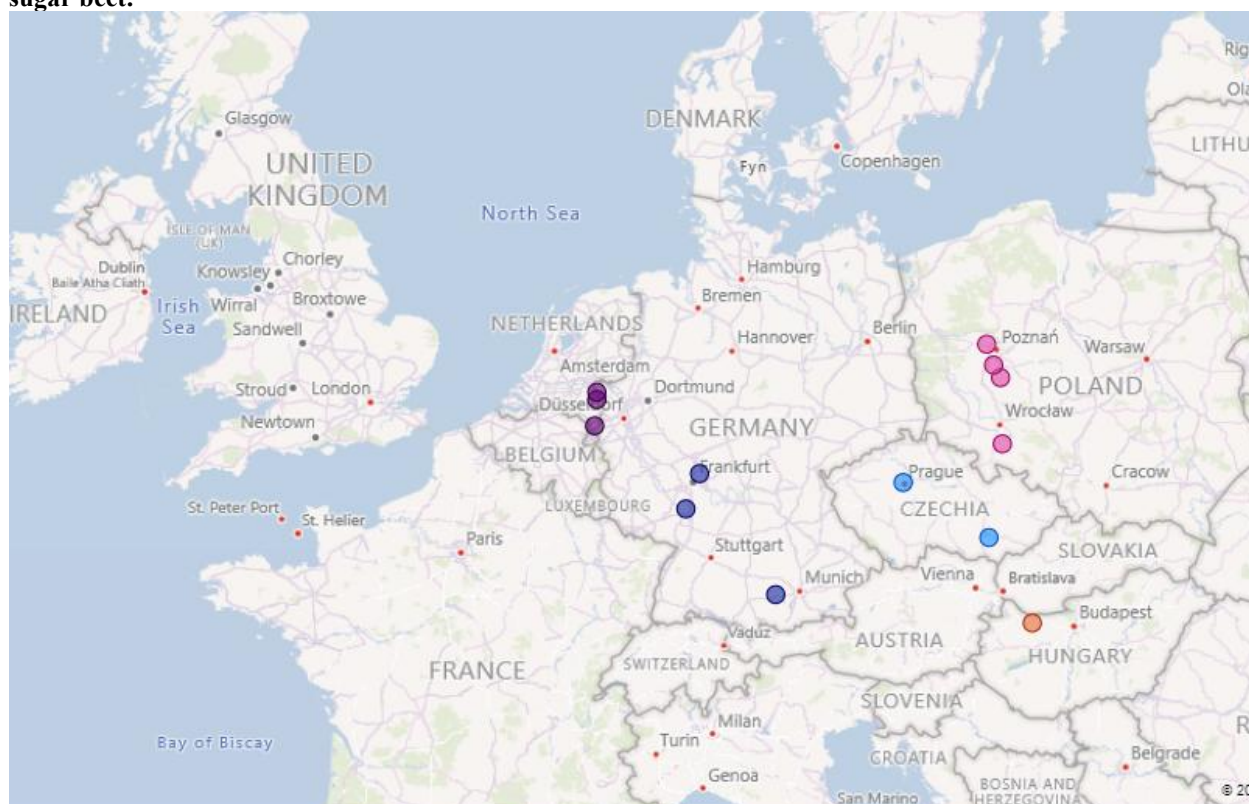
#### Guidelines

Guidelines	General guidelines	PP 1/135, PP 1/152, PP 1/181, PP 1/213, PP 1/214
	Specific guidelines	PP 1/52, PP 1/278

#### Application methods

Treatments were applied to all trials using a backpack sprayer compressed air or a bicycle sprayer compressed air, calibrated to apply a spray volume of 175-300 L/ha using different types of nozzles (FLAT FAN: flat fan; FLATFANA: flat fan, air induction). Details of application are presented in the Biology Assessment Dossier.

**Figure 3.2-2: Location map of trials with F7B-39-30 EC applied in programs with against broadleaves in sugar beet.**



### Assessment methods

Only trials with significant weed infestation were considered and included in the analysis for this document.

Assessments were carried out according to the EPPO guidelines PP 1/135 “*Phytotoxicity assessment*”, PP 1/152 “*Design and analysis of field evaluation trials*” and PP 1/181 “*Conduct and reporting of efficacy evaluation trials including good experimental practice*”.

The efficacy, expressed as percentage of visual control compared to the untreated control, was scheduled to be evaluated at 1 week after each application, just before the following application, and at 3, 4, 5 and 6 weeks after the last application, to the following scale: 0 = no efficacy/control to 100 = target plants dead/completely controlled.

Last assessment only is taken into consideration. This interval is considered appropriate to allow tested herbicides to effectively be absorbed and move within the plants to reach the site of action and reach effective efficacy.

Efficacy was tested under a range of environmental conditions to fully challenge the product.

F7B-39-30 EC was tested in different programs applied 3 and 4 times. The intent, in fact, is to understand the efficacy of the programs with and without the addition of F7B-39-30.

Several other herbicide programs were included in the trials but are not presented here. Data from those programs are available and can be found in the Single Trial reports (submitted with this dossier). In this section, only programs presented in all the trials are described to allow orthogonal comparison between trials.

Data from three representative weed control programs in sugar beet with and without F7B-39-30 applied as either a three or four applications are summarised in this dossier and are described below.

**Program A : Goltix (metamitron) + Trammat (ethofumesate) + Actirob (Esterified rape seed oil) with/without F7B-39-30**

***Three application timings ABC:***

Goltix at 350 g a.i/ha and Trammat at 125 g a.i/ha, with the addition of Actirob B at 0.5 L/ha was mixed with/without F7B-39-30 EC at 0.66 g a.i/ha

***Four application timings ABCD:***

Goltix at 350 gai/ha and Trammat at 125 g a.i/ha, with the addition of Actirob B at 0.5 L/ha was mixed with/without F7B-39-30 EC at 0.5 g a.i/ha

**Program B: Goltix (metamitron) + Trammat (ethofumesate) + Betasana (phenmedipham) + Actirob (vegetal oil) with/without F7B-39-30**

***Three application timings ABC:***

Goltix at 350 g a.i/ha, Trammat at 125 g a.i/ha and Betasana at 200/160\* g a.i/ha, with the addition of Actirob B at 0.5 L/ha was mixed with/without F7B-39-30 EC at 0.66 g a.i/ha

***Four application timings ABCD:***

Goltix at 350 gai/ha, Trammat at 125 gai/ha and Betasana at 160\* g a.i/ha, with the addition of Actirob B at 0.5 L/ha was mixed with/without F7B-39-30 EC at 0.5 g a.i/ha

**Program C: Goltix (metamitron) + Trammat (ethofumesate) + Safari (triflusulfuron-methyl) + Actirob (vegetal oil) with/without F7B-39-30**

***Three application timings ABC:***

At appl A: Goltix at 350 g a.i/ha, Trammat at 125 g a.i/ha and Safari at 5 g a.i/ha, with the addition of Actirob B at 0.5 L/ha and appl BC: same program with Safari at 7.5 g a.i/ha was mixed with/without F7B-39-30 EC at 0.66 g a.i/ha

***Four application timings ABCD:***

Goltix at 350 gai/ha, Trammat at 125 g a.i/ha and Safari at 5 g a.i/ha, with the addition of Actirob B at 0.5 L/ha was mixed with/without F7B-39-30 EC at 0.5 g a.i/ha

\* 160 g a.i/ha - rate of Betasana used in protocol EA21F7B037H

Details of the formulations tested on the above programs are provided in Table 3.2-28.

**Table 3.2-28: Formulations tested at trials with F7B-39-30 EC applied in programs against broadleaves in sugar beet.**

Reference (trademark)	Form. Type	Form. concentration	Active substance	Rate used in reported trials (g a.s./ha)	Rate used in reported trials (L or Kg f.p./ha)
Goltix	SC	700	metamitron	350	0.5
Tramat® F	SC	500	ethofumesate	125	0.25
Betasana® SC	SC	160	phenmedipham	160	1
Safar	WG	500	triflusulfuron-methyl	5	0.01
Actirob B	EC	812 g/l	esterified rapeseed oil		0.5

**Table 3.2-29: Details on trial methodology**

<b>Guidelines</b>	General guidelines	EPPO PP 1/152, 1/135, 1/181, 1/223, 1/225, 1/226, 1/278, 1/214, 1/291
	Specific guidelines	EPPO PP 1/52
<b>Experimental design</b>	Plot design	Randomised complete block (RCB)
	Plot size	13.75 – 24 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Crop	Sugar beet (BEAVA)
	Crop varieties	<u>Conventional sugar beet varieties</u> : Annemartha, Annarosa, BTS-555, BTS-4190 RHC, Caprianna KWS,Coati, Danicia KWS, Lisanna,, Kipunji, Jagger, Mazur, Panorama  <u>Conviso® SMART varieties</u> : BTS SMART 9145 N
	Sowing period	Spring 2021 -spring 2022
<b>Application</b>	Crop stage (BBCH)* at application	Application A=10-13, B=10-14, C=12-31, D=14-45
	Timing Pest stage (BBCH)* at application	CHEAL Application A=10-14, B=10-23, C=12-51, D=14-45 AETCY Application A=09-11, B=09-12, C=10-16, D=12-30 ABUTH Application A=10, B=10, C=10-14, D=12-23 GALAP Application A=10, B=12, C=10-22, D=10-23 GASPA Application A=10, B=10-14, C=14-18, D=51-59 MERAN Application A=09-10, B=10-12, C=10-23, D=10-31 CAPBP Application A=09, B=10-11, C=15-16, D=39-61 LAMPU Application A=09-10, B=10-12, C=12-14, D=12-16 PAPRH Application A=10, B=10-11, C=14-17, D=17-18
	Pest density (pl/m2)	CHEAL, Application A=5-38, B=5-60, C=7-90, D=3-90 AETCY, Application A=6-7, B=9-11, C= 11-12 D= 11-14 ABUTH, Application A=20, B= 14, C=13, D= 10 GALAP Application A=3 B=8, C=5-8, D=5-83 GASPA Application A=40, B=48, C=45, D=25 MERAN Application A=8-23, B=12-31, C=11-34, D=10-34 CAPBP Application A=20, B=14, C=13, D=10 LAMPU Application A=32, B=200, C=200, D=200 PAPRH Application A=3, B=4, C=4, D=8
	Number of applications Intervals between applications	4 , request 5-7 days
	Spray volumes	100, 200, 250 & 300 L/ha
	Spray pressure	200
	Temperature (°C)	7 – 30.7
	Soil temperature (°C)	6 – 26
	Humidity (%)	30- 82
<b>Soil</b>	Soil type	Clay, loam, loamy sand, sandy loam, silt, siltyclay, silty clay loam, silt loam
	pH	5.5- 7.6
	% OM	0.9-6.1

	Tillage type	Conventional tillage (plough, disking, and harrows to prepare seed bed) and Minimum tillage
<b>Assessment</b>	Assessment types	% visual control relative to the untreated control on a 0-100 linear scale whereby 0% = no control and 100% = plant death.
	Assessment dates	7 days after each application timing and before the next application timing then at regular intervals, up to 56 days after application D
<b>Other relevant information</b>	Field trials	-

### Data Analysis

Efficacy data are described as average by target species within EPPO climatic zone and summarized by regulatory zone if more than one climatic zone data is available. Minimum and maximum range is also provided for evaluation of variability and consistency of observed data.

Following tables present efficacy data at trial level with orthogonal comparisons of all three programs with and without F7B-39-30 applied 3 and 4 times.

#### Efficacy on *Chenopodium album* (CHEAL) when F7B-39-30 is applied in program

Data are presented from a total of 10 trials to demonstrate that F7B-39-30 at the requested rate of 2 g a.i/ha can be used in an herbicide program to improve efficacy on *C. album*. Trials were conducted between 2021 and 2022 in Czech Republic, Germany, Netherlands, and Poland, which are representative of the Central regulatory zone. EPPO zones covered were Maritime (6) and North-East (4). F7B-39-30 (florpyrauxifen-benzyl, 25.05 g a.i/L, EC) was tested in three sugar beet herbicide programs from (April 28<sup>th</sup>, 2021, to June 1<sup>st</sup> 2022) and applied in application volumes ranging from 100 to 300 L/ha. Efficacy was tested under a range of environmental conditions to fully challenge the product.

#### Efficacy on *Aethusa cynapium* (AETCY) when F7B-39-30 is applied in program

Data are presented from a total of 2 trials to demonstrate that F7B-39-30 at the requested rate of 2 g a.i/ha can be used in an herbicide program to improve efficacy on *A. cynapium*. Trials were conducted between 2021 and 2022 in Germany which represents the Central Regulatory zone and Maritime EPPO zone. F7B-39-30 (florpyrauxifen-benzyl, 25.05 g a.i/L, EC) was tested in three sugar beet herbicide programs from April 28<sup>th</sup> 2021 to May 16<sup>th</sup> 2022 and applied in application volumes ranging from 100 to 200 L/ha. Efficacy was tested under a range of environmental conditions to fully challenge the product.

#### Efficacy on *Abutilon theophrasti* (ABUTH) when F7B-39-30 is applied in program

Data are presented from one trial to demonstrate that F7B-39-30 at the requested rate of 2 g a.i/ha can be used in an herbicide program to improve efficacy on *A. theophrasti*. The trial was conducted in 2022 in the Czech Republic which represents the Central regulatory zone and Maritime EPPO zone. F7B-39-30 (florpyrauxifen-benzyl, 25.05 g a.i/L, EC) was tested in three sugar beet herbicide programs from April 27<sup>th</sup>, to May 23<sup>rd</sup> 2022 and applied in application volume of 300 L/ha.

#### Efficacy on *Galium aparine* (GALAP) when F7B-39-30 is applied in program

Data are presented from a total of 2 trials to demonstrate that F7B-39-30 at the requested rate of 2 g a.i/ha can be used in an herbicide program to improve efficacy on *G. aparine*. Trials were conducted between 2021 and 2022 in Poland, which represents the Central regulatory zone and North East EPPO zone. F7B-39-30 (florpyrauxifen-benzyl, 25.05 g a.i/L, EC) was tested in three sugar beet herbicide programs from April 28<sup>th</sup>, 2021 to May 17<sup>th</sup> 2022 and applied in application volumes ranging from 200 to 250 L/ha. Efficacy was tested under a range of environmental conditions to fully challenge the product.

#### Efficacy on *Galinsoga parviflora* (GASPA) when F7B-39-30 is applied in program



Data are presented from 1 trial to demonstrate that F7B-39-30 at the requested rate of 2 g a.i/ha can be used in an herbicide program to improve efficacy on *G. parviflora*. The trial was conducted in 2021 in the Netherlands which represents the Central regulatory zone and Maritime EPPO zone. F7B-39-30 (florpyrauxifen-benzyl, 25.05 g a.i/L, EC) was tested in three sugar beet herbicide programs from April 29<sup>th</sup> to June 22<sup>nd</sup> 2022 and applied in application volume of 250 L/ha.

**Efficacy on *Mercurialis annua* (MERAN) when F7B-39-30 is applied in program**

Data are presented from a total of 2 trials to demonstrate that F7B-39-30 at the requested rate of 2 g a.i/ha can be used in an herbicide program to improve efficacy on *M. annua*. Trials were conducted in 2022 in Czech Republic, and Hungary, which are representative of the Central regulatory zone. EPPO zones covered were Maritime (1) and South-East (1). F7B-39-30 (florpyrauxifen-benzyl, 25.05 g a.i/L, EC) was tested in three sugar beet herbicide programs from April 27<sup>th</sup> to June 5<sup>th</sup> 2022 and applied in application volume of 300 L/ha. Efficacy was tested under a range of environmental conditions to fully challenge the product.

**Efficacy on *Capsella bursa-pastoris* (CAPBP) when F7B-39-30 is applied in program**

Data are presented from 1 trial to demonstrate that F7B-39-30 at the requested rate of 2 g a.i/ha can be used in an herbicide program to improve efficacy on *C. bursa pastoris*. The trial was conducted in 2022 in Poland, which represents the Central regulatory zone and North-East EPPO zone. F7B-39-30 (florpyrauxifen-benzyl, 25.05 g a.i/L, EC) was tested in three sugar beet herbicide programs from April 27<sup>th</sup> to May 23<sup>th</sup> 2022 and applied in application volume of 200 L/ha.

**Efficacy on *Lamium purpureum* (LAMPU) when F7B-39-30 is applied in program**

Data are presented from 1 trial to demonstrate that F7B-39-30 at the requested rate of 2 g a.i/ha can be used in an herbicide program to improve efficacy on *L. purpureum*. The trial was conducted in 2021 in Germany, which represents the Central regulatory zone and Maritime EPPO zone. F7B-39-30 (florpyrauxifen-benzyl, 25.05 g a.i/L, EC) was tested in three sugar beet herbicide programs from April 30<sup>th</sup> to May 30<sup>th</sup> 2021 and applied in application volume of 200 L/ha.

**Efficacy on *Papaver rhoeas* (PAPRH) when F7B-39-30 is applied in program**

Data are presented from 1 trial to demonstrate that F7B-39-30 at the requested rate of 2 g a.i/ha can be used in an herbicide program to improve efficacy on *P. rhoeas*. The trial was conducted in 2021 in Poland, which represents the Central regulatory zone and North-East EPPO zone. F7B-39-30 (florpyrauxifen-benzyl, 25.05 g a.i/L, EC) was tested in three sugar beet herbicide programs from (April 28<sup>th</sup>, to May 28<sup>th</sup> 2021) and applied in application volume of 200 L/ha.

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**Table 3.2-30: Summary - Efficacy of F7B-39-30 in program A in sugar beet, all weeds, data from final assessment, timing C= 22- 69 daa & D=22-68 daa**

Species	EPPO and/or Administrative Zone	N° of trials	Infestation of the untreated control (plants/m²) timing	Weed stage at application (BBCH) Timing A & D	Crop stage at application (BBCH) Timing A & D	% Control at the final assessment – Program A							
						Three applications ABC				Four applications ABCD			
						Program A		Program A + F7B-39-30		Program A		Program A + F7B-39-30	
						Mean	Min-Max	Mean	Min-Max	Mean	Min-Max	Mean	Min-Max
CHEAL	Maritime	6	A=18 (5-38) D=25 (3-70)	10-65	10-45	91.18	81.2-100	98.37	96.2-100	88.9	75-97	99.1	97.8-100
	North-East	4	A=15 (4-30) D=52 (20-90)	10-33	10-28	52.8	40-86.2	94.4	78.8-100	68.12	50-100	98.12	92.5-100
	Central Zone	10	A=17.3 (4-38) D=36.2 (3-90)	10-65	10-28	75.83	40-100	96.78	78.8-100	80.59	50-100	98.71	92.5-100
AETCY	Maritime	2	A= 7(6-7.5) D=12.5 (11-13.7)	09-30	10-16	22.5	18.2-26.8	98.5	98-99	25.25	22-28	98.5	98-99
	Central Zone	2	A=6.7(6-7.5) D=12.5 (11-13.7)	09-30	10-16	22.5	18.2-26.8	98.5	98-99	25.25	22-28	98.5	98-99
ABUTH	Maritime	1	A=20 D=10	10-23	10-18	0	.	100	.	0	.	100	.
	Central Zone	1	A=20 D=10	10-23	10-18	0	.	100	.	0	.	100	.
GALAP	North-East	2	A=3 D=6.5 (5-8)	10-23	10-28	81.25	65-97.5	88	77.5-98.5	78.75	57.5-100	95.6	91.2-100
	Central Zone	2	A=3 D=6.5 (5-8)	10-23	10-28	81.25	65-97.5	88	77.5-98.5	78.75	57.5-100	95.6	91.2-100
GASPA	Maritime	1	A=40 D=25 %	10-59	10-18	56.2	.	98.8	.	57	.	96.5	.
	Central Zone	1	A=40 D=25 %	10-59	10-18	56.2	.	98.8	.	57	.	96.5	.
MERAN	Maritime	1	A=8 D=10	10-31	10-18	81.2	.	100	.	78.8	.	100	.
	South-East	1	A=23 D=34	09-14	10-19	81.8	.	93.2	.	88.5	.	99	.
	Central Zone	2	A=15.5 (8-23) D=22(10-34)	09-31	10-19	81.5	81.2-81.8	96.6	93-100	83.65	78.8-88.5	99.5	99-100
CAPBP	North-East	1	A=12 D=35	09-61	10-17	75	.	100	.	85	.	100	.
	Central Zone	1	A=12 D=35	09-61	10-17	75	.	100	.	85	.	100	.
LAMPU	Maritime	1	A=32 D=200	09-16	10-14	85	.	99	.	91.2	.	98	.
	Central Zone	1	A=32 D=200	09-16	10-14	85	.	99	.	91.2	.	98	.



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Species	EPP0 and/or Administrative Zone	N° of trials	Infestation of the untreated control (plants/m²) timing	Weed stage at application (BBCH) Timing A & D	Crop stage at application (BBCH) Timing A & D	% Control at the final assessment – Program A							
						Three applications ABC				Four applications ABCD			
						Program A		Program A + F7B-39-30		Program A		Program A + F7B-39-30	
						Mean	Min-Max	Mean	Min-Max	Mean	Min-Max	Mean	Min-Max
PAPRH	North-East	1	A=3 D=8	10-18	10-18	45	.	51.2	.	56.2	.	71.2	.
	Central Zone	1	A=3 D=8	10-18	10-18	45	.	51.2	.	56.2	.	71.2	.

**Table 3.2-31: Summary - Efficacy of F7B-39-30 in program B in sugar beet, all weeds, data from final assessment, timing C= 22- 69 daa & D=22-68 daa**

Species	EPP0 and/or Administrative Zone	N° of trials	Infestation of the untreated control (plants/m²) timing	Weed stage at application (BBCH) Timing A & D	Crop stage at application (BBCH) Timing A & D	% Control at the final assessment – Program B							
						Three applications split ABC				Four applications split ABCD			
						Program B		Program B + F7B-39-30		Program B		Program B + F7B-39-30	
						Mean	Min-Max	Mean	Min-Max	Mean	Min-Max	Mean	Min-Max
CHEAL	Maritime	6	A=18 (5-38) D=25 (3-70)	10-65	10-45	95.38	90-99	99.52	98.8-100	97.20	90.8-100	99.33	97.5-100
	North-East	4	A=15 (4-30) D=52 (20-90)	10-33	10-28	69.7	52.5-93.8	94.7	80-100	78.1	65-100	97.5	90-100
	Central Zone	10	A=17.3 (4-38) D=36.2 (3-90)	10-65	10-28	85.11	52.5-99	97.59	80-100	89.57	65-100	98.6	90-100
AETCY	Maritime	2	A= 7(6-7.5) D=12.5 (11-13.7)	09-30	10-16	33.65	32.5-34.8	98.5	98-99	39.1	35-43.2	98.5	98-99
	Central Zone	2	A=6.7(6-7.5) D=12.5 (11-13.7)	09-30	10-16	33.65	32.5-34.8	98.5	98-99	39.1	35-43.2	98.5	98-99
ABUTH	Maritime	1	A=20 D=10	10-23	10-18	0	.	100	.	0	.	100	.
	Central Zone	1	A=20 D=10	10-23	10-18	0	.	100	.	0	.	100	.
GALAP	North-East	2	A=3 D=6.5 (5-8)	10-23	10-28	77.5	57.5-97.5	86.25	72.5-100	90	80-100	91.9	83.8-100
	Central Zone	2	A=3 D=6.5 (5-8)	10-23	10-28	77.5	57.5-97.5	86.25	72.5-100	90	80-100	91.9	83.8-100
GASPA	Maritime	1	A=40 D=25 %	10-59	10-18	97.8	.	98.8	.	100	.	100	.
	Central Zone	1	A=40 D=25 %	10-59	10-18	97.8	.	98.8	.	100	.	100	.
MERAN	Maritime	1	A=8	10-31	10-18	75	.	78.8	.	95.5	.	99	.

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Species	EPPO and/or Administrative Zone	N° of trials	Infestation of the untreated control (plants/m²) timing	Weed stage at application (BBCH) Timing A & D	Crop stage at application (BBCH) Timing A & D	% Control at the final assessment – Program B							
						Three applications split ABC				Four applications split ABCD			
						Program B		Program B + F7B-39-30		Program B		Program B + F7B-39-30	
						Mean	Min-Max	Mean	Min-Max	Mean	Min-Max	Mean	Min-Max
			Mean Min-Max	Min-Max	Min-Max								
	South-East	1	A=23 D=34	09-14	10-19	85.5	.	95.8	.	98.5	.	99.5	.
	Central Zone	2	A=15.5 (8-23) D=22(10-34)	09-31	10-19	80.25	75-85.5	87.3	78.8-95.8	97	95.5-98.5	99.25	99-99.5
CAPBP	North-East	1	A=12 D=35	09-61	10-17	100	.	100	.	100	.	100	.
	Central Zone	1	A=12 D=35	09-61	10-17	100	.	100	.	100	.	100	.
LAMPU	Maritime	1	A=32 D=200	09-16	10-14	91.7	.	99	.	99	.	99.8	.
	Central Zone	1	A=32 D=200	09-16	10-14	91.7	.	99	.	99	.	99.8	.
PAPRH	North-East	1	A=3 D=8	10-18	10-18	83.8	.	96.2	.	95	.	100	.
	Central Zone	1	A=3 D=8	10-18	10-18	83.8	.	96.2	.	95	.	100	.

**Program B:** Goltix (metamitron) + Tramat (ethofumesate) + Betasana (phenmedipham) + Actirob (vegetal oil)

**Table 3.2-32: Efficacy summary of F7B-39-30 in Program C in sugar beet all weeds, data from final assessment, timing C= 22- 69 daa & D=22-68 daa**

Species	EPPO and/or Administrative Zone	N° of trials	Infestation of the untreated control (plants/m²) timing	Weed stage at application (BBCH) Timing A & D	Crop stage at application (BBCH) Timing A & D	% Control at the final assessment – Program C							
						Three applications split ABC				Four applications split ABCD			
						Program C		Program C + F7B-39-30		Program C		Program C + F7B-39-30	
						Mean	Min-Max	Mean	Min-Max	Mean	Min-Max	Mean	Min-Max
			Mean Min-Max	Min-Max	Min-Max								
CHEAL	Maritime	6	A=18 (5-38) D=25 (3-70)	10-65	10-45	90.80	82.5-99	99.13	97.8-100	94.33	82.5-99	99.62	99-100
	North-East	4	A=15 (4-30) D=52 (20-90)	10-33	10-28	60.63	42.5-87.5	90.95	68.8-100	78.13	57.5-100	97.80	91.2-100
	Central Zone	10	A=17.3 (4-38) D=36.2 (3-90)	10-65	10-28	78.73	42.5 -99	95.86	68.8-100	87.85	57.5-100	98.89	91.2-100
AETCY	Maritime	2	A= 7(6-7.5) D=12.5 (11-13.7)	09-30	10-16	78.8	73.8-83.8	98.5	98-99	84.1	78.2-90	98.5	98-100

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Species	EPP0 and/or Administrative Zone	N° of trials	Infestation of the untreated control (plants/m²) timing	Weed stage at application (BBCH) Timing A & D	Crop stage at application (BBCH) Timing A & D	% Control at the final assessment – Program C							
						Three applications split ABC				Four applications split ABCD			
						Program C		Program C + F7B-39-30		Program C		Program C + F7B-39-30	
						Mean	Min-Max	Mean	Min-Max	Mean	Min-Max	Mean	Min-Max
	Central Zone	2	A=6.7(6-7.5) D=12.5 (11-13.7)	09-30	10-16	78.8	73.8-83.8	98.5	98-99	84.1	78.2-90	98.5	98-100
ABUTH	Maritime	1	A=20 D=10	10-23	10-18	99.2	.	98	.	75	.	100	.
	Central Zone	1	A=20 D=10	10-23	10-18	99.2	.	98	.	75	.	100	.
GALAP	North-East	2	A=3 D=6.5 (5-8)	10-23	10-28	81.6	65-98.2	89.35	81.2-97.5	78.75	57.5-100.	96.25	92.5-100
	Central Zone	2	A=3 D=6.5 (5-8)	10-23	10-28	81.6	65-98.2	89.35	81.2-97.5	78.75	57.5-100.	96.25	92.5-100
GASPA	Maritime	1	A=40 D=25 %	10-59	10-18	98.2	.	98.8	.	98.2	.	100	.
	Central Zone	1	A=40 D=25 %	10-59	10-18	98.2	.	98.8	.	98.2	.	100	.
MERAN	Maritime	1	A=8 D=10	10-31	10-18	99.5	.	98.2	.	98.8	.	99.5	.
	South-East	1	A=23 D=34	09-14	10-19	91.2	.	94.5	.	99.5	.	99.8	.
	Central Zone	2	A=15.5 (8-23) D=22(10-34)	09-31	10-19	95.35	91.2-99.5	96.35	94.5-98.2	99.15	98.8-99.5	99.65	99.5-99.8
CAPBP	North-East	1	A=12 D=35	09-61	10-17	100	.	100	.	100	.	100	.
	Central Zone	1	A=12 D=35	09-61	10-17	100	.	100	.	100	.	100	.
LAMPU	Maritime	1	A=32 D=200	09-16	10-14	85	.	98.5	.	91.2	.	99.8	.
	Central Zone	1	A=32 D=200	09-16	10-14	85	.	98.5	.	91.2	.	99.8	.
PAPRH	North-East	1	A=3 D=8	10-18	10-18	52.5	.	58.8	.	92.5	.	100	.
	Central Zone	1	A=3 D=8	10-18	10-18	52.5	.	58.8	.	92.5	.	100	.

**Program C:** Goltix (metamitron) + Tramet (ethofumesate) + Safari (triflurosulfuron-methyl) + Actirob (vegetal oil)

### **Summary and conclusions on the efficacy of F7B-39-30 (florpyrauxifen-benzyl) when is applied in programs with several commercial products in sugar beet**

#### **Summary Program A: F7B-39-30 +/- Trammat® + Goltix® + Actirob® applied as a three or four applications**

The addition of F7B-39-30 to program A (Tramat® + Goltix® + Actirob® B) applied as either a three (0.66 g a.i/ha) or four applications (0.5 g a.i/ha) split dose improved efficacy on all 9 species tested (CHEAL, ATECY, ABUTH, GALAP, GASPA, MERAN, CAPBP, LAMPU and PAPRH). Data clearly demonstrates that a low rate of F7B-39-30 can be used effectively in herbicide programs for the control of important weeds in sugar beet crops.

#### **Summary Program B: F7B-39-30 +/- Betasana +Tramat® + Goltix® + Actirob® applied as a three or four applications**

The addition of F7B-39-30 to program B (Betasana+ Trammat® + Goltix® + Actirob® B) applied as either a three (0.66 g a.i/ha) or four applications (0.5 g a.i/ha) split dose improved efficacy on 6 of the 9 species tested (CHEAL, ATECY, ABUTH, MERAN, LAMPU and PAPRH). Program B provided very high levels of control of GALAP, GASPA and CAPBP and the addition of F7B-39-30 had no adverse impact on its control of these species. Data clearly demonstrates that F7B-39-30 can be used effectively in herbicide programs for the control of important weeds in sugar beet crops.

#### **Summary Program C: F7B-39-30 +/- Trammat® + Goltix® +Safari + Actirob® applied in three or four applications**

The addition of F7B-39-30 to program C (Tramat® + Goltix® + Safari +Actirob® B) applied as either three (0.66 g a.i/ha) or four (0.5 g a.i/ha) applications improved efficacy on 6 of the 9 species tested (CHEAL, ATECY, ABUTH, GALAP, LAMPU and PAPRH). Program C provided very high levels of control of GASPA, MERAN and CAPBP and the addition of F7B-39-30 had no adverse impact on its control of these species. Data clearly demonstrates that F7B-39-30 can be used effectively in herbicide programs for the control of important weeds in sugar beet crops.

### **Overall Conclusion**

**F7B-39-30 applied at 2 g a.i/ha/season either as 3 or 4 applications, can be used effectively in herbicide programs for the control of important weeds, such as CHEAL, ATECY, ABUTH, GALAP, GASPA, MERAN, CAPBP LAMPU and PAPRH in sugar beet crops.**

dRR point 3.2.3.2	Efficacy tests Sugar beet: efficacy of F7B-39-30 value in a program
<p>ZRMS conclusion:</p> <p>The applicant has not included in the GAP table the use of the product F7B-39-30 as a mixture with other authorised on the markets herbicides. In the dRR/BAD, he explained that data in this paragraph are supporting data and no claim for the inclusion of specific programs on the proposed label will be made. The only intention is to include in the label proposal that F7B-39-30 may be generally tank mixed with any current sugar-beet protection herbicide present on the market.</p> <p>The Applicant has presented limited data showing efficacy mixture of herbicides with and without F7B-39-30 in three programs A, B, C. In each program, different set of herbicides was used to prove improvement of efficacy after an addition of F7B-39-30. The efficacy was tested in the split applications – 3 and 4 applications against: CHEAL, ATECY, ABUTH, GALAP, GASPA, MERAN, CAPBP, LAMPU and PAPRH.</p> <p><b>For Maritime EPPO climate zone</b> 8 trials were presented. Efficacy against CHEAL in three program was tested in 6 trial. In each program the addition of F7B-39-30 applied as either a three (0,66 g a.i/ha) or four applications (0,5 g a.i/ha) split dose improved efficacy against CHEAL. Number of efficacy trials for the rest presented weeds species is</p>	

not sufficient to conclude about efficacy. Nevertheless, relying on those limited data it may be assumed that the addition of F7B-39-30 to program A, B and C will be improved efficacy against presented weeds.  
The final decision whether that data is sufficient is up to CMSs.

**For NE EPPO** climate zone 4 trials were presented. In each program the addition of F7B-39-30 applied as either a three (0,66 g a.i/ha) or four applications (0,5 g a.i/ha) split dose improved efficacy. Number of efficacy trials for the presented weeds species is not sufficient to conclude about efficacy. Nevertheless, relying on those limited data it may be assumed that the addition of F7B-39-30 to program A, B and C will be improved efficacy against presented weeds.

**For SE EPPO climate zone** 1 trial were presented. In each program the addition of F7B-39-30 applied as either a three (0,66 g a.i/ha) or four applications (0,5 g a.i/ha) split dose improved efficacy. Number of efficacy trials for the presented weeds species is not sufficient to conclude about efficacy. Nevertheless, relying on those limited data it may be assumed that the addition of F7B-39-30 to program A, B and C will be improved efficacy against presented weeds.

The final decision whether that data is sufficient is up to CMSs.

### 3.2.3.3 Fodder beet

In addition to sugar beet, this document also seeks approval in fodder beet. Sugar beet and fodder beet belong to the same subspecies, i.e. *Beta vulgaris* subsp. *vulgaris*. All cultivated beets belong to this subspecies, but different cultivar groups are distinguished. The sugar beet corresponds with *Beta vulgaris* subsp. *vulgaris* var. *altissima*, whereas the fodder beet with *Beta vulgaris* subsp. *vulgaris* var. *crassa*. Both beet types are very similar in growth and development and are cultivated in temperate climates. Sugar and fodder beet grow more slowly than most weeds and are therefore poor competitors to weeds, especially from emergence until canopy closure. It is therefore recommended to keep the beet free of weed during this early stage. They also share the same weed spectrum) whereby the weeds in fodder beet are applied at comparable growth stages and calendar dates to those in sugar beet.

Due to the above reasons, we consider that the efficacy data obtained in the efficacy trials of sugar beet can be extrapolated to fodder beet. Therefore we conclude that 0.08 L/ha of F7B-39-30, applied in minimum 1 and maximum 4 applications, can be used to control the same label weeds in both sugar and fodder beet.

A total dose of 2 F7B-39-30/ha can be applied as either a single or split dose for the control of annual broad-leaved weeds.

dRR point 3.2.3.3	<b>Fodder beet</b>
ZRRMS conclusion:	
Please, see ZRRMS conclusion to the dRR point 3.2.3.1	

### Summary and conclusion

**Data presented in this section supports the use of F7B-39-30 applied at a total dose of 2 g a.i/ha applied as a single or split dose for the control of the target weeds stated above in sugar beet and fodder beet.**

### **3.2.4 Minor use**

No data will be presented on this section as no minor uses are claim for this product

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

No data will be presented on this section as efficacy trials were not harvests

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

### **Summary**

In this section, the resistance management of the product F7B-39-30 will be presented, and a risk resistance management strategy proposed following the EPPO guideline PP 1/213 that will be used for guidance in this chapter.

F7B-39-30 is a product containing the active substance florpyrauxifen-benzyl. Florpyrauxifen-benzyl. is a member of the arylpicolinate family of synthetic auxins (Group “4/O” according to HRAC classification).

Florpyrauxifen-benzyl. is an auxin herbicide that disrupts the plant growth regulation processes. F7B-39-30 is a post-emergence herbicide for the control of broadleaf weeds in sugar beet crops.

Resistance to synthetic auxins is known worldwide. A total of 28 weed species have been published as resistant to synthetic auxin herbicides in the world, and only 4 weed species are recorded as resistant in Europe. Most of the resistance cases recorded in Europe are resistant to 2,4-D, MCPA or MCPP and none to the florpyrauxifen-benzyl chemical family. Despite the low risk from the synthetic auxins actives to develop resistance, a management plan is promoted for the commercial use of F7B-39-30.

### **Proposed zonal label text:**

F7B-39-30 is a product containing florpyrauxifen-benzyl active substance. Florpyrauxifen-benzyl is a member of the arylpicolinate family of synthetic auxins (Group “4/O” according to HRAC classification). There is no known resistance to florpyrauxifen-benzyl on weeds species proposed for the label of F7B-39-30 in sugar beet.

Florpyrauxifen-benzyl can be used to control all weeds submitted in the country label including those which are resistant to other modes of action.

Even though the risk of resistance developing to florpyrauxifen-benzyl is low, the following resistance risk strategies are advised:

1. Use rate which will provide effective good control of all targets weed species
2. Follow label statements concerning rates and application timing
3. Consider the use of cultural practices and crop rotation to prevent development of resistance biotypes
4. Do not over rely on a single herbicide mode of action.

### **General principles of herbicide resistance management**

- Apply integrated weed management practices. Use multiple herbicide modes of action with

- overlapping weed spectrum in rotation, sequences, or mixtures.
- Use the full recommended rate of the herbicide and the correct application timing to ensure the control of the hardest to control weed species present in the field.
- Visit fields after herbicide application to ensure control has been achieved. Avoid allowing weeds to reproduce by seed or by vegetative propagation.
- Clean farm equipment when moving between fields.

**For annual cropping situations also consider the following:**

- Use cultural practices such as cultivation and crop rotation, where appropriate.
- Use good agronomic principles that enhance crop competitiveness.
- Start with a clean field controlling weeds early e.g., by use of a stale seedbed, using a non-selective herbicide treatment or cultivation or by use of a pre-emergence herbicide.

## **Introduction**

Resistance to crop protection chemicals is a common biological phenomenon that occurs in insects, fungi, and weeds. It usually becomes evident after the repeated use of a pesticide that selects for the naturally occurring resistant biotypes allowing them to multiply over several seasons until they become dominant and an obvious problem.

When herbicides with the same mode of action are used repeatedly over several years, naturally occurring resistant weed biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field.

Resistance is the naturally occurring inheritable ability of some weed biotypes within a population to survive an herbicide treatment that should, under normal conditions of use, effectively control that weed population.

Development of resistance in a weed population can be avoided or delayed by reducing the selection pressure that an herbicide produces on a weed population.

There are two main factors for the evolution of a trait like herbicide resistance in plant populations: the occurrence of heritable variation for the trait and natural selection.

As genetic variation is naturally occurring, the rate of resistance development will be determined by the mode of inheritance of resistance trait(s), together with the intensity of selection pressure. The development of resistance under repeated application of a single herbicide (or mode of action) may be considered as an example of recurrent selection. This results in a progressive and sometimes rapid development of resistance of some species of a weed population exposed to the herbicide.

Three factors contribute to increase the selection pressure imposed by the herbicide:

- The efficacy of the herbicide.*** Highly effective herbicides control almost all the susceptible biotypes. The initial low level of resistant biotypes goes unnoticed because the overall level of weed control is so high. Resistant biotypes are given a competitive advantage and will continue to multiply until they dominate the population if susceptible biotypes are controlled.
- The frequency of use.*** The risk of developing a herbicide resistant weed population is higher where the same herbicides are used repeatedly on the same crop, the same fields, and the same weeds over a long period of time.
- The duration of effect.*** The use of herbicides with a long residual soil activity accelerates the selection process that favours resistant biotypes. As susceptible biotypes are controlled over a long period of time, the soil reserve of susceptible seed becomes depleted and replaced by seed from resistant biotypes.

The selection intensity in response to the herbicide application is a measure of the relative efficacy of the product against the target weed species and/or the relative reduction in the seed production by the survivors. This is proportional to the herbicide dose. Selection in response to duration is a measure of the period over



which phytotoxicity is imposed by an herbicide. Both intensity and duration interact to give a seasonal variation in the selection pressure imposed on weed species according to their phenology and growth.

In sugar beet crops, only weeds resistance to PSII inhibitors have been reported. The main target weeds species for resistance management are broadleaf weeds such as *Chenopodium album* as PSII-resistant biotypes for sugar beet crop.

### Mode of action

Florpyrauxifen-benzyl is a member of a new structural class of chemistry, known as the arylpicolinate, to be developed by Corteva for the European rice, corn, grassland and sugar beet markets. It is a member of the pyridine carboxylic (picolinate) family of synthetic auxins (group O/4).

Florpyrauxifen-benzyl is a product that, when applied to sensitive species, will present auxin-like properties. Natural auxins are used by the plant to regulate minute amounts of hormones which bind to specific receptor proteins turning on and off vital plant processes. Florpyrauxifen-benzyl moves systemically throughout the target weed binding to receptor sites normally used by these plant hormones. This causes a disruption of normal plant growth processes via the binding of florpyrauxifen-benzyl to the receptors. This binding results in the deregulation of plant growth metabolic pathways and thus causes uneven cell division and growth, culminating in plant death.

Symptoms of florpyrauxifen-benzyl herbicide damage to sensitive species normally occur within a couple of hours. Symptoms of herbicide damage include cessation of growth, epinasty, leaf cupping, chlorosis, swelling/thickening of stems, callus tissue and distortion of the meristems and eventually plant death.

### Persistent activity

Due to the rapid soil degradation, florpyrauxifen-benzyl does not have noticeable soil activity and no long-lasting efficacy on plants. The allowed dose rate per season is 2 g ai/ha, applied in a single application or in multiple applications in a low-dose system.

### Mechanisms of resistance

- **Target site resistance:** This is the basis for most of the weed biotypes with resistance to ALS inhibitor herbicides, for example. If we take the resistance to ALS inhibitor herbicides a mutation in the gene encoding the ALS enzyme renders the weed less sensitive to sulfonylurea. The ability for other ALS inhibitor herbicides to bind at this site and hence their activity could also be affected, and it depends directly on the mutated gene position on the ALS genome.
- **Non-target site resistance:** This type of resistance includes several mechanisms like overexpression of the enzymes, transportation, and accumulation of the chemical in vacuole, etc..., but the most found is the enhance of metabolism, which is based on the plant's ability to metabolize the herbicide to non-phytotoxic compounds rapidly enough to prevent the build-up of lethal herbicide levels. This mechanism is present in grass populations.

### Evidence of resistance to Auxin herbicides in EU

Very little has been done with this chemical family to understand its mode of action and the mechanisms that are involved in cases of resistance. The reason why it has been so difficult to determine the mode of action of the auxin herbicides is undoubtedly due to the multiplicity of biochemical effects that they have within the cell. There are no cases of resistance reported to florpyrauxifen-benzyl in Europe.

**Table 3.3-1: Confirmed cases of Auxin resistant weeds in Europe (first year detected)**

Species	Year	Country	Actives	Crop
<i>Centaurea cyanus</i>	2012	Poland	dicamba	Winter wheat
<i>Cirsium arvense</i>	1979	Sweden	MCPA	Cropland



	1985	Hungary	MCPA, 2,4-D	Pastures
<i>Papaver rhoeas</i>	1993	Spain	tribenuron-methyl, 2,4-D	Cereals, Wheat
	1998	Italy	tribenuron-methyl, 2,4-D, iodosulfuron-methyl-Na	Wheat
	1998	Italy	2,4-D	Wheat
	2002	Greece	2,4-D, iodosulfuron-methyl-Na, mesosulfuron-methyl	Wheat
	2015	France	2,4-D	Wheat
	2016	France	metasulfuron-methyl, MCPA, 2,4-D, iodosulfuron-methyl-Na, mesosulfuron-methyl	Cereals
<i>Stellaria media</i>	1985	United Kingdom	mecoprop	Cereals, Wheat

Source: Heap I., *The International Survey of Herbicide Resistant Weeds Online*. Available on internet [www.weedscience.com](http://www.weedscience.com)

There is a limit number of occurrence of weeds resistant to auxin herbicides, and often easy to control with other types of herbicides. Furthermore, it appears that weeds resistant to the auxins are not widely dispersed and they are considered as “low risk” compounds as they do not affect a single target site and they do not have a long-term residual activity.

A total of 14 synthetic auxin herbicides are currently registered in the European Union for the control of weed species in a range of crops including cereals, oilseed rape, sugar beet, corn, and grasslands. Many of these herbicides have been on the market for decades. For example, fluroxypyr was discovered in the early 1980s and has been sold in Europe since 1984. 2,4-D was one of the first herbicides discovered during the Second World War and has been in use for over fifty years.

Despite the length of time these herbicides have been on the EU market, resistance to this class of herbicide is still relatively low, especially when compared to high-risk groups such as the ALS herbicides, and PSII herbicides.

In Europe, three annual broadleaf weed species have developed resistance to synthetic auxin herbicides: *Stellaria media* to mecoprop in the UK, *Papaver rhoeas* to 2,4-D (and MCPA) in Spain, France, and Italy, and *Centaurea cyanus* to dicamba in Poland.

As a member of the Group 4/O herbicides florpyrauxifen-benzyl is a low-risk herbicide in terms of resistance risk.

### Cross-resistance

Cross-resistance occurs in biotypes that are resistant to one or more herbicides due to either one of the mechanisms. The modification of the target site or the enhanced metabolism renders the plant less susceptible/resistant to chemicals that have the same mode or site of action or in the case of enhanced metabolism a similar molecular structure or part of the molecular structure.

For example, a modification of the target site, as is the case in certain sulfonylurea resistant biotypes, will result in cross-resistance to other sulfonylureas and other groups of ALS inhibitors, e.g. Imidazolinones. The implications of cross-resistance between groups of herbicides with the same mode of action and the susceptibility of resistant biotypes to products with alternative modes of action are important factors in the management of resistant biotypes. This includes the prevention/delay of the appearance of resistant biotypes.

### Resistance risk assessment

Presented resistance studies will refer to *Chenopodium album* and are submitted as evidence from a novel chemistry efficacy within a mode of action group considered with low risk of resistance building: the synthetic auxins group 4/O. Moreover, the resistance management strategy proposed will be relevant to all species presented on this Biology Assessment Dossier for GF-3206. References for the occurrence of resistance are taken from the International Survey of Herbicides Resistance Weeds supported by HRAC (online. internet available ([www.weedscience.com](http://www.weedscience.com)), and from internal Corteva resistance monitoring programs.

### The pests

The weeds usually only produce one generation per year and development of resistance is usually a relatively slow process. It can therefore be difficult to class the weed species as inherently more or less likely to develop resistance to an herbicide. Table 3.3-2 describes the key biological characteristics of *Chenopodium album* species for which PSII resistance have been already recorded in several countries in Europe, and present in sugar beet crops.

The overall inherent risk evaluated for PSII resistance is high, and in the normal field situation the presence of these weed species in the sugar beet field is high, however the inherent risk to synthetic auxins is consider as low.

*C. album* is an annual broadleaved weed. It typically germinates spring / summer with flowering taking place summer into autumn. It can shed seed before growers have carried out cutting or flailing measures. It can grow quickly and outcompete the crop.

There is no evidence that resistant populations of *C. album* which have become resistant to one or more active substances are fit compared with sensitive populations.

**Table 3.3-2: Characteristics of CHEAL in Sugar beet crops and resistance to PSII herbicides in countries in Europe**

	<i>Chenopodium album</i>
<b>Life cycle</b>	Annual
<b>Existing resistance (by HRAC Group)</b>	Corn, Potatoes, Sugar beet: Group 5/C1, C2 Spring wheat: Group 2/B
<b>Existence of cross-resistance to another MoA</b>	Unknown by crop
<b>High fitness of resistant strains</b>	unknown
<b>Fecundity (average number seeds/plant)</b>	500 to 5000
<b>Dispersal mechanism of populations</b>	Cross pollination by wind
<b>Overall Inherent Risk</b>	Medium

### The active substance

Florpyrauxifen-benzyl is a member of the arylpicolinates (Pyridine-carboxylic acids) group of herbicides whose mode of action is a synthetic auxin (HRAC Group 4/O). Florpyrauxifen-benzyl acts by inducing characteristic auxin-type responses, e.g. leaf curling. These herbicides disrupt hormone balance and protein synthesis in plants, leading to a variety of plant growth abnormalities. The molecular binding site for synthetic auxin herbicides was identified in 2005 as the plant F-box proteins like the natural plant auxin, indole acetic acid (IAA), F-box proteins. This F-box protein is a large group proteins where different sites of action, making the resistance development complex to synthetic auxins as a multisite mode of action group of herbicides.

A total of 14 auxinic herbicides are currently registered in the European Union for the control of weeds species in a range of crops including cereals, oilseed rape, sugar beet, corn, and grasslands. Many of these herbicides have been on the market for decades. For example, fluroxypyr was discovered in the early 1980s and has been sold in Europe since 1984. 2,4-D was one of the first herbicides discovered during the Second World War and has been in use for over fifty years.

Considering the length of time these auxinic herbicides have been on the market, their wide geographic spread of use and a relatively low number of confirmed cases of resistance, this chemistry can be a low risk in terms of resistance developing.

As a member of this Group 4/O herbicides, F7B-39-30 (florpyrauxifen-benzyl) is a low-risk herbicide in terms of resistance risk.

### Agronomic practices

Florpyrauxifen-benzyl can be applied to rice, corn, grassland and sugar beet crops. In the crop rotation, it is advised to integrate winter crops and spring crops (e.g. wheat, barley) for which florpyrauxifen-benzyl

is not registered.

Regarding agronomic practices, there are certain agricultural cultivation conditions that increase the population density of weeds: *e.g.*, minimal, or superficial soil ploughing, and direct sowing favour the occurrence of *Alopecurus myosuroides*, *Apera spica-venti* and *Bromus* spp. For dicotyledonous weeds the impact of this practice is much less pronounced.

There are other agronomic methods to control weeds: ploughing, harrow, mowing of grass swards, cultivation of catch crop and winter-summer crop change. These techniques contribute to a non-chemical weed control and to a reduced risk of developing resistances. However, these are more effective for the control of grass weed species than broadleaf weed species.

### Management strategy

Based on the information presented, a responsible management of F7B-39-30 will be recommended, and the use of management strategies will be promoted.

These management strategies include:

- 1) The principles of good plant protection practices will be promoted. These include the use of cultural and mechanical practices to ensure that herbicide application is made under favourable environmental conditions, facilitating good even coverage, to prevent resistance appearance by avoiding monocultures situations, ploughing before crop drill, etc.
- 2) Use recommended label rates to maximise effective control and minimise seed return to the soil bank
- 3) Do not apply F7B-39-30 to the same weed population more than once per year
- 4) Destroy all the seed produced by the herbicide no-controlled weeds using mechanical control or the target application of a total herbicide

The resistance management strategy will be regularly reviewed considering experience of the commercial use of the product and any changes in advice from local Herbicide Resistance Working Groups.

The inherent risk of the development of resistance to F7B-39-30 it is considered as low and due to that the unmodified use of F7B-39-30 is acceptable. Nevertheless, as a cautionary approach specific resistant management strategy will be implemented and Corteva will conduct monitor studies on F7B-39-30 from the moment that the product will be authorized on weed populations present in sugar beet crops.

These monitoring studies will be conducted in the same manner than those already in progress for current Corteva herbicides. Seed samples will be collected in the fields following weed control failure. Resistant “in vivo” test under growth chamber conditions and DNA analysis on leaves will be performed to confirm if the population is resistant or not. Results from the monitoring tests are presented below.

### Test methods

To determine the resistant profiles of the different populations sampled in Europe, two types of resistance tests have been carried out from seeds and leaves samples. The objectives were to confirm if these populations were resistant or not to metamilon a PSII herbicides and to evaluate the level of control provided by F7B-39-30.

- In-vivo tests were carried out with the seeds under controlled conditions, comparing the efficacy of different PSII-inhibitors (metamilon, phenmedipham), and compared to florpyrauxifen- benzyl efficacy (Table 3.3-3).
- DNA analyses were carried out through PCR and pyrosequencing methodology on field samplings with the objective to detect a potential mutation on the PSII target-site gene. In general, the PSII inhibitor resistance occurs through mutations in different positions of the target gene, where the dominant one seems to be Ser-264-Gly. Mutations can be also found on Val-219-Ile, Ala-251-Val, Phe-255-Ile, Ser-264-Thr, Asn-266-Thr and Phe-274-Val.

### **In-vivo tests under growth chamber conditions**

Seeds of the targeted populations were collected from the field across countries in the central zone and were analyzed in comparison to a susceptible reference population.

Seeds of each population were sown in Petri dishes on vermiculite moistened with KNO<sub>3</sub> 0.2%. All the seeds were then placed under the following conditions: 15 °C/20 °C night/day with a 14h photoperiod and a relative humidity of 60%-80%.

When the cotyledons were completely unfolded, they were transplanted in 8x8x8 cm pots filled with a mixture of sandy-clay-loam soil and vermiculite (1/2: 1/2; v: v). Five plants were transplanted per pot and 4 pots were used for each condition of treatment. After transplantation, all the plants were placed in the following growing conditions: 18 °C/26 °C night/day with a 16h photoperiod and a relative humidity of 60%-80% until they reached the stage of treatment. Plants of the different populations were sprayed using a Track Sprayer equipped with double flat fan nozzles TeeJet TTI60-11003 and calibrated to deliver 200 L/ha at 2.5 bars and 5.3 km/h. After treatment, pots with treated plants were replaced under the same growing conditions than previously.

**Table 3.3-3: Herbicide products used in the presented studies**

Product	Form.	Active substance(s) (a.s)	HRAC Classification	Concentration (g a.s/L or *g a.s/kg)
GOLTIX GOLD 700	SC	metamitron	C1/5	700
BETAGRI SC160	SC	phenmedipham	C1/5	160
F7B-39-30	EC	Florpyrauxifen benzyl	O/4	25.05

### **DNA analysis in PSII inhibitor-gene**

The PCR and pyrosequencing methodology applied on the sampled leaves include the following steps:

- 0.5 cm<sup>2</sup> of leaf sample was transferred to a 96-well plate (Qiagen; Collection microtubes) with steel balls (Umarex; 4,5 mm).
- Samples were shred in the Qiagen TissueLyser II and DNA was extracted using a customised kit (Perkin Elmer; Chemagic Plant400 Kit) using KingFisher™ Flex Magnetic Particle Processors.
- PCR was performed using specific primers in a PCR thermal cycler (Analytik Jena; Flex Cycler). Program as follows: 95°C (3 min); 40 cycles: 95°C (10 sec), 55-65°C (temperature depends on primer set; 35 sec), 72°C (90 sec); 72°C (5 min); 20°C (10 sec).
- PCR products were sequenced via Sanger-sequencing by a commercial provider (SeqLab, Göttingen, Germany), and afterwards, raw data was analysed for single nucleotide polymorphism (SNP) in partial psbA gene sequence using Geneious bioinformatics software. Then, results coming from the Pyrosequencing allow to determine any substitution of amino acids on the targeted positions, and if the mutation is heterozygous (only 1 allele mutated) or homozygous (2 alleles mutated). TSR (Target Site Resistance) detected means that at least one of the analysed plants showed a mutation. Otherwise, the whole stock of samples is wild type. Base pair changes within a codon may lead to changes in the amino acid sequence.

### **Resistance management strategy to control *Chenopodium album* (CHEAL)**

To determine the resistant profiles of *Chenopodium album* populations, seeds and leaves have been sampled in Germany in 2020, and two types of resistance tests have been carried out.

The objectives were to confirm if these populations were resistant or not to PSII-inhibitors. A DNA analysis was carried out on leaves sampled from fields with the objective to detect the mutations on the PSII gene-enzyme. In-vivo tests were carried out with seeds under controlled conditions, evaluating control from PSII

inhibitors as metamitron or phenmedipham, compared to florypyrauxifen benzyl. Efficacies were compared with a susceptible reference population.

The detailed information of all populations tested is summarized in the **Table 3.3-4** below:

**Table 3.3-4: Distribution of CHEAL samples resistant profiles analysed in 2020 in Germany**

		TOTAL Resistant Cases	Target-site mutation			Susceptible
			Leu-218	Ser-264	Phe-274	
Germany	2020	4	2	1	1	1
	<b>TOTAL</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>

**Table 3.3-5: List of all resistant CHEAL populations analysed in 2020 in Germany**

EPPO Zone	Species	Country	Year	Location	Seeds Code	Leaves Code	PSII R-PROFILE
CEU	CHEAL	Germany	2020	na	na(*)	L-DE-CHEAL-20-01	100% mutated on Ser-264
CEU	CHEAL	Germany	2020	na	na(*)	L-DE-CHEAL-20-02	100% mutated on Phe-274
CEU	CHEAL	Germany	2020	na	na(*)	L-DE-CHEAL-20-03	No mutation
CEU	CHEAL	Germany	2020	Niedersachsen, Pattensen	S-DE-CHEAL-20-01	L-DE-CHEAL-20-04	100% mutated on Leu-218
CEU	CHEAL	Germany	2020	Niedersachsen, Pattensen	S-DE-CHEAL-20-02	L-DE-CHEAL-20-05	100% mutated on Leu-218

(\*) no seeds sample analyzed

As shown in **Table 3.3-5**, in 2020, 4 of the 5 leaves samples of CHEAL from Germany analysed on PSII-gene showed high proportion of mutated plants on positions Ser-264, Phe-274 or Leu-218. Only one sample showed no mutation.

The **Table 3.3-6** shows the results obtained in the in-vivo study carried out on the two populations of seeds sampled from the two locations showing mutations on position Leu-218. Other fields were not sampled with leaves.

The final data confirmed that both CHEAL populations were resistant to PSII inhibitors, with low control of metamitron and phenmedipham. On the other hand, both were better controlled by F7B-39-30 at the dose of 2 g ai/ha.

**Table 3.3-6: % Visual efficacy (average of 4 rep) at 28 days after application on CHEAL populations from Germany 2020**

Products Name	Active ingredient	Rate (ai/ha)	Ref. S	S-DE-CHEAL-20-01	S-DE-CHEAL-20-02
GOLTIX GOLD	metamitron	1400	87	3	3
GOLTIX GOLD	metamitron	3500	100	0	23
BETAGRI	phenmedipham	320	52	32	22
BETAGRI	phenmedipham	960	84	37	33
F7B-39-30	florypyrauxifen	2	96	87	85
ALS-gene profile (% of mutated plants)		Leu-218	0%	100%	100%

### Implementation of the management strategy

As a result of the resistance information presented, the following resistant management strategy will be communicated for the use of F7B-39-30, and the following guidelines will be recommended. Based on the risk assessment carried out above, it is concluded that the risk to use F7B-39-30 may be low. There is no known resistance to florpyrauxifen benzyl from any of the weeds present in sugar beet crops.

F7B-39-30 can be used to control all label species submitted including those which are resistant to other modes of action like the resistant biotypes of *Chenopodium album* to PSII inhibitor herbicides. To responsibly manage and maintain the performance of F7B-39-30, Corteva will recommend and promote management strategies in agreement with resistance guidelines (HRAC guidelines).

This resistance guidance include:

- Use full label rate, which will allow good control of all targets weed species.
- Follow label statements concerning rates and application timing.
- Consider the use of cultural control and crop rotation to help control prevent development of resistance biotypes.
- Do not over rely of a single herbicide mode of action.

The resistance management strategy will be implemented / communicated via:

- label statements
- leaflets
- training courses
- Corteva customer meetings

### Monitoring, reporting and reaction to changes in performance

Part of the management strategy is to monitor F7B-39-30 performance to determine any shifts in sensitivity towards the product. This will help determine the success of the management strategies implemented.

The monitoring strategies employed will be based on the investigation of complaints from growers of apparent loss of field performance. Providing that all other aspects negatively impacting field performance can be ruled out, samples will be taken and tested for resistance according to an “in vivo” resistant method developed by Corteva or by the conventional whole-plant soil bioassay.

Monitoring studies on *Chenopodium album* will continue to ensure the control of the resistance populations to PSII by F7B-39-30 in sugar beet fields. Seed samples will be collected in the fields following weed control failure from PSII inhibitor herbicide. Resistant “in vivo” tests under growth chamber conditions and appropriated PCR analysis will be performed to confirm if the population is resistant or not to PSII inhibitor herbicides and confirm the successful control by F7B-39-30.

dRR point 3.3.	Information on the occurrence or possible occurrence of the development of resistance
ZRRMS conclusion:	
<p>Florpyrauxifen-benzyl is classified by HRAC to the group 4 (family of synthetic auxin) and it is considered to be a low risk herbicide in terms of resistance developing. The mechanism of resistance to synthetic auxin herbicides is not known. Due to the complexity of the effects on plant growth processes, synthetic auxin herbicides are not considered to have a single site mode of action. For Florpyrauxifen-benzyl, the international herbicide-resistant weed database <a href="http://www.weedscience.org/Pages/Herbicide.aspx">http://www.weedscience.org/Pages/Herbicide.aspx</a> does not report Florpyrauxifen-benzyl -resistant weed species. 3 cases of auxin resistant weeds in Europe were listed. Three of them (<i>Centaurea cyanus</i>, <i>Papaver rhoeas</i>, <i>Stellaria media</i>) are annual broadleaf weed species, one - <i>Cirsium arvense</i> – perennial broadleaf weed. Despite auxinic herbicides have been on the EU market for decades, resistance to this class of herbicide is still relatively low. In in-vivo tests under growth chamber condition, it was demonstrated that CHEAL populations resistant to PSII inhibitors, with low control of metamiltrone and phenmedipham were better controlled by F7B-39-30 at the dose of 2 g ai/ha. Florpyrauxifen-benzyl shows rapid soil degradation so it has neither long-lasting soil activity nor long-term efficacy</p>	



on plants. What is more the weeds usually only produce one generation per year, so development of resistance is a slow process. Taking into account above-mentioned an inherent risk is considered as low.

Sugar beet is grown in the crop rotation with winter and spring crop, where florypyrauxifen-benzyl is not used. The product is intended to use once in season. What is more other non-chemical methods to control weeds are used : ploughing, harrow, cultivation of catch crop and crop change. Agronomic practices like superficial soil ploughing, and direct sowing increase the population density of mainly monocotyledonous weeds. Those techniques contribute to a non-chemical weed control and to a reduced risk of developing resistances. Additionally, there are many active substances available with alternative MoA controlling key target weeds. Agronomic risk is considered as low. Unmodified use of F7B-39-30 is acceptable. Nevertheless in order to prevent the development of resistance, the proposed by the Applicant resistance risk strategies should be implemented, including placing on the label information that this product should be used alternately with others having a different mode of action.

The zRMS agrees with the applicant's proposal of resistant management strategy. However, management strategy should be implemented in cMS based on the latest HRAC recommendations and taking into consideration cMS conditions.

### 3.4 Adverse effects on treated crops (KCP 6.4)

The possible adverse effect of F7B-39-30 was assessed in trials where F7B-39-30 was applied alone and also, as supporting data, in trials where F7B-39-30 was part of a common herbicide weed control program.

Whilst in efficacy trials, the % visual phytotoxicity was assessed after application of the requested N rate of F7B-39-30, in selectivity trials, as according to the EPPO guideline PP1/135 '*Phytotoxicity assessment*', besides % visual phytotoxicity also the effect on yield and yield quality such as sugar, Na, N and P content were studied at the N and 2N rate.

Standard reference material, Betasana® SC, was included for completeness of information. This commercial reference was selected upon its relevance for farmers in the considered area of Central Europe where sugar beet is economically relevant, and for comparable timing of application and spectrum of efficacy and selectivity. Similar to our test product F7B-39-30, Betasana® SC was applied at N and 2N rate as a single and split application in all selectivity trials where F7B-39-30 was applied alone.

#### Phytotoxicity (visual) in efficacy trials

##### ***F7B-39-30 applied solo***

Percent visual phytotoxicity was assessed in the 21 efficacy trials where F7B-39-30 was applied solo. These trials were conducted in the Maritime (14), North-East (4) and South-East (2) EPPO zones during the period 2021-2022. Of the 21 trials, 2 trials were conducted in the Southern registration zone, and 2 in a non-EU registration zone but they were all 4 located in the Maritime EPPO zone and therefore results were considered relevant for this dossier. The 21 trials covered 20 different varieties of sugar beet, including 4 Conviso®SMART varieties.

##### ***F7B-39-30 applied in program***

As supporting data and because of agronomical interest, percent visual phytotoxicity was also assessed in 15 trials where F7B-39-30 was part of a weed control program including other herbicide active substances. 13 of these trials corresponded to conventional weed control programs and 2 to the Conviso®SMART system. The 13 trials of the conventional weed control programs were conducted all in the Central regulatory area covering the Maritime (8), North-East (4) and South-East (1) EPPO zone during the period 2021-2022 on 13 different varieties of sugar beet, including 1 Conviso®SMART varieties.

With exception of the trials on the Conviso®SMART system all other above efficacy trials were performed

as described in the **Błąd! Nie można odnaleźć źródła odwołania..** The distribution of the two efficacy trials in the Conviso®SMART program are presented in Table 3.4-1 and in



Figure 3.2-1.

### **Phytotoxicity (visual) in selectivity trials**

#### ***F7B-39-30 applied solo***

Selectivity on sugar beet was tested in 21 selectivity trials for each of the four different uses of F7B-39-30 applied alone as presented in the GAP. These trials were conducted in 2020 and 2021 to establish whether treatment with F7B-39-30 would have any negative effects on sugar beet and fodder beet. These trials were conducted in the Maritime (13), North-East (3) and South-East (5) EPPO zone. One French and two UK trials are outside the Central regulatory zone but as they belong to the Maritime EPPO zone, their results were considered relevant to include. These 21 selectivity trials covered 19 different varieties of sugar beet, including 2 Conviso®SMART varieties.

The distribution of these trials across EPPO zones and countries is presented in

Figure 3.4-2 and Table 3.4-2.

***F7B-39-30 applied in program***

There were 10 trials conducted between 2021 and 2022 in 6 countries (Netherlands, Czech Republic, Germany, United Kingdom, Poland and Hungary) on sugar beets to test the impact of F7B-39-30 applications in program with other products, on the selectivity, the yield and quality of roots. The 10 trials were covering all three EPPO zones of the Central regulatory zone. Two trials from UK do not belong to the Central regulatory zone itself but as they were conducted in the Maritime zone they are considered as relevant to be included in this dossier. The results of these selectivity trials with F7B-39-30 set up in program serve as supporting data and are more of practical interest. No claim for the inclusion of specific programs on the proposed label are made. The distribution of these trials across EPPO zones and countries is presented in Table 3.4-3 and Figure 3.4-3.

**Phytotoxicity (visual) in efficacy trials - F7B-39-30 applied in program: Conviso®SMART system**

The % visual selectivity was assessed in two additional efficacy trials where F7B-39-30 was applied in Conviso® Smart sugar beet varieties (KWS) and compared to the herbicide Conviso® One (foramsulfuron + thien carbazoné).

As the trials were conducted in 2022 in Spain which belong to the Mediterranean EPPO zone of the Southern Regulatory zone, the corresponding data are considered as relevant and supportive for this Biological Assessment Dossier. Efficacy results were however not included in this dossier.

Trials were carried out by contractor companies, all of which followed the EPPO standards and are officially recognized by the competent authorities to carry out field registration trials in accordance with the principles of Good Experimental Practice (GEP).

**Table 3.4-1: Trial distribution of efficacy trials of F7B-39-30 applied in Conviso®SMART system throughout EPPO zones**

EPPO zone	Year	2022	Total EPPO zone
	Country		
Mediterranean	Spain	2	2
<b>Total Southern Zone</b>		<b>2</b>	<b>2</b>

**Figure 3.4-1: Location map of Conviso® sugar beet varieties trials**



#### Selectivity trials with F7B-39-30 applied solo

Table 3.4-2: Phytotoxicity to host crop: Distribution of selectivity trials F7B-39-30 applied solo throughout EPPO zone (2021 & 2022 data).

EPPO zone	Year Country	2021	2022	Total	Total EPPO zone
Maritime	Belgium	1	2	3	13
	Czech Republic	1	2	3	
	Germany	1	2	3	
	United Kingdom	1	2	3	
	France	0	1	1	
North-East	Poland	1	2	3	3
South-East	Hungary	1	4	5	5
	<b>Total</b>	<b>6</b>	<b>15</b>	<b>21</b>	<b>21</b>
	Total Central Zone	5	12	17	17
	Total Central Zone + UK	6	14	20	20
	Total Southern Zone	0	1	1	1

Trials from Germany and Czech Republic to support the crop safety of F7B-39-30 in sugarbeet crop in Poland.

**Figure 3.4-2: Locations of 21 selectivity trials (F7B-39-30 applied alone) conducted across Europe (2021 & 2022 data). Map was created using batchgeo and googlemaps.**



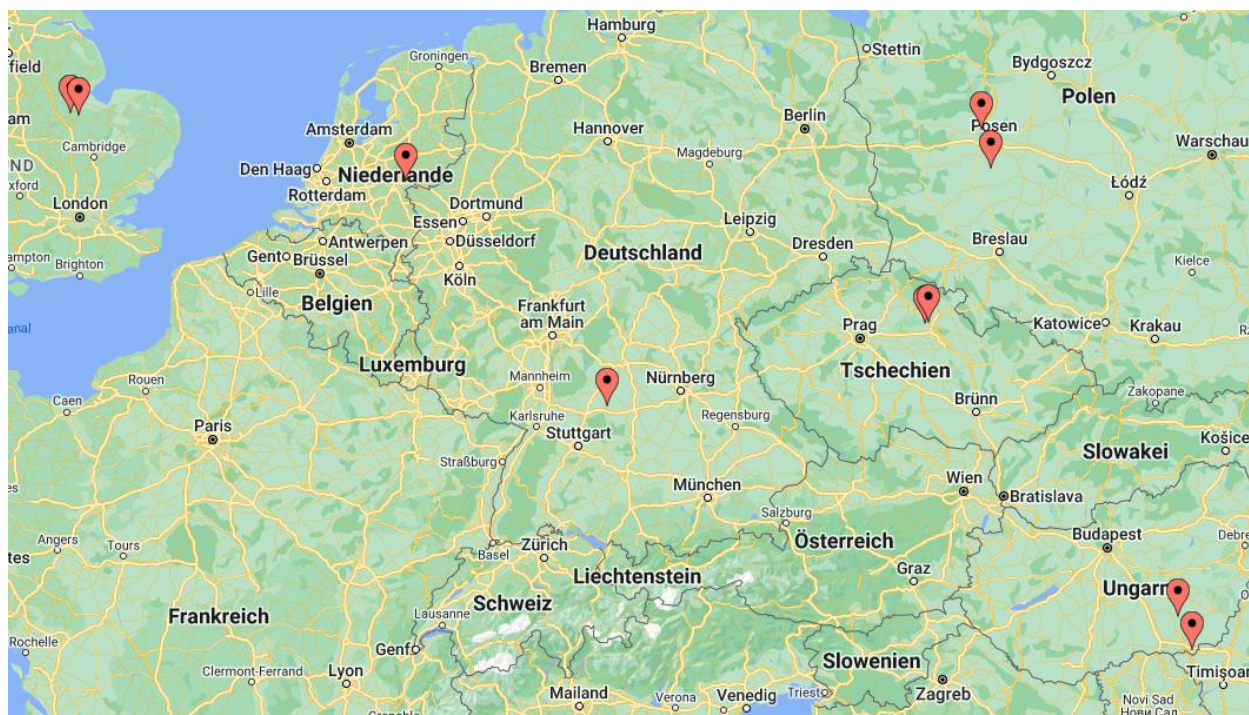
#### Selectivity trials with F7B-39-30 applied in program

**Table 3.4-3: Selectivity trials testing F7B-39-30 in programs across Europe (2021 & 2022 data).**

EPPO zone	Year Country	2021	2022	Total	Total EPPO zone
Maritime	Netherlands	0	1	1	6
	Czech Republic	1	1	2	
	Germany	0	1	1	
	United Kingdom	1	1	2	
North-East	Poland	1	1	2	2
South-East	Hungary	1	1	2	2
	<b>Total Central Zone</b>	<b>3</b>	<b>5</b>	<b>8</b>	
	<b>Total Central Zone + UK</b>	<b>4</b>	<b>6</b>	<b>10</b>	



**Figure 3.4-3: Locations of 10 selectivity trials testing F7B-39-30 in program across Europe (2021 & 2022 data). Map was created using batchgeo and google maps.**



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

#### Material & Methods

##### **Phytotoxicity (visual) in efficacy trials - F7B-39-30 applied in program: Conviso®SMART system**

The % visual selectivity was assessed in two additional efficacy trials where F7B-39-30 was applied in Conviso® Smart sugar beet varieties (KWS) and compared to the herbicide Conviso® One (foramsulfuron + thienencarbazone).

As the trials were conducted in 2022 in Spain which belong to the Mediterranean EPPO zone of the Southern Regulatory zone, the corresponding data are considered as relevant and supportive for this Biological Assessment Dossier.

Trials were carried out by contractor companies, all of which followed the EPPO standards and are officially recognized by the competent authorities to carry out field registration trials in accordance with the principles of Good Experimental Practice (GEP).

**Table 3.4-4: Trial distribution throughout EPPO zone**

EPPO zone	Year	2022	Total EPPO zone
	Country		
Mediterranean	Spain	2	2
Total Southern		2	2

#### Guidelines

Guidelines	General guidelines	PP 1/135, PP 1/152, PP 1/181, PP 1/213, PP 1/214
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	Specific guidelines	PP 1/52, PP 1/278
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Conviso® One herbicide was tested alone and in mixture with F7B-39-30 at different application timings.

- Conviso® one at 80 gai/ha applied alone at crop BBCH 12-14
- Conviso® one at 80 gai/ha applied in mixture with F7B-39-30 at 2 gai/ha at crop BBCH 12-14
- Conviso® one applied twice at 40 gai/ha/application at crop BBCH 12 and 10-14 Days after the first application
- Conviso® one at 40 gai/ha/application applied in mixture with F7B-39-30 at 1 gai/ha/application applied twice at crop BBCH 12 and 10-14 Days after the first application
- Conviso® one at 80 gai/ha applied alone at crop BBCH 14-16
- Conviso® one at 80 gai/ha applied in mixture with F7B-39-30 at 2 gai/ha at crop BBCH 14-16

Other mixtures were included in the trials but are not presented here as not orthogonal comparison between several trials is possible. Data from those programs are available and can be found in the Single Trial reports (submitted with this dossier).

**Table 3.4-5: Formulations tested at Conviso® Smart sugar beet varieties trials**

Reference (trademark)	Form. Type	Form. concentration	Active substance	Rate used in reported trials (g a.s./ha)	Rate used in reported trials (L or Kg f.p./ha)
Conviso® one	OD	80 gai/l	foramsulfuron + thiencazone-methyl	40, 80	0.5, 1
F7B-39-30	EC	25 gai/l	florpyrauxifen-benzyl	1, 2	0.04, 0.08

**Table 3.4-6: Herbicide Program on Conviso® One herbicide with and without F7B-39-30**

Program	Appl Code	Material Name	Description	Form Conc (g ai/L)	Form Type	Rate (g ai/ha)	Rate (L/ha)	Appl Timing
<b>A</b> without F7B-39-30	E	Conviso one	foramsulfuron + thiencazone	80	OD	80	1	BBCH12-14
<b>A</b> with F7B-39-30	E	Conviso one	foramsulfuron + thiencazone	80	OD	80	1	BBCH12-14
	E	F7B-39-30	florpyrauxifen-benzyl	25	EC	2	0,08	BBCH12-14
<b>B</b> 2 appl without F7B-39-30	C	Conviso one	Foramsulfuron+ thiencazone	80	OD	40	0,5	BBCH12
	F	Conviso one	foramsulfuron + thiencazone	80	OD	40	0,5	10-14 days interval
<b>B</b> 2 appl with F7B-39-30	C	Conviso one	foramsulfuron + thiencazone	80	OD	40	0,5	BBCH12
	C	F7B-39-30	florpyrauxifen-benzyl	25	EC	1	0,04	
	F	Conviso one	foramsulfuron + thiencazone	80	OD	40	0,5	10-14 days interval
	F	F7B-39-30	florpyrauxifen-benzyl	25	EC	1	0,04	
<b>C</b> without F7B-39-30	H	Conviso one	foramsulfuron + thiencazone	80	OD	80	1	BBCH14-16
<b>C</b> with F7B-39-30	H	Conviso one	foramsulfuron + thiencazone	80	OD	80	1	BBCH14-16
	H	F7B-39-30	florpyrauxifen-benzyl	25	EC	2	0,08	

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<b>D</b> pre by 2 appl without F7B-39-30	A	Goltix 700 SC	metamitron	700	SC	700	1	BBCH00
	C	Convigo one	foramsulfuron + thiencarbazon	80	OD	40	0,5	BBCH12
	F	Convigo one	foramsulfuron + thiencarbazon	80	OD	40	0,5	10-14 days interval
<b>D</b> pre by 2 appl with F7B-39-30	A	Goltix 700 SC	metamitron	700	SC	700	1	BBCH00
	C	Convigo one	foramsulfuron + thiencarbazon	80	OD	40	0,5	BBCH12
	C	F7B-39-30	florpyrauxifen-benzyl	25	EC	1	0,04	
	F	Convigo one	foramsulfuron + thiencarbazon	80	OD	40	0,5	10-14 days interval
	F	F7B-39-30	florpyrauxifen-benzyl	25	EC	1	0,04	

### Selectivity trials with F7B-39-30 applied solo

Selectivity on sugar beet was tested for each of the four different uses of F7B-39-30 applied alone as presented in the GAP, in 21 selectivity trials. These trials were conducted in 2020 and 2021 to establish whether treatment with F7B-39-30 would have any negative effects on sugar beet and fodder beet. These trials were conducted in the Maritime (13), North-East (3) and South-East (5) EPPO zone. One French and two UK trials are outside the Central regulatory zone but as they belong to the Maritime EPPO zone their results were considered relevant to include. An overview of the 21 selectivity trials according to registration zone, EPPO zone and country is presented in Table 3.4-2. A corresponding visual presentation of the distribution is given in

Figure 3.4-2.

These 21 selectivity trials covered 19 different varieties of sugar beet, including 2 Conviso®SMART varieties.

**Table 3.4-7: Phytotoxicity to host crop: Distribution of selectivity trials F7B-39-30 applied solo throughout EPPO zone (2021 & 2022 data).**

EPPO zone	Year Country	2021	2022	Total	Total EPPO zone
Maritime	Belgium	1	2	3	13
	Czech Republic	1	2	3	
	Germany	1	2	3	
	United Kingdom	1	2	3	
	France	0	1	1	
North-East	Poland	1	2	3	3
South-East	Hungary	1	4	5	5
	<b>Total</b>	<b>6</b>	<b>15</b>	<b>21</b>	<b>21</b>
	Total Central Zone	5	12	17	17
	Total Central Zone + UK	6	14	20	20
	Total Southern Zone	0	1	1	1

**Trials from Germany and Czech Republic to support the crop safety of F7B-39-30 in sugarbeet crop in Poland.**

### Material and Methods

All selectivity and efficacy trials with F7B-39-30 applied solo were conducted according to the good agricultural practices conditions (GEP) and the experimental design was a Completed Randomize Block (RCB). All the trials included 4 replicates and on different commercial sugar beet hybrids and climatic and agronomical conditions.

The plots size ranged between trials from 18.09 m<sup>2</sup> to 48 m<sup>2</sup>. Treatments were applied when majority of crop plants were within the growth stage range 10 -39 (BBCH) for the trials from 2021 and from 10-19 (BBCH) for the trials conducted in 2022. On 2021 trials the intent application window for F7B-39-30 was from BBCH10 to BBCH39, but based on the symptoms of crop phytotoxicity observed on some trials, and due to the fact that it will be very unusual to apply F7B-39-30 at the late stage of BBCH39, it was decided to narrow the application window to BBCH10-19. Therefore the trials conducted on 2022 were done under this application window that correspond to the proposed current and presented GAP in this dossier.

### Guidelines

<b>Guidelines</b>	General guidelines	EPPO PP 135, 152, 181, 213, 214 and 278
	Specific guidelines	EPPO PP 052

### Testing facility or organization

Trials were carried out by contractor companies and Official Research institutes, all of which follow the EPPO standards and are officially recognized by the competent authorities to carry out field registration trials in accordance with the principles of Good Experimental Practice (GEP). All information on the individual selectivity trials and trial distribution whereby F7B-39-30 was applied solo are presented in the Biology Assessment Dossier in Table 3.4-7 (Distribution of trials), in Table 3.4-8 (Testing facilities), in Table 3.4-9 (Description of individual selectivity trials) and Table 3.4-10 (Application details of individual selectivity trials), respectively. Product amounts were applied at water volumes of 100-300 L/ha, in all the trials using back-pack, tractor, or bicycle mounted sprayers using flat fan nozzles



### **Selectivity trials with F7B-39-30 applied in program**

As supporting data and of practical interest, selectivity trials were also set up in 10 trials where F7B-39-30 was part of a weed control program including other herbicide active substances. Nine of these trials corresponded to conventional weed control programs and one to the Conviso®SMART system. These trials were conducted in the Maritime (6), North-East (2) and South-East (2) EPPO zones during the period 2021-2022. The two UK trials do not belong to the Central registration zone but as trials were done in the Maritime EPPO zone, the corresponding results were relevant to include.

**Table 3.4-8: Selectivity trials testing F7B-39-30 in programs across Europe (2021 & 2022 data).**

EPPO zone	Year Country	2021	2022	Total	Total EPPO zone
Maritime	Netherlands	0	1	1	6
	Czech Republic	1	1	2	
	Germany	0	1	1	
	United Kingdom	1	1	2	
North-East	Poland	1	1	2	2
South-East	Hungary	1	1	2	2
	<b>Total Central Zone</b>	<b>3</b>	<b>5</b>	<b>8</b>	
	<b>Total Central Zone + UK</b>	<b>4</b>	<b>6</b>	<b>10</b>	

### **Material and Methods**

All selectivity and efficacy trials with F7B-39-30 applied in program were conducted according to the good agricultural practices conditions (GEP) and the experimental design was a Completed Randomize Block (RCB). All the trials included 4 replicates and on different commercial sugar beet hybrids and climatic and agronomical conditions.

The plots size ranged between trials from 20 m<sup>2</sup> to 32.04 m<sup>2</sup>. Treatments were applied when majority of crop plants were within the growth stage range BBCH10-19.

### **Guidelines**

<b>Guidelines</b>	General guidelines	EPPO PP 135, 152, 181, 213, 214 and 278
	Specific guidelines	EPPO PP 052

### Testing facility or organization

Trials were carried out by contractor companies and Official Research institutes, all of which follow the EPPO standards and are officially recognized by the competent authorities to carry out field registration trials in accordance with the principles of Good Experimental Practice (GEP). All information on the individual selectivity trials and trial distribution whereby F7B-39-30 was applied in program are presented in the Biology Assessment Dossier in Table 3.4-11 (Distribution of trials), in Table 3.4-12 (Testing facilities), in Table 3.4-13 (Description of individual selectivity trials) and Table 3.4-14 (Application details of individual selectivity trials), respectively. Product amounts were applied at water volumes of 200-300 L/ha, in all the trials using back-pack, tractor, or bicycle mounted sprayers using flat fan nozzles.

### Description of individual selectivity trials of F7B-39-30 on sugar beet applied solo and in program

On this adverse effect section, the crop safety response of F7B-39-30 will be demonstrated on:

1. Selectivity effect of F7B-39-30 on sugar beet from selectivity and efficacy trials when product was applied solo.
2. Selectivity effect of F7B-39-30 on sugar beet from selectivity and efficacy trials when product was applied in programs.
3. Selectivity effect of F7B-39-30 on sugar beet from efficacy trials when the product was applied on Conviso® Smart sugar beet varieties.

In all the selectivity trials, F7B-39-30 was tested at 0.08 and 0.16 L/ha (N and 2N, respectively). The standards included in the selectivity trials were described on the table 3.4-7.

Crop safety assessments were carried out in all trials. As well the general phytotoxicity as the type of phytotoxicity symptom(s) expressed were assessed on all plots. Phytotoxicity symptom(s) were assessed at regular intervals after application.

Visual phytotoxicity (PHYGEN) (0% = no phytotoxicity, 100% = complete expression of phytotoxicity symptom) was recorded on a whole plot basis. When phytotoxicity was observed, the most appropriate symptom was chosen (e.g. CHLORO, DEFORM, GROINHIB, NECROSIS) and the whole plot was assessed on a scale from 0 to 100, where 0 means plants completed healthy and 100 means plants very affected for those assignments compared to the untreated.

#### 3.4.1.1 Crop safety effect of F7B-39-30 on sugar beet from selectivity and efficacy trials when product was applied SOLO

Overall, there were 21 selectivity trials conducted across the the Maritime, North-East and South-East EPPO zones to demonstrate crop safety when F7B-39-30 was applied solo. For each of the four uses submitted in the GAP, the crop safety is described in the selectivity and efficacy trials.

The effect of F7B-39-30 was compared to Betasana® (standard product in sugar beet crop) at N and 2N doses (1 and 2 L pr/ha, respectively). F7B-39-30 was applied at 1, 2, 3, and 4 applications with an interval of 1-2 weeks between applications.

**Table 3.4-9: Presentation of reference standards used in Solo trials (selectivity trials)**

Crop(s)	Reference standard	Active substance(s)	Formulation		Application rate in trials		Other relevant information <sup>(2)</sup>
			Type <sup>(1)</sup>	Concentration of a.s.	N dose	2N dose	
Sugar beet	Betasana	phenmedipham	SC	160 g L/ha	1 L pr/ha	2 L pr/ha	NA

	F7B-39-30	florpyrauxifen-benzyl	EC	25 g L/ha	0.08L pr/ha	0.16L pr/ha	NA
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- (1) e.g. WP (wetable powder), EC (emulsifiable concentrate), etc.  
(2) Other relevant information (e.g. uses, number of applications, spray volume, method of application...)

### **Selectivity after single application of F7B-39-30 - early and late applications at BBCH10-11/12 and BBCH18-19, respectively – USE1**

Overall, there were 21 selectivity trials conducted across the the Maritime, North-East and South-East EPPO zones to demonstrate crop safety when F7B-39-30 was applied in sugar beet at either an early application at BBCH10/11-12 or at a later application stage at BBCH18/19. These two growth stages span the whole range of crop growth in which the use of F7B-39-30 is requested.

The Climatic comparison conducted (see page 11, compliance with uniform principles) demonstrates that the trials from Poland, Czech Republic and Germany already included on this dRR/BAD present very similar conditions that could be considered comparable.

The applicant would like also to highlight that from the selectivity trials conducted in Poland and also in Czech Republic and Germany the following sugarbeet varieties were tested:

- Poland: Everest, Wojownik, BTS 9975
- Germany: BTS 7300 N, Lunella, Chevrolet
- Czech Republic: BTS-8840, BTS-555, BTS9975

In total there were 8 different sugarbeet varieties from trials across 2 years. The applicant consider that these selectivity trials already presented in the BAD/dRR, section 3.4.1, 3.4.2 and 3.4.3 are sufficient to cover the crop safety behaviour of F7B-39-30 in sugarbeet varieties.

#### **Applying F7B-39-30 at BBCH10-11/12**

Most common plant reactions after a single application of F7B-39-30 at the early stage BBCH10-11/12 observed in the 21 trials were chlorosis, deformation and growth inhibition. A summary of the the level and duration of each of these symptoms at the N and 2N rate is presented in Table 3.4-10. In the same tables selectivity data from EFFICACY trials are presented and fully support crop safety of F7B-39-30 in sugar beet.

**Based on the observations, it is therefore concluded that the data presented hereafter clearly demonstrate that the application of F7B-39-30 is crop safe if applied at BBCH10/11-12 of the crop.**

#### **Applying F7B-39-30 at BBCH18/19**

Most common plant reactions after a single application of F7B-39-30 at the late stage BBCH18/19 observed in the 21 trials were chlorosis, deformation and growth inhibition. A summary of the the level and duration of each of these symptoms at the N and 2N rate is presented in Table 3.4-11. In the same tables selectivity data from EFFICACY trials are presented and fully support crop safety of F7B-39-30 in sugar beet.

In 2021 trials, application was made even later, i.e. at BBCH36-39. Based on this outcome it was decided to narrow the application window to the maximal growth stage of BBCH19 in order to avoid any unnecessary phytotoxicity symptoms in the crop. Hence, the data is not supportive to the GAP and was only included in the Biological Assessment Dossier, and not in this document, for completeness. Selectivity data from EFFICACY trials are presented in and fully support crop safety of F7B-39-30 in sugar beet.

**Based on the above observations, it is therefore concluded that the data presented herein demonstrated that F7B-39-30 may safely be applied in sugar beet if label recommendations are followed.**

**Table 3.4-10: SUMMARY Selectivity of a single application of F7B-39-30 at A timing (BBCH10-11/12)**

Symptom	Number of trials with...		Selectivity trials (18 trials)				Efficacy trials (20 trials)	
			F7B-39-30		BETASANA® SC		F7B-39-30	BETASANA SC
			N	2N	N	2N	N	N
Chlorosis	Maximum of phytotoxicity recorded during the trials	0%	17	16	15	15	19	19
		1 to 5%	1	1	3	3	0	0
		>5% to 10%	0	1	0	0	1	1
		>10% to 15%	0	0	0	0	0	0
		>15 %	0	0	0	0	0	0
Chlorosis	Level of symptoms at the last assessments	0% to 5%	18	18	18	18	20	20
		>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

Symptom	Number of trials with...		Selectivity trials (20 trials)				Efficacy trials (21 trials)	
			F7B-39-30		BETASANA® SC		F7B-39-30	BETASANA SC
			N	2N	N	2N	N	N
Deformation	Maximum of phytotoxicity recorded during the trials	0%	14	10	17	18	17	20
		1 to 5%	5	4	3	2	1	1
		>5% to 10%	1	4	0	0	1	0
		>10% to 15%	0	1	0	0	1	0
		>15 %	0	1	0	0	1	0
Deformation	Level of symptoms at the last assessments	0% to 5%	20	20	20	20	20	21
		>5% to 10%	0	0	0	0	0	0
		>10% to 15%	0	0	0	0	1	0
		>15 %	0	0	0	0	0	0

Symptom	Number of trials with...		Selectivity trials (20 trials)				Efficacy trials (21 trials)	
			F7B-39-30		BETASANA® SC		F7B-39-30	BETASANA SC
			N	2N	N	2N	N	N
Groinhib	Maximum of phytotoxicity recorded during the trials	0%	14	14	15	15	20	20
		1 to 5%	2	2	0	0	0	0
		>5% to 10%	3	1	4	2	1	0
		>10% to 15%	0	2	1	2	0	1
		>15 %	1	1	0	1	0	0
Groinhib	Level of symptoms at the last assessments	0% to 5%	19	18	19	19	21	21
		>5% to 10%	0	1	0	1	0	0
		>10% to 15%	0	0	0	0	0	0
		>15 %	1	1	1	0	0	0

**Table 3.4-11: SUMMARY\_ Selectivity of a single application of F7B-39-30 at E timing (BBCH18/19) (2022 trials)**

Symptom	Number of trials with...	Selectivity trials* (9 trials)	
		F7B-39-30	BETASANA® SC

			N	2N	N	2N
<b>Chlorosis</b>	<b>Maximum of phytotoxicity recorded during the trials</b>	0%	7	6	9	7
		1 to 5%	1	2	0	2
		>5% to 10%	1	1	0	0
		>10% to 15%	0	0	0	0
		>15 %	0	0	0	0
<b>Chlorosis</b>	<b>Level of symptoms at the last assessments</b>	0% to 5%	9	9	9	9
		>5% to 10%	0	0	0	0
		>10% to 15%	0	0	0	0
		>15 %	0	0	0	0

Symptom	Number of trials with...		Selectivity trials* (14 trials)			
			F7B-39-30		BETASANA® SC	
			N	2N	N	2N
<b>Deformation</b>	<b>Maximum of phytotoxicity recorded during the trials</b>	0%	3	3	10	9
		1 to 5%	1	1	4	3
		>5% to 10%	2	1	0	1
		>10% to 15%	2	1	0	0
		>15 %	6	8	0	0
<b>Deformation</b>	<b>Level of symptoms at the last assessments</b>	0% to 5%	12	12	14	14
		>5% to 10%	1	1	0	0
		>10% to 15%	0	0	0	0
		>15 %	1	1	0	0

Symptom	Number of trials with...		Selectivity trials* (12 trials)			
			F7B-39-30		BETASANA® SC	
			N	2N	N	2N
<b>Groinhib</b>	<b>Maximum of phytotoxicity recorded during the trials</b>	0%	8	8	9	8
		1 to 5%	1	1	2	1
		>5% to 10%	2	1	0	2
		>10% to 15%	1	0	0	0
		>15 %	2	3	1	1
<b>Groinhib</b>	<b>Level of symptoms at the last assessments</b>	0% to 5%	11	11	11	11
		>5% to 10%	0	0	0	0
		>10% to 15%	0	1	0	0
		>15 %	1	0	1	1

\*No efficacy trials were conducted with a single application of F7B-39-30 at BBCH18/19

### Selectivity after two applications of F7B-39-30 – Use 2

Crop response after two applications of F7B-39-30 between BBCH10 and BBCH14 was assessed in 20 selectivity trials distributed across the central regulatory zone.

Most common plant reactions after two applications of F7B-39-30 were chlorosis, deformation and growth inhibition. In seventeen out of the 20 trials chlorosis was observed and all 20 selectivity trials showed deformation and growth inhibition. More details on the level and duration of this level of selectivity at both N and 2N rate is presented in the Table 3.4-12.

The selectivity data set therefore clearly demonstrated that two applications of F7B-39-30 between BBCH10 and BBCH14 is crop safe.

Supporting selectivity data assessed across 18 efficacy trials fully supported above mentioned findings. In 17 out of 18 trials all crop response disappeared during the experiment.

**Overall, it is therefore concluded that the application of two times F7B-39-30 between BBCH10 and BBCH14 is crop safe on a wide range of sugar beet varieties (including Conviso®SMART varieties) if applications are done according to label recommendations.**

**Table 3.4-12: SUMMARY Selectivity of F7B-39-30 after two applications**

Symptom	Number of trials with...		Selectivity trials (17 trials)				Efficacy trials (18 trials)	
			F7B-39-30		BETASANA® SC		F7B-39-30	BETASANA SC
			N	2N	N	2N	N	N
Chlorosis	Maximum of phytotoxicity recorded during the trials	0%	17	16	15	15	17	16
		1 to 5%	0	1	2	2	1	1
		>5% to 10%	0	0	0	0	0	1
		>10% to 15%	0	0	0	0	0	0
		>15 %	0	0	0	0	0	0
Chlorosis	Level of symptoms at the last assessments	0% to 5%	17	17	17	17	18	18
		>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

Symptom	Number of trials with...		Selectivity trials (20 trials)				Efficacy trials (18 trials)	
			F7B-39-30		BETASANA® SC		F7B-39-30	BETASANA SC
			N	2N	N	2N	N	N
Deformation	Maximum of phytotoxicity recorded during the trials	0%	13	13	16	15	13	17
		1 to 5%	5	2	3	2	1	1
		>5% to 10%	2	2	0	1	1	0
		>10% to 15%	0	3	1	2	1	0
		>15 %	0	0	0	0	2	0
Deformation	Level of symptoms at the last assessments	0% to 5%	20	20	20	20	15	18
		>5% to 10%	0	0	0	0	2	0
		>10% to 15%	0	0	0	0	0	0
		>15 %	0	0	0	0	1	0

Symptom	Number of trials with...		Selectivity trials (20 trials)				Efficacy trials (17 trials)	
			F7B-39-30		BETASANA® SC		F7B-39-30	BETASANA SC
			N	2N	N	2N	N	N
Groinhib	Maximum of phytotoxicity recorded during the trials	0%	16	15	17	16	15	15
		1 to 5%	2	2	2	1	1	1
		>5% to 10%	2	2	1	1	0	0
		>10% to 15%	0	0	0	2	1	0
		>15 %	0	1	0	0	0	1
Groinhib	Level of symptoms at the last assessments	0% to 5%	19	19	20	20	16	17
		>5% to 10%	1	0	0	0	1	0
		>10% to 15%	0	0	0	0	0	0
		>15 %	0	1	0	0	0	0

### Selectivity after three applications of F7B-39-30 – Use 3

Overall, there were 20 selectivity trials conducted across the central regulatory zone to demonstrate crop safety if F7B-39-30 was applied three times at target and double rate compared to a reference product.

Most common plant reactions after three applications of F7B-39-30 were chlorosis, deformation and growth inhibition. More details on the level and duration of this level of selectivity at both N and 2N rate is presented in the **Table 3.4-13**.

With exception of 1 trial with growth inhibition, all other trials showed transient symptoms even if twice the recommended dose rates were applied.

The supporting data set on selectivity assessments done in efficacy trials, are fully in line with above mentioned findings in selectivity trials. There was no major **chlorosis** across all 19 efficacy trials as presented

**Overall, it is therefore concluded that the application of three times F7B-39-30 at target or double rate is crop safe in sugar beet on a wide range of sugar beet varieties (including Conviso®SMART varieties) if applications were done according to label recommendations.**

**Table 3.4-13 SUMMARY Selectivity of F7B-39-30 after three applications**

Symptom	Number of trials with...		Selectivity trials (15 trials)				Efficacy trials (19 trials)	
			F7B-39-30		BETASANA® SC		F7B-39-30	BETASANA SC
			N	2N	N	2N	N	N
Chlorosis	Maximum of phytotoxicity recorded during the trials	0%	15	14	14	13	17	16
		1 to 5%	0	1	1	2	1	2
		>5% to 10%	0	0	0	0	1	1
		>10% to 15%	0	0	0	0	0	0
		>15 %	0	0	0	0	0	0
Chlorosis	Level of symptoms at the last assessments	0% to 5%	15	15	15	15	19	19
		>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

Symptom	Number of trials with...		Selectivity trials (20 trials)				Efficacy trials (20 trials)	
			F7B-39-30		BETASANA® SC		F7B-39-30	BETASANA SC
			N	2N	N	2N	N	N
Deformation	Maximum of phytotoxicity recorded during the trials	0%	11	0	16	14	12	19
		1 to 5%	4	3	3	6	3	1
		>5% to 10%	3	5	1	0	2	0
		>10% to 15%	2	1	0	0	0	0
		>15 %	0	3	0	0	3	0
Deformation	Level of symptoms at the last assessments	0% to 5%	20	20	20	20	19	20
		>5% to 10%	0	0	0	0	0	0
		>10% to 15%	0	0	0	0	0	0
		>15 %	0	0	0	0	1	0

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Symptom	Number of trials with...		Selectivity trials (18 trials)				Efficacy trials (20 trials)	
			F7B-39-30		BETASANA® SC		F7B-39-30	BETASANA SC
			N	2N	N	2N	N	N
Groinhib	Maximum of phytotoxicity recorded during the trials	0%	14	14	14	15	17	19
		1 to 5%	2	1	3	0	2	0
		>5% to 10%	1	1	0	3	1	1
		>10% to 15%	0	1	1	0	0	0
		>15 %	1	1	0	0	0	0
Groinhib	Level of symptoms at the last assessments	0% to 5%	17	17	17	18	20	20
		>5% to 10%	0	0	1	0	0	0
		>10% to 15%	0	0	0	0	0	0
		>15 %	1	1	0	0	0	0



**Selectivity after four applications of F7B-39-30 – Use 4**

Overall, there were 20 selectivity trials conducted across the central regulatory zone to demonstrate crop safety if F7B-39-30 was applied four times at target and double rate compared to a reference product.

Most common plant reactions after four applications of F7B-39-30 were chlorosis, deformation and growth inhibition. More details on the level and duration of this level of selectivity at both N and 2N rate is presented in Table 3.4-14.

Since the vast majority of trials demonstrated crop safety of four applications of F7B-39-30, it is concluded that F7B-39-30 may safely be applied if applications were done in accordance with label recommendations.

Above mentioned findings based on selectivity trials were clearly supported by selectivity assessments done in efficacy trials presented in the same table.

**Overall, it is concluded that the data set presented from selectivity and efficacy trials clearly demonstrated crop safety of F7B-39-30 on a wide range of sugar beet varieties (including Conviso®SMART varieties) if applications were done in accordance to label recommendations.**

**Table 3.4-14: SUMMARY Selectivity of F7B-39-30 after four applications**

Symptom	Number of trials with...		Selectivity trials (15 trials)				Efficacy trials (17 trials)	
			F7B-39-30		BETASANA® SC		F7B-39-30	BETASANA SC
			N	2N	N	2N	N	N
Chlorosis	Maximum of phytotoxicity recorded during the trials	0%	13	14	14	15	16	16
		1 to 5%	1					
		>5% to 10%	1		1		1	1
		>10% to 15%						
		>15 %		1				
Chlorosis	Level of symptoms at the last assessments	0% to 5%	15	15	15	15	17	17
		>5% to 10%						
		>10% to 15%						
		>15 %						

Symptom	Number of trials with...		Selectivity trials (20 trials)				Efficacy trials (20 trials)	
			F7B-39-30		BETASANA® SC		F7B-39-30	BETASANA SC
			N	2N	N	2N	N	N
Deformation	Maximum of phytotoxicity recorded during the trials	0%	10	7	17	16	12	19
		1 to 5%	4	4		3	2	1
		>5% to 10%	3	4	2	1	2	
		>10% to 15%	1	1	1		2	
		>15 %	2	4			2	
Deformation	Level of symptoms at the last assessments	0% to 5%	20	20	20	20	19	20
		>5% to 10%						
		>10% to 15%						
		>15 %					1	

Symptom	Number of trials with...		Selectivity trials (17 trials)		Efficacy trials (19 trials)	
			F7B-39-30	BETASANA® SC	F7B-39-30	BETASANA SC

			N	2N	N	2N	N	N
<b>Groinhib</b>	<b>Maximum of phytotoxicity recorded during the trials</b>	0%	14	12	13	12	18	18
		1 to 5%	2	1	2	3		
		>5% to 10%		2	1	1	1	1
		>10% to 15%		1	1			
		>15 %	1	1		1		
<b>Groinhib</b>	<b>Level of symptoms at the last assessments</b>	0% to 5%	16	16	15	16	19	19
		>5% to 10%			2			
		>10% to 15%						
		>15 %	1	1		1		

### 3.4.1.2 Crop safety effect of F7B-39-30 on sugar beet from selectivity and efficacy trials when product was applied in PROGRAMS

#### Metamitron+Ethofumesate+Phenmedipham program: with / without F7B-39-30 applied A-D or A-C

This paragraph compares the practical spray program of metamitron (M) + ethofumesate (E) + phenmedipham (P) at target and double rates with and without F7B-39-30 (R) to understand if the addition of F7B-39-30 potentially increases crop response. To cover practical use scenarios, programs were applied either at four times (A-D) or three times (A-C).

In the following paragraph crop safety after adding F7B-39-30 to current practical herbicide programs is demonstrated across 10 selectivity trials. The following basis spray program was chosen:

	<b>BETASANA® SC</b>	<b>Goltix® 700 SC</b>	<b>TRAMAT® F</b>	<b>Actirob® B</b>	<b>Application</b>
	Phenmedipham (P)	Metamitron (M)	Ethofumesate (E)		
Practical herbicide program at target rate	160	350	125	0.5 L/HA	ABCD
Practical herbicide program at 2N rate	320	700	250	1L/ha	ABCD

	<b>BETASANA SC</b>	<b>F7B-39-30</b>	<b>Goltix® 700 SC</b>	<b>TRAMAT® F</b>	<b>Actirob® B</b>	<b>Application</b>
	Phenmedipham (P)	<b>Florpyrauxif en-benzyl (R)</b>	Metamitron (M)	Ethofumesate (E)		
Practical herbicide program at target rate including F7B-39-30	160	<b>0,5</b>	350	125	0,5L/ha	ABCD
Practical herbicide program at 2N rate including F7B-39-30	320	<b>1</b>	700	250	1L/ha	ABCD

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### **Timings A-D**

Table 3.4-15 contains the selectivity data across 10 trials that compared the practical spray program of metamitron (M) + ethofumesate (E) + phenmedipham (P) at target and double rate with and without F7B-39-30 (Rinskor <sup>TM</sup>, R) if applied four times at application A, B, C and D.

Common observed symptoms were chlorosis, deformation and growth inhibition. In the vast majority of the trials, the symptoms disappeared during the experiment. Overall, it is therefore concluded that the addition of F7B-39-30 to practical spray programs (application timing A, B, C and D) did not increase the risk of additional crop response. F7B-39-30 may therefore safely be applied in sugar beet if label recommendation were followed.

This same table presents also the selectivity symptoms observed in the efficacy trials conducted to evaluate the benefit of adding F7B-39-30 to practical spray programs (see efficacy section). The symptoms observed in these efficacy trials were in line with those of the selectivity trials.

### **Timings A-C**

Table 3.4-16 contains information if F7B-39-30 (F7B-39-30) was added to a practical herbicide program (metamitron+ ethofumesate + phenmedipham) applied three times at A, B and C. The same 10 **selectivity trials** tested A-D as well as A-C applications for this program comparison that are presented hereafter.

Common observed symptoms were chlorosis, deformation and growth inhibition. In the vast majority of the trials, the symptoms disappeared during the experiment. Overall, it is therefore concluded that the addition of F7B-39-30 to practical spray programs (application timing A, B and C) did not increase the risk of additional crop response. F7B-39-30 may therefore safely be applied in sugar beet if label recommendation were followed.

**In the same table a summary of the selectivity symptoms observed in the efficacy trials was presented. These efficacy trials were testing the effect if F7B-39-30 was added to practical spray programs (applied at timing A-C). Chlorosis and deformation was observed. However, since deformation completely disappeared during the experiment it is concluded that the addition of F7B-39-30 did not cause permanent phytotoxicity increase if label recommendations were followed. Growth inhibition data is fully in line with above mentioned findings of the selectivity trials.**

**Overall, it is therefore concluded that the data presented in the tables hereafter clearly demonstrated that the addition of F7B-39-30 to practical spray programs including metamitron, ethofumesatee and phenmedipham is safe to the crop if applications were made at A-D or A-C.**

**Table 3.4-15: Summary\_Selectivity of F7B-39-30 applied in program MEP with/without F7B-39-30 (=R) (4 applications)**

Symptom	Number of trials with...		Selectivity trials (10 trials)				Efficacy trials (10 trials)	
			MEPR*		MEP		MEPR*	MEP
			N	2N	N	2N	N	N
Chlorosis	Maximum of phytotoxicity recorded during the trials	0%	6	6	6	6	8	8*
		1 to 5%	0	0	0	0	2	1
		>5% to 10%	2	0	2	2	0	0
		>10% to 15%	1	2	1	1	0	0
		>15 %	1	2	1	1	0	0
Chlorosis	Level of symptoms at the last assessments	0% to 5%	10	10	10	10	10	9*
		>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

Symptom	Number of trials with...		Selectivity trials (10 trials)				Efficacy trials (13 trials)	
			MEPR*		MEP		MEPR*	MEP
			N	2N	N	2N	N	N
Deformation	Maximum of phytotoxicity recorded during the trials	0%	7	6	7	7	6	10*
		1 to 5%	1	1	1	0	3	2
		>5% to 10%	0	1	2	2	2	0
		>10% to 15%	2	0	0	1	1	0
		>15 %	0	2	0	0	1	0
Deformation	Level of symptoms at the last assessments	0% to 5%	10	10	10	10	13	12*
		>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

Symptom	Number of trials with...		Selectivity trials (10 trials)				Efficacy trials (10 trials)	
			MEPR*		MEP		MEPR*	MEP
			N	2N	N	2N	N	N
Growth Inhibition	Maximum of phytotoxicity recorded during the trials	0%	8	8	8	8	8	9
		1 to 5%	0	0	0	0	1	0
		>5% to 10%	2	0	1	0	1	1
		>10% to 15%	0	1	0	2	0	0
		>15 %	0	1	1	0	0	0
Growth Inhibition	Level of symptoms at the last assessments	0% to 5%	10	10	10	10	10	10
		>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

\*assessment in trial not available, R=addition of F7B-39-30 to the tested program

Table 3.4-16: Summary\_Selectivity of F7B-39-30 applied in program MEP with/without F7B-39-30 (=R)  
(3 applications)

Symptom	Number of trials with...		Selectivity trials (10 trials)				Efficacy trials (10 trials)	
			MEPR		MEP		MEPR	MEP
			N	2N	N	2N	N	N
Chlorosis	Maximum of phytotoxicity recorded during the trials	0%	6	6	6*	6*	8	8
		1 to 5%	0	0	0	0	2	2
		>5% to 10%	0	2	1	1	0	0
		>10% to 15%	1	0	1	1	0	0
		>15 %	3	2	1	1	0	0
Chlorosis	Level of symptoms at the last assessments	0% to 5%	10	10	9*	9*	10	10
		>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

Symptom	Number of trials with...		Selectivity trials (10 trials)				Efficacy trials (13 trials)	
			MEPR		MEP		MEPR	MEP
			N	2N	N	2N	N	N
Deformation	Maximum of phytotoxicity recorded during the trials	0%	7	6	5*	6*	7	11
		1 to 5%	1	1	2	1	3	2
		>5% to 10%	1	1	1	0	1	0
		>10% to 15%	1	0	0	0	1	0
		>15 %	0	2	0	1	1	0
Deformation	Level of symptoms at the last assessments	0% to 5%	10	10	8*	8*	13	13
		>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

Symptom	Number of trials with...		Selectivity trials (10 trials)				Efficacy trials (10 trials)	
			MEPR		MEP		MEPR	MEP
			N	2N	N	2N	N	N
Growth Inhibition	Maximum of phytotoxicity recorded during the trials	0%	8	8	8*	7*	8	9
		1 to 5%	0	0	0	0	1	
		>5% to 10%	2	0	1	0	1	1
		>10% to 15%	0	1	0	0	0	0
		>15 %	0	1	0	1	0	0
Growth Inhibition	Level of symptoms at the last assessments	0% to 5%	10	10	9*	8*	10	10
		>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

\*assessment in trial not available, R=addition of F7B-39-30 to the tested program

#### Metamitron+Ethofumesate+Triflusaluron program: with / without F7B-39-30 applied A-D

This paragraph compares the practical spray program of metamitron (M) + ethofumesate (E) + triflusaluron (T) at target and double rates with and without F7B-39-30 to understand if the addition of F7B-39-30 potentially increases crop response.

To compare the practical herbicide program of metamitron (M, Goltix® 700) + ethofumesate (E, Trammat® 500) and triflusaluron (T, Safari) + Actirob® with and without F7B-39-30 (R), four selectivity trials were conducted in 2021.

Application rates were set to double rates to represent the worst-case scenario and to prove crop safety of F7B-39-30 if added to practical herbicide spray programs in sugar beet.

Table 3.4-17 shows that chlorosis, deformation and growth inhibition was observed in the selectivity trials. In the vast majority of trials it was shown that the inclusion of F7B-39-30 did not increase crop response. In the same table, the phytotoxicity of the efficacy trials was included. The efficacy trials of this program consisted of 4 applications. Based on these results it can be concluded that the addition of F7B-39-30 to this spray program applied four times at A-D, did not significantly increase phytotoxicity. Most importantly, observed symptomology always disappeared during the experiment, concluding that symptomology is considered as acceptable. The efficacy data clearly supported crop safety of F7B-39-30 if added to a practical spray program including metamitron (M) + ethofumesate (E) + triflusaluron (T) at timings A-D.

**It is therefore concluded that the data set presented herein clearly demonstrated that the addition of F7B-39-30 to practical spray programs including metamitron, ethofumesate and triflusaluron is crop safe if label recommendations were followed.**

Table 3.4-17: Summary - Selectivity of F7B-39-30 applied in MET(R) program, 4 applications ABCD

Symptom	Number of trials with...		Selectivity trials (4 trials)				Efficacy trials (9 trials)	
			METR		MET		METR	MET
			N	2N	N	2N	N	N
Chlorosis	Maximum of phytotoxicity recorded during the trials	0%	0	3	0	3	7	7
		1 to 5%	0	0	0	0	1	2
		>5% to 10%	0	0	0	1	1	0
		>10% to 15%	0	1	0	0	0	0
		>15 %	0	0	0	0	0	0
Chlorosis	Level of symptoms at	0% to 5%	0	4	0	4	9	9
		>5% to 10%	0	0	0	0	0	0

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	the last assessments	>10% to 15%	0	0	0	0	0	0
		>15 %	0	0	0	0	0	0

Symptom	Number of trials with...		Selectivity trials (4 trials)				Efficacy trials (12 trials)	
			METR		MET		METR	MET
			N	2N	N	2N	N	N
Deformation	Maximum of phytotoxicity recorded during the trials	0%	0	2	0	3	5	9
		1 to 5%	0	0	0	0	2	3
		>5% to 10%	0	1	0	1	3	0
		>10% to 15%	0	1	0	0	1	0
		>15 %	0	0	0	0	1	0
Deformation	Level of symptoms at the last assessments	0% to 5%	0	4	0	4	12	12
		>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

Symptom	Number of trials with...		Selectivity trials (4 trials)				Efficacy trials (9 trials)	
			METR		MET		METR	MET
			N	2N	N	2N	N	N
Growth Inhibition	Maximum of phytotoxicity recorded during the trials	0%	0	3	0	3	7	7
		1 to 5%	0	0	0	0	0	1
		>5% to 10%	0	1	0	1	2	1
		>10% to 15%	0	0	0	0	0	0
		>15 %	0	0	0	0	0	0
Growth Inhibition	Level of symptoms at the last assessments	0% to 5%	0	4	0	4	9	9
		>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

R=addition of F7B-39-30 to the tested program

### Metamitron+Ethofumesate+Phenmedipham+Triflusalufuron program: with / without F7B-39-30 applied A-D or A-C

This paragraph compares the practical spray program of metamitron (M) + ethofumesate (E) + phenmedipham (P) + triflusalufuron (T) at target and double rates with and without F7B-39-30 (R) to understand if the addition of F7B-39-30 potentially increases crop response. To cover practical use scenarios, programs were applied either at four times (A-D) (Table 3.4-18) or three times (A-C, Table 3.4-19). Six selectivity trials were conducted in 2022. Application rates were set to double rates to represent the worst-case scenario and to prove crop safety of F7B-39-30 if added to practical herbicide spray programs in sugar beet.

Despite the fact that chlorosis, growth inhibition and deformation was observed during the trial, based on the final results of Table 3.4-18 it is therefore concluded that the addition of F7B-39-30 to a spray program containing metamitron, ethofumesate, phenmedipham and triflusalufuron (4 application timings) is crop safe if label recommendations were followed. The same was observed for three application timings (Table 3.4-19). All symptomology after application of a practical spray program three at timings, appeared very soon after the application was done (within a week) and, most importantly disappeared completely during the experiment.

**Overall, it is therefore concluded that the addition of F7B-39-30 to a spray program containing metamitron, ethofumesate, phenmedipham and triflusalufuron is crop safe if label recommendations were followed.**

**Table 3.4-18: Summary Selectivity F7B-39-30 in program MEPT(R) 4 applications abcd**

Symptom	Number of trials with...		Selectivity trials (6 trials)			
			MEPTR		MEPT	
			N	2N	N	2N
Chlorosis	Maximum of phytotoxicity recorded during the trials	0%	0	3	0	3
		1 to 5%	0	0	0	0
		>5% to 10%	0	1	0	0
		>10% to 15%	0	0	0	1
		>15 %	0	2	0	2
Chlorosis	Level of symptoms at the last assessments	0% to 5%	0	6	0	6
		>5% to 10%	0	0	0	0
		>10% to 15%	0	0	0	0
		>15 %	0	0	0	0

Symptom	Number of trials with...		Selectivity trials (6 trials)			
			MEPTR		MEPT	
			N	2N	N	2N
Deformation	Maximum of phytotoxicity recorded during the trials	0%	0	4	0	3
		1 to 5%	0	0	0	0
		>5% to 10%	0	1	0	2
		>10% to 15%	0	0	0	0
		>15 %	0	1	0	1
Deformation	Level of symptoms at the last assessments	0% to 5%	0	6	0	6
		>5% to 10%	0	0	0	0
		>10% to 15%	0	0	0	0
		>15 %	0	0	0	0

Symptom	Number of trials with...		Selectivity trials (6 trials)			
			MEPTR		MEPT	
			N	2N	N	2N
Growth Inhibition	Maximum of phytotoxicity recorded during the trials	0%	0	5	0	5
		1 to 5%	0	0	0	0
		>5% to 10%	0	0	0	0
		>10% to 15%	0	0	0	1
		>15 %	0	1	0	0
Growth Inhibition	Level of symptoms at the last assessments	0% to 5%	0	6	0	0
		>5% to 10%	0	0	0	0
		>10% to 15%	0	0	0	0
		>15 %	0	0	0	0

R=addition of F7B-39-30 to the tested program

**Table 3.4-19: Summary Selectivity F7B-39-30 in program MEPT(R) 3 applications abc**

Symptom	Number of trials with...		Selectivity trials (5 trials)			
			MEPTR		MEPT	
			N	2N	N	2N
Deformation	Maximum of phytotoxicity recorded during the trials	0%	0	2	0	2
		1 to 5%	0	0	0	0
		>5% to 10%	0	1	0	2
		>10% to 15%	0	1	0	0
		>15 %	0	1	0	1
Deformation	Level of symptoms at the last assessments	0% to 5%	0	5	0	5
		>5% to 10%	0	0	0	0
		>10% to 15%	0	0	0	0
		>15 %	0	0	0	0

Symptom	Number of trials with...		Selectivity trials (5 trials)			
			MEPTR		MEPT	
			N	2N	N	2N
Growth Inhibition	Maximum of phytotoxicity recorded during the trials	0%	0	4	0	4
		1 to 5%	0	0	0	0
		>5% to 10%	0	0	0	0
		>10% to 15%	0	0	0	0
		>15 %	0	1	0	1
Growth Inhibition	Level of symptoms at the last assessments	0% to 5%	0	5	0	5
		>5% to 10%	0	0	0	0
		>10% to 15%	0	0	0	0
		>15 %	0	0	0	0

R=addition of F7B-39-30 to the tested program

### Metamitron+Ethofumesate program: with / without F7B-39-30 applied A-C in efficacy trials

**Efficacy trials** conducted to evaluate the benefit of adding F7B-39-30 to the practical spray programs (metamitron (M) + triflurosulfuron (T) at application timing A-C, see efficacy section) were also evaluated to support the selectivity section. Assessments on chlorosis, deformation and growth inhibition were done multiple times after applying this program (Table 3.4-20) with and without F7B-39-30 to analyse if the addition of F7B-39-30 caused significant, unacceptable phytotoxicity symptoms.

Results show that the addition of F7B-39-30 to the practical spray program metamitron (M) + triflurosulfuron (T) is crop safe if label recommendations were followed.

Overall, it is therefore concluded that the dataset presented hereafter on efficacy trials clearly supported crop safety of F7B-39-30 if added to practical spray programs.

Table 3.4-20: Summary Selectivity of F7B-39-30 applied in ME(R) program, 3 applications ABC

Symptom	Number of trials with...		Efficacy trials (9 trials)	
			MER	ME
			N	N
Chlorosis	Maximum of phytotoxicity recorded during the trials	0%	8	8
		1 to 5%	1	1
		>5% to 10%	0	0
		>10% to 15%	0	0
		>15 %	0	0
Chlorosis	Level of symptoms at the last assessments	0% to 5%	9	9
		>5% to 10%	0	0
		>10% to 15%	0	0
		>15 %	0	0

Symptom	Number of trials with...		Efficacy trials (13 trials)	
			MER	ME
			N	N
Deformation	Maximum of phytotoxicity recorded during the trials	0%	6	11
		1 to 5%	4	2
		>5% to 10%	2	0
		>10% to 15%	0	0
		>15 %	1	0



<b>Deformation</b>	<b>Level of symptoms at the last assessments</b>	0% to 5%	13	13
		>5% to 10%	0	0
		>10% to 15%	0	0
		>15 %	0	0

Symptom	Number of trials with...	Efficacy trials (10 trials)		
		MER		ME
		N		N
<b>Growth Inhibition</b>	<b>Maximum of phytotoxicity recorded during the trials</b>	0%	8	9
		1 to 5%	1	0
		>5% to 10%	1	1
		>10% to 15%	0	0
		>15 %	0	0
<b>Growth Inhibition</b>	<b>Level of symptoms at the last assessments</b>	0% to 5%	10	10
		>5% to 10%	0	0
		>10% to 15%	0	0
		>15 %	0	0

R=addition of F7B-39-30 to the tested program

### 3.4.1.3 Crop safety effect of F7B-39-30 in programs on Conviso® Smart sugar beet varieties from efficacy trials.

To prove crop selectivity of F7B-39-30 on Conviso Smart variety, a selectivity trial was setup, comparing phytotoxicity after applying F7B-39-30 at N (2g) and 2N (4g) rates to Conviso target rate (2 x 40g) and 1 x 80g). All details on this trial (trial details, location, application info, material and methods) is described in **Błąd! Nie można odnaleźć źródła odwołania. (Selectivity trials with F7B-39-30 applied solo).**

Table 3.4-21 demonstrated that **nBłąd! Nie można odnaleźć źródła odwołania.o chlorosis** is to be expected if F7B-39-30 was applied at target or even twice the recommended dose rate on Conviso Smart varieties. There was some **deformation and growth inhibition** but as the last assessment took place at the highest level of injury, it is unknown if symptoms were transient. However, as yield assessments showed no negative effects compared to the untreated check. it is therefore concluded that the trial demonstrated crop safety of F7B-39-30 if applied at target rate in Conviso Smart varieties.

Supporting evidence was generated by introducing two Mediterranean efficacy trials in which F7B-39-30 and Conviso were tested (

Table 3.4-22). Data clearly demonstrated that at BBCH12-14 the addition of F7B-39-30 did not increase **chlorosis, deformation, or growth inhibition**, hence F7B-39-30 is crop safe in Conviso Smart varieties. If applied at BBCH16, crop response was comparable between F7B-39-30 + Conviso and Conviso alone or symptomology disappeared during the experiment. Therefore, it is concluded that F7B-39-30 is crop safe in Conviso Smart varieties.

**It is therefore concluded that the data presented hereafter clearly indicate that F7B-39-30 may safely be applied in Conviso® SMART system if application was done in accordance to label recommendations.**

**Table 3.4-21: Summary- SELECTIVITY trial. Selectivity F7B-39-30 applied in Conviso Smart system**

Symptom	Number of trials with...	Selectivity trial (1 trial)			
		F7B-39-30		Conviso One	
		N	2N	N (2x0.5N)	N

<b>Chlorosis</b>	<b>Maximum of phytotoxicity recorded during the trials</b>	0%	1	1	1	1
		1 to 5%	0	0	0	0
		>5% to 10%	0	0	0	0
		>10% to 15%	0	0	0	0
		>15 %	0	0	0	0
<b>Chlorosis</b>	<b>Level of symptoms at the last assessments</b>	0% to 5%	1	1	1	1
		>5% to 10%	0	0	0	0
		>10% to 15%	0	0	0	0
		>15 %	0	0	0	0

Symptom	Number of trials with...		Selectivity trial (1 trial)			
			F7B-39-30		Convviso One	
			N	2N	N (2x0.5N)	N
<b>Deformation</b>	<b>Maximum of phytotoxicity recorded during the trials</b>	0%	0	0	1	1
		1 to 5%	0	0	0	0
		>5% to 10%	0	0	0	0
		>10% to 15%	1	0	0	0
		>15 %	0	1	0	0
<b>Deformation</b>	<b>Level of symptoms at the last assessments</b>	0% to 5%	0	0	1	1
		>5% to 10%	0	0	0	0
		>10% to 15%	1	0	0	0
		>15 %	0	1	0	0

Symptom	Number of trials with...		Selectivity trials (1 trial)			
			F7B-39-30		Convviso One	
			N	2N	N (2x0.5N)	N
<b>Growth Inhibition</b>	<b>Maximum of phytotoxicity recorded during the trials</b>	0%	1	0	1	1
		1 to 5%	0	0	0	0
		>5% to 10%	0	1	0	0
		>10% to 15%	0	0	0	0
		>15 %	0	0	0	0
<b>Growth Inhibition</b>	<b>Level of symptoms at the last assessments</b>	0% to 5%	1	1	1	1
		>5% to 10%	0	0	0	0
		>10% to 15%	0	0	0	0
		>15 %	0	0	0	0

**Table 3.4-22: Summary- EFFICACY trials. Selectivity F7B-39-30 applied in Convviso Smart system (SEU trials)**

		Efficacy trials (2 trials)			
		Conviso one (80gai/ha)	F7B-39-30 + Conviso one (2 + 80gai/ha)	Conviso one (80gia/ha)	F7B-39-30 + Conviso one (2 + 80gai/ha)
		Timing E (BBCH = 12-14)		Timing H (BBCH = 16)	
Number of trials with PHYGEN					
Maximum of phytotoxicity recorded during the trials	0% to 5%	2	2	0	0
	>5% to 10%	0	0	1	0
	>10% to 15%	0	0	0	1
	>15 %	0	0	1	1
Level of symptoms at the last assessments	0% to 5%	2	2	1	1
	>5% to 10%	0	0	0	0
	>10% to 15%	0	0	0	0
	>15 %	0	0	1	1
Number of trials with CHLOROSIS		Efficacy trials (2 trials)			
	0% to 5%	2	2	2	2

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<b>Maximum of phytotoxicity recorded during the trials</b>	>5% to 10%	0	0	0	0
	>10% to 15%	0	0	0	0
	>15 %	0	0	0	0
	0% to 5%	2	0	0	0
<b>Level of symptoms at the last assessments</b>	>5% to 10%	0	0	0	0
	>10% to 15%	0	0	0	0
	>15 %	0	0	0	0
	0% to 5%	2	0	0	0
<b>Number of trials with DEFORMATION</b>	<b>Efficacy trials (2 trials)</b>				
<b>Maximum of phytotoxicity recorded during the trials</b>	0% to 5%	1	2	0	0
	>5% to 10%	0	0	0	0
	>10% to 15%	1	0	1	0
	>15 %	0	0	1	2
<b>Level of symptoms at the last assessments</b>	0% to 5%	2	2	2	2
	>5% to 10%	0	0	0	0
	>10% to 15%	0	0	0	0
	>15 %	0	0	0	0
<b>Number of trials with GROWTH INHIBITION</b>	<b>Efficacy trials (2 trials)</b>				
<b>Maximum of phytotoxicity recorded during the trials</b>	0% to 5%	2	2	2	1
	>5% to 10%	0	0	0	1
	>10% to 15%	0	0	0	0
	>15 %	0	0	0	0
<b>Level of symptoms at the last assessments</b>	0% to 5%	2	2	2	2
	>5% to 10%	0	0	0	0
	>10% to 15%	0	0	0	0
	>15 %	0	0	0	0

dRR point 3.4.1 dRR point 3.4.2 dRR point 3.4.3	Phytotoxicity to host crop
ZRMS conclusion:	
<u>F7B-39-30 applied solo</u>	
<b><u>The NE EPPO climate zone</u></b>	
Phytotoxicity symptoms were checked in efficacy trials and 9 selectivity trials carried out in 2021 and 2022, in CZ, DE, PL.	
In selectivity trials the following varieties were tested: Everest, Wojownik, BTS 9975, BTS 555, BTS 9975, BTS 8840, Lunella, Chevrolet.	
F7B-39-30 was applied at the do rate 1N and 2N in one and split applications at BBCH 10-11/12, BBCH 18/19 BBCH 36-39, with interval between applications 7-14 days, mainly 7-9 days (interval of 5 days was in only one trial as a single interval between application 2 and 3) and compared to the reference product Betasana SC.	
<b>One application:</b>	
Application of F7B-39-30 at BBCH 10-11/12 gave transient chlorosis, deformations and growth inhibitions. At final assessment 2 cases of growth inhibition (1N, 2N) and 1 case of deformation (2N) were observed. The reference product gave similar results.	
Application of F7B-39-30 at BBCH 18/19 gave transient chlorosis, deformations and growth inhibitions. At final assessment 1 case of chlorosis (2N), 2 cases of deformation (1N, 2N var. BTS 9975), 2 cases of growth inhibition (1N, 2N) were observed. The reference product gave similar results.	
After application of F7B-39-30 at BBCH 36/39, at final assessment 1 case of chlorosis (1N, 2N), 1 case of deformation (1N, 2N), 1 case of growth inhibition (1N, 2N) were observed. The reference product did not show any phytotoxic results in final assessment.	
In efficacy trials phytotoxic effect - transient chlorosis, deformations and growth inhibitions were also observed. In one trial deformation was observed at final assessment. The ZRMS agrees with the Applicant to narrow the application window to the maximal growth stage of BBCH 19.	
<b>Two applications:</b>	
Application of F7B-39-30 at BBCH 10-11/12 gave transient chlorosis, deformations and growth inhibitions. The reference product gave similar results. At final assessment 1 case of growth inhibition (1N, 2N, var. BTS 9975) was observed. The reference product did not cause growth inhibition in this trial, at final assessment.	

In efficacy trials phytotoxic effect: chlorosis, deformations and growth inhibitions were also observed. All these effect were observed at final assessment in three efficacy trials. The reference product did not cause phytotoxic effect at final assessment.

**Three applications:**

Application of F7B-39-30 at BBCH 10-11/12 gave transient chlorosis, deformations. The reference product gave similar results. Growth inhibitions was observed in two trials and they were not transient (1N, 2N, var. BTS9975 and Lunella). The reference product gave similar results in one trial.

In efficacy trials transient phytotoxic effect: chlorosis, deformations and growth inhibitions were also observed. The reference product did cause deformations. In one trial with tested product, deformation were not transient.

**Four applications:**

Application of F7B-39-30 at BBCH 10-11/12 gave transient chlorosis, deformations. The reference product gave similar results. Growth inhibitions was observed in two trials and they were not transient (1N, 2N, var. BTS9975 and 1N, var. Lunella). The reference product gave similar results in one trial (2N).

In efficacy trials, not transient deformations were observed. The reference product cause 1 % deformations in one trial and they were transient.

It might concluded that application of F7B-39-30 can cause chlorosis, deformations and growth inhibitions when product applied in one or split applications.

**The Maritime EPPO climate zone**

Phytotoxicity symptoms were checked in efficacy trials and 13 selectivity trials carried out in 2021 and 2022, in CZ, DE, BE, UK, FR

In selectivity trials the following varieties were tested: Giono, BTS 1915, Lightning, Tessilia KWS, BTS 7300N, BTS 555, BTS 4860, BTS 9975, BTS 8840, Lunella, Chevrolet.

F7B-39-30 was applied at the do rate 1N and 2N in one and split applications at BBCH 10-11/12, BBCH 18/19 BBCH 36-39, with interval between applications 7-26 days, mainly 7 – 12 days and compared to the reference product Betasana SC.

**One application:**

Application of F7B-39-30 at BBCH 10-11/12 gave transient chlorosis, deformations and growth inhibitions. At final assessment 2 cases of growth inhibition (1N, 2N) and 1 case of deformation (2N) were observed. The reference product gave similar results.

Application of F7B-39-30 at BBCH 18/19 gave transient chlorosis, deformations and growth inhibitions. At final assessment 1 case of chlorosis (2N), 3 cases of deformation (1N, 2N var. BTS 9975, Tessilia KWS, BTS 4860), 2 cases of growth inhibition (1N, 2N) were observed. The reference product cause deformation on a much smaller scale and in gave similar degree of growth inhibition in one trial.

After application of F7B-39-30 at BBCH 36/39, more than 10% of deformations were observed (1N and 2N) and at final assessment in 1 trial deformation was still observed. The growth inhibition (2N) were observed in one trial. The reference product did not show any phytotoxic results. The ZRMS agrees with the Applicant to narrow the application window to the maximal growth stage of BBCH 19.

In efficacy trials phytotoxic effect - transient chlorosis, deformations and growth inhibitions were also observed.

**Two applications:**

Application of F7B-39-30 at BBCH 10-11/12 gave transient chlorosis, deformations and growth inhibitions. The reference product gave similar results. Not transient growth inhibitions was observed in one trial (1N, 2N, var. BTS9975). The reference product gave similar results in one trial.

In efficacy trials phytotoxic effect: chlorosis, deformations and growth inhibitions were also observed. All these effect were observed at final assessment in three efficacy trials. The reference product did not cause phytotoxic effect at final assessment.

**Three applications:**

Application of F7B-39-30 at BBCH 10-11/12 gave transient chlorosis, deformations. The reference product showed similar results. Not transient growth inhibitions was observed in two trials (1N, 2N, var. BTS9975 and Lunella). The reference product gave similar results in one trial.

In efficacy trials transient phytotoxic effect: chlorosis, deformations and growth inhibitions were also observed. The reference product did cause deformations. In one trial with tested product, deformation were not transient.

**Four applications:**

Application of F7B-39-30 at BBCH 10-11/12 gave transient chlorosis, deformations. The reference product gave similar results. Growth inhibitions was observed in two trials and they were not transient (1N, 2N, var. BTS9975 and 1N, var. Lunella). The reference product gave similar results in one trial (2N).

In efficacy trials, not transient deformations were observed. The reference product cause 1 % deformations in one trial and they were transient.

It might concluded that application of F7B-39-30 can cause chlorosis, deformations and growth inhibitions when product applied in one or split applications.

The applicant should have presented 2 selectivity trials to confirm the product use in fodder beet. It is necessary to submit post-authorized 2 selectivity trials for fodder beet conducted in the climatic zone of PL- NE, in the country of authorisation and placing on the market of the product, to confirm safety of fodder beet.

#### **The SE EPPO climate zone**

Phytotoxicity symptoms were checked in efficacy trials and 5 selectivity trials carried out in 2021 and 2022, in HU. The number of trials may not be sufficient, nevertheless ZRMS has concluded them.

In selectivity trials the following varieties were tested: Kipunji Smart (Conviso Smart), Tesla, Grandosa KWS, KWS Djerba (Conviso Smart), Komodo

F7B-39-30 was applied at the do rate 1N and 2N in one and split applications at BBCH 10-11/12, BBCH 18/19 BBCH 36-39, with interval between applications 7-8 days and compared to the reference product Betasana SC.

#### **One application:**

Application of F7B-39-30 at BBCH 10-11/12 gave transient chlorosis, deformations and growth inhibitions. The reference product gave similar results.

Application of F7B-39-30 at BBCH 18/19 gave transient chlorosis, deformations and growth inhibitions. At final assessment, 2 cases of deformation (1N, 2N var. Tesla, Grandosa KWS), 1 case of growth inhibition (1N, 2N) were observed. The reference product did not cause any negative results at final assessment.

After application of F7B-39-30 at BBCH 36/39, at final assessment 1 case of deformation (1N, 2N), 1 case of growth inhibition (more than 10% for 1N as well as for 2N) were observed. The reference product did not show any phytotoxic results in final assessment. The ZRMS agrees with the Applicant to narrow the application window to the maximal growth stage of BBCH 19.

In efficacy trials phytotoxic effect - transient deformations were observed. The reference product did not cause any deformation on the crop.

#### **Two applications:**

Application of F7B-39-30 at BBCH 10-11/12 gave transient deformations and growth inhibitions. The reference product gave similar results.

In efficacy trials phytotoxic effect: deformations and growth inhibitions were also observed. Deformations were observed at final assessment. The reference product did not cause phytotoxic effect at final assessment.

#### **Three applications:**

Application of F7B-39-30 at BBCH 10-11/12 gave transient deformations and growth inhibitions. The reference product gave better results.

In efficacy trials the product caused no transient small deformations (2% at final assessment.) The reference product gave less severe effects.

#### **Four applications:**

Application of F7B-39-30 at BBCH 10-11/12 gave transient deformations and growth inhibition. The reference product gave similar results.

In efficacy trials, transient deformations were observed. The reference product did not cause deformations.

It might concluded that application of F7B-39-30 can cause chlorosis, deformations and growth inhibitions when product applied in one or split applications.

#### **F7B-39-30 applied in programs**

The applicant has not included in the GAP table the use of the product F7B-39-30 as a mixture with other authorised on the markets herbicides. In the dRR/BAD, he explained that data in this paragraph are supporting data and no claim for the inclusion of specific programs on the proposed label will be made. The only intention is to include in the label proposal that F7B-39-30 may be generally tank mixed with any current sugar-beet protection herbicide present on the market. For the Maritime climate zone 6 trials were presented, for NE-5 trials and for SE 2 trials.

The Applicant has presented limited data showing selectivity of herbicides mixtures in the spray program of: Metamitron+Ethofumesate+Phenmedipham; Metamitron+Ethofumesate+Triflusalufuron; Metamitron+Ethofumesate+Phenmedipham+Triflusalufuron; Metamitron+Ethofumesate at target and double rates with and without F7B-39-30.

It is possible that addition of F7B-39-30 to the mixtures (spilt applications: 3 and 4 applications) in some cases may increase chlorosis, deformations and growth inhibitions and was in most cases transient. Nevertheless presented data is insufficient to draw the right conclusions.

#### F7B-39-30 applied in Conviso Smart System

Selectivity of F7B-39-30 on Conviso Smart variety (trial conducted in SE EEPO climate zone - HU22F7B060-JPA01) was tested. Phytotoxicity of F7B-39-30 dose rate 1N (2g) and 2N (4g) was compared to phytotoxicity of target dose rates 1N of Conviso applied 2 x 40g and 1 x 80g. Not transient deformation at 1N, 2N dose rate of F7B-39-30 and not transient growth inhibition at 2N dose rate of F7B-39-30 in this trial was observed. Conviso product at 1N dose rate did not cause any phytotoxic effects.

Selectivity of F7B-39-30 was tested in one efficacy trial (conducted in Spain) if added to CONVISO ONE spray program, at BBCH 12-14 and BBCH 16. In this trial, the addition of F7B-39-30 did not increase chlorosis, deformation and growth inhibition of conviso variety of sugar beet at BBCH 12-14. When the product was applied at BBCH16, chlorosis, necrosis and vigor slightly increased. At final assessment there were no symptoms of phytotoxicity.

It should be underlined that the above data is very limited and that definitive conclusions cannot be drawn.

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

The aim of any sugar beet grower is a high yielding crop. To ensure farmers that F7B-39-30 has no negative impact on the yield, all 21 selectivity trials were brought to yield and there was verified if the yield of treated crops was not negatively influenced compared to the untreated.

In addition to sugar beet, this document seeks as well approval in fodder beet. In sugar beet, the beet root is the most important plant part. In fodder beet, both the root and the produced leaf material are important as they are both aimed for animal feed. For this reason, 6 selectivity trials also collected data on the production of leaf material. Due to the similarity of the crops, we consider that the data on the yield of the leaf material obtained in sugar beet can be extrapolated to fodder beet.

As supporting data and because of agronomical interest, the yield was also assessed in 10 trials where F7B-39-30 was part of a weed control program including other herbicide active substances.

The data set supports the label statement that F7B-39-30 applied at 0.08L/ha. The trials include the N dose of 0.08L/ha and the 2N dose of 0.16 L/ha on sugar beet from BBCH 10-19.

#### **Formulations applied and application rates**

Details of the formulations tested in the selectivity yielded trials are provided below. Trials also received normal farming agronomic treatments.

#### **Yield effect of F7B-39-30 applied solo in selectivity trials**

There were 21 trials conducted between 2021 and 2022 in 7 countries (3 EPPO climatic zones) on sugar beet to test the selectivity of F7B-39-30 applications to the crop. These trials are the same as described in the Crop Safety Effect of F7B-39-30 applied solo (3.4.1.1).

Table 3.4-23 presents the trial distribution throughout the EPPO zone. Figure 3.4-4 is the map showing the location of the trials in the Maritime, North-East and South-East EPPO zone.

A climatic and edaphic comparison between trials carried out in Poland, Germany and Czech Republic



between 2021 & 2022 have been conducted (see Pag 11, Compliance with the Uniform Principles). Results demonstrated the similarity between those countries, from the edaphic and climatological point of view. Based on these results, it is concluded that the selectivity trials reporting yield and quality data conducted in Germany and Czech Republic could be used to support the registration of F7B-39-30 in Poland with a total 9 selectivity trials.

**Table 3.4-23: Effects on the yield of plants or plant products after application of F7B-39-30 applied alone: Trial distribution throughout EPPO zone.**

EPPO zone	Year Country	2021	2022	Total	Total EPPO zone
Maritime	Belgium	1	2	3	13
	Czech Republic	1	2	3	
	Germany	1	2	3	
	United Kingdom	1	2	3	
	France	-	1	1	
North-East	Poland	1	2	3	3
South-East	Hungary	1	4	5	5
	<b>Total</b>	<b>6</b>	<b>15</b>	<b>21</b>	<b>21</b>
	Total Central Zone	5	12	17	17
	Total Central Zone + UK	6	14	20	20
	Total Central Zone + UK Southern Zone +	6	15	21	21

Trials from Germany and Czech Republic to support the crop safety of F7B-39-30 in sugarbeet crop in Poland.

**Figure 3.4-4: Location of the selectivity trials in Central Zone when F7B-39-30 is applied alone – Maritime, North-East and South-East EPPO zones**



\*Some points on the map overlap

**Table 3.4-24: Presentation of reference standards used in SOLO trials (selectivity trials)**

Crop(s)	Reference standard	Active substance(s)	Formulation	Application rate in trials	
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			Type <sup>(1)</sup>	Concentration of a.s.	N dose	2N dose	Other relevant information <sup>(2)</sup>
Sugar beet	Betasana	phenmedipham	SC	160 g L/ha	1 L pr/ha	2 L pr/ha	NA
	F7B-39-30	Florpyrauxifen-benzyl	EC	25 g L/ha	0.08L pr/ha	0.16L pr/ha	NA

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

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

## Assessment methods

The root crop was harvested from the plots with a plot harvester or was taken manually. Root or leaf yield was weighed on site and measured in kg/plot. Then the yield was converted from kg/plot to T/ha.

## Statistical analysis

Statistical analysis (K2 test) if applicable for specific assessments were performed on each trial using Tukey's HSD (P=0.05) mean test to determine if the means are the same or different from each other. Where appropriate, treatment effects are also reported without statistical analysis in various terms in tables.

In the below summary tables, on the overall, the application of F7B-39-30 and the standard (Betasana SC) at N (960gai/ha) and 2N (1920gai/ha) doses and at different timings showed no statistically differences in comparison with the untreated, in terms of yield.

In addition, leaf yield was collected in 4 trials;to include in the proposed GAP the fodder beet crop (T/ha). Harvested leaves were collected from treatments with F7B-39-30 and Betasana applied at 2N, at the last single late application at BBCH18-19 and when it was applied 4 times (ABCD), plus the untreated. The results showed on the overall, no significant difference in terms of yield leaf, at the treatments applied at BBCH18-19 and/or after the 4 applications (ABCD) at 2N in Solo and program selectivity trials, respectively.

The summary tables only show the value as % to the untreated. In the Biological Assessment Dossier, single trials results show the real values and the value compared to the untreated.

## Yield of sugar beet roots

### Single application

Table 3.4-25 shows a summary of the results per EPPO and regulatory zone. 19 out of 20 experiments showed no negative effect of F7B-39-30 applied in a single application at the early stage on the sugar beet root yield compared to the untreated. The one differing from the untreated, did not differ statistically from Betasana® SC.

Table 3.4-26 shows the yield of the sugar beet roots when treated at N and 2N rate of F7B-39-30 in a single application in the late stage (BBCH18-19) of the sugar beet crop. No differences were observed amongst the treatments, including the untreated.

### Two applications AB

Table 3.4-27 shows the data of the yield of the sugar beet roots when treated at N and 2N rate of F7B-39-30 in two applications at timing A and timing B. No statistical difference was observed relative to the untreated after the use F7B-39-30, neither at N nor at 2N rate. As well, no statistical differences were noted compared to the reference product Betasana® SC at N and 2 N.

### Three applications ABC

Table 3.4-28 presents data of the yield of sugar beet roots (T/ha) after a split application of N and 2N into timing A, B and C of F7B-39-30.

No statistical lower difference was observed after the use of F7B-39-30 relative to untreated, not a N nor at 2N rate. Also, no significant differences were observed compared to the reference product Betasana® SC.



#### **Four applications ABCD**

Table 3.4-29 presents data of the yield of sugar beet roots (T/ha) when F7B-39-30 was applied at N and 2N rate in four application timings A, B, C and D.

No statistical lower difference was observed after the use of F7B-39-30 relative to untreated, not a N nor at 2N rate. Also, no significant differences were observed compared to the reference product Betasana® SC.

#### **Yield of sugar beet leaves**

In addition to sugar beet, this document seeks as well approval in fodder beet. In sugar beet, the beet root is the most important plant part. In fodder beet, both the root and the produced leaf material are important as they are both aimed for animal feed. For this reason, 6 selectivity trials also collected data on the production of leaf material. The 6 trials were covering the Maritime (1 trial), North-East (2) and South-East (3) EPPO zone. Due to the similarity of the crops, we consider that the data on the yield of the leaf material obtained in sugar beet can be extrapolated to fodder beet.

Yield of leaves were only collected for the treatments with one single application of 2 g a.i./ha at the later crop stage (BBCH 18-19) and for the four split applications (4 x 0.5 g a.i./ha). After weighing the fresh leaves the dry matter of the leaves was measured.

The effect on the fresh leaf yield and the corresponding dry matter after one application of 2 g a.i./ha are presented in respectively Table 3.4-30 and Table 3.4-31. Results show that no statistical differences between treatments or any negative effect is observed, except for one trial from the North-East EPPO zone: a statistical lower value in treatment F7B-39-30 in 2N relative to Betasana® SC in 2N and the untreated was observed.

The effect on both parameters when the target rate of F7B-39-30 is done in four applications of 0.5 g a.i./ha is presented in Table 3.4-32 and

Table 3.4-33. The first table shows the fresh weight of leaves and the latter table the dry weight of the leaves. No statistical differences were observed between treatments, nor any negative effect compared to the untreated.

**On the overall it can be concluded that an application of F7B-39-30, at 2 g ai/ha as a single application or split into 2 to 4 applications had no negative impact on the root of leaf yield of sugar beet, compared to the untreated and the standard Betasana ® SC.**

**Based on these results, it can be concluded that the application of F7B-39-30 does not impact the root and leaves yield on sugar beet crops and by extrapolation also fodder beet crops.**

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**Table 3.4-25: Summary of the root yield impact of F7B-39-30 when applied at 1 application (A) (BBCH 10-11/12) on sugar beet by EPPO zone**

EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha and % relative to untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
Maritime	BEAVA	TESSILIA KWS	109.79	a	100.00	120.93	a	100.00	112.66	a	100.00	109.20	a	100.00	107.06	a
Maritime	BEAVA	BTS 4860 N	126.01	a	96.28	116.53	a	87.97	126.75	a	95.99	133.05	a	100.21	134.16	a
Maritime	BEAVA	TESSILIA KWS	122.00	a	94.98	124.13	a	96.61	125.40	a	97.52	125.01	a	97.32	128.71	a
Maritime	BEAVA	BTS-555	57.53	a	99.70	58.01	a	100.53	58.96	a	102.16	59.04	a	102.28	57.75	a
Maritime	BEAVA	BTS9975	66.20	abc	70.80	48.88	c	52.27	78.10	abc	83.53	79.85	abc	85.40	93.50	ab
Maritime	BEAVA	BTS-8840	78.37	a	99.40	79.18	a	100.49	80.03	a	101.53	79.32	a	100.61	78.85	a
Maritime	BEAVA	BTS 7300 N	87.00	a	92.47	86.95	a	92.65	92.75	a	99.09	91.63	a	97.28	94.38	a
Maritime	BEAVA	Lunella	82.99	a	99.62	86.81	a	104.21	83.41	a	100.14	88.66	a	106.44	83.30	a
Maritime	BEAVA	Chevrolet	91.34	abc	97.78	94.20	ab	100.92	91.29	abc	97.95	98.57	a	105.50	93.53	ab
Maritime	BEAVA	Lightning	108.65	a	103.21	102.98	a	98.25	99.50	a	94.14	103.95	a	97.16	107.43	a
Maritime	BEAVA	BTS 1915	43.18	a	96.97	45.85	a	102.98	45.65	a	102.53	44.30	a	99.49	44.53	a
Maritime	BEAVA	Lightning	93.10	a	113.64	92.83	a	113.30	87.10	a	106.32	95.15	a	116.14	81.93	a
Maritime	BEAVA	Giono	76.20	a	100.80	77.83	a	102.95	73.16	a	96.75	73.57	a	97.31	75.61	a
North-East	BEAVA	BTS 9975	36.80	a	90.14	38.90	a	96.46	31.10	a	75.91	40.50	a	99.71	41.20	a
North-East	BEAVA	Everest	62.54	a	104.55	62.60	a	104.64	65.82	a	110.03	62.85	a	105.06	59.82	a
North-East	BEAVA	Wojownik	45.58	a-d	98.64	52.83	a-d	112.91	63.81	a	140.49	45.69	a-d	100.47	46.78	a-d
South-East	BEAVA	KOMODO	40.92	ab	110.75	42.23	ab	111.18	43.31	ab	118.58	40.25	ab	107.04	37.09	ab
South-East	BEAVA	Kipunji Smart (Conviso Smart)	86.52	a	78.23	87.21	a	78.86	113.66	a	102.77	104.59	a	94.57	110.59	a
South-East	BEAVA	Tesla	58.55	ab	96.98	63.22	ab	104.70	61.21	abc	101.37	65.14	a	107.89	60.38	ab
South-East	BEAVA	Grandosa KWS	104.12	a	98.29	94.10	a	90.30	97.27	a	92.89	97.70	a	92.50	106.49	a
Maritime EPPO zone (N=13)		Mean			97.36			96.40			98.28			100.40		
		Min			70.80			52.27			83.53			85.40		
		Max			113.64			113.30			106.32			116.14		
North-East EPPO zone (N=3)		Mean			97.78			104.67			108.81			101.75		
		Min			90.14			96.46			75.91			99.71		
		Max			104.55			112.91			140.49			105.06		
North-East EPPO zone + Czech & Germany as Support (N=7)		Mean			94.4			96.0			101.4			100.5		
		Min			70.8			52.3			75.9			85.4		
		Max			104.6			112.9			140.5			106.4		
South-East EPPO zone (N=4)		Mean			96.06			96.26			103.90			100.50		
		Min			78.23			78.86			92.89			92.50		
		Max			110.75			111.18			118.58			107.89		
Central Zone (N=16)		Mean			95.54			95.92			101.25			100.14		
		Min			70.80			52.27			75.91			85.40		
		Max			110.75			112.91			140.49			107.89		
Central Zone + UK + France (N=20)		Mean			97.16			97.61			100.98			100.62		
		Min			70.80			52.27			75.91			85.40		

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EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha and % relative to untreated)									
			F7B-39-30 @1N	%Unt.	F7B-39-30 @2 N	%Unt.	BETASANA SC @1N	%Unt.	BETASANA SC @2N	%Unt.	UNTREATED	
		Max			113.64		113.30		140.49		116.14	

Means followed by same letter in the row do not significantly differ

**Table 3.4-26: Summary of the root yield impact of F7B-39-30 when applied at 1 application (E) (BBCH 18/19) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha and % relative to untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
Maritime	BEAVA	TESSILIA KWS	112.96	a	105.51	102.68	a	95.91	113.41	a	105.93	109.86	a	102.62	107.06	a
Maritime	BEAVA	BTS 4860 N	119.88	a	90.75	132.59	a	101.25	123.28	a	92.86	123.87	a	94.34	134.16	a
Maritime	BEAVA	TESSILIA KWS	128.06	a	99.63	126.56	a	98.49	125.72	a	97.81	121.30	a	94.34	128.71	a
Maritime	BEAVA	BTS-555	58.34	a	101.10	59.08	a	102.38	58.49	a	101.35	58.90	a	102.06	57.75	a
Maritime	BEAVA	BTS9975	69.43	abc	74.25	62.73	abc	67.09	51.63	bc	55.21	67.80	abc	72.51	93.50	ab
Maritime	BEAVA	BTS-8840	79.11	a	100.38	78.85	a	100.06	79.47	a	100.87	78.97	a	100.23	78.85	a
Maritime	BEAVA	BTS 7300 N	87.95	a	93.44	94.30	a	100.35	89.18	a	94.94	87.38	a	93.22	94.38	a
Maritime	BEAVA	Lunella	87.92	a	105.55	81.26	a	97.56	81.12	a	97.38	82.72	a	99.31	83.30	a
Maritime	BEAVA	Chevrolet	87.23	ab	93.65	81.13	b	86.84	93.10	ab	99.70	95.38	ab	102.23	93.53	ab
Maritime	BEAVA	Lightning	119.08	a	110.95	106.85	a	102.05	97.30	a	92.54	113.18	a	107.44	107.43	a
Maritime	BEAVA	BTS 1915	47.65	a	107.02	46.73	a	104.94	42.98	a	96.52	39.40	a	88.49	44.53	a
Maritime	BEAVA	Lightning	88.40	a	107.90	75.45	a	92.10	106.03	a	129.42	98.28	a	119.96	81.93	a
Maritime	BEAVA	Giono	74.57	a	98.61	72.07	a	95.29	77.83	a	102.97	74.82	a	98.93	75.61	a
North-East	BEAVA	BTS 9975	30.30	a	73.91	29.10	a	71.99	36.40	a	89.33	32.60	a	81.39	41.20	a
North-East	BEAVA	Everest	69.03	a	115.40	62.48	a	104.44	66.79	a	111.65	64.96	a	108.59	59.82	a
North-East	BEAVA	Wojownik	41.03	bcd	91.74	56.25	abc	121.69	42.94	a-d	91.80	45.39	a-d	104.20	46.78	a-d
South-East	BEAVA	KOMODO	39.68	ab	107.47	40.33	ab	108.45	42.63	ab	116.22	46.87	ab	124.10	37.09	ab
South-East	BEAVA	Kipunji Smart (Conviso Smart)	90.63	a	81.95	105.91	a	95.77	96.87	a	87.59	87.10	a	78.76	110.59	a
South-East	BEAVA	Tesla	53.94	ab	89.34	51.93	b	86.01	59.57	ab	98.66	56.71	ab	93.93	60.38	ab
South-East	BEAVA	Grandosa KWS	107.57	a	102.89	97.38	a	91.94	99.03	a	93.60	102.53	a	97.62	106.49	a
Maritime EPPO zone (N=13)		Mean			99.13			95.71			97.50			98.13		
		Min			74.25			67.09			55.21			72.51		
		Max			110.95			104.94			129.42			119.96		
North-East EPPO zone (N=3)		Mean			93.68			99.37			97.60			98.06		
		Min			73.91			71.99			89.33			81.39		
		Max			115.40			121.69			111.65			108.59		
North-East EPPO zone + Czech & Germany as Support (N=7)		Mean			93.6			92.8			92.3			95.5		
		Min			73.9			67.1			55.2			72.5		
		Max			115.4			121.7			111.7			108.6		
South-East EPPO zone (N=4)		Mean			95.41			95.54			99.02			98.60		
		Min			81.95			86.01			87.59			78.76		

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EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha and % relative to untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
		Max			107.47			108.45			116.22			124.10		
Central Zone (N=16)		Mean			95.43			95.64			95.93			96.84		
		Min			73.91			67.09			55.21			72.51		
		Max			115.40			121.69			116.22			124.10		
		Mean			97.57			96.23			97.82			98.21		
Central Zone + UK + France (N=20)		Min			73.91			67.09			55.21			72.51		
		Max			115.40			121.69			129.42			124.10		

Means followed by same letter in the row do not significantly differ

**Table 3.4-27: Summary of the root yield impact of F7B-39-30 when applied at 2 applications (AB) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha and % relative to untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
Maritime	BEAVA	TESSILIA KWS	114.82	a	107.25	116.30	a	108.63	110.21	a	102.94	111.95	a	104.57	107.06	a
Maritime	BEAVA	BTS 4860 N	127.45	a	96.09	128.47	a	97.40				134.46	a	101.23	134.16	a
Maritime	BEAVA	TESSILIA KWS	125.10	a	97.38	125.14	a	97.36				122.33	a	95.14	128.71	a
Maritime	BEAVA	BTS-555	58.99	a	102.26	58.60	a	101.51	58.48	a	101.36	57.93	a	100.33	57.75	a
Maritime	BEAVA	BTS9975	65.40	abc	69.95	63.10	abc	67.49	89.25	abc	95.45	95.05	a	101.66	93.50	ab
Maritime	BEAVA	BTS-8840	79.63	a	101.02	78.54	a	99.66	79.58	a	100.97	79.48	a	100.87	78.85	a
Maritime	BEAVA	BTS 7300 N	91.80	a	97.32	84.58	a	90.01	93.18	a	98.99	91.83	a	97.78	94.38	a
Maritime	BEAVA	Lunella	83.86	a	100.67	88.71	a	106.50	91.24	a	109.54	87.36	a	104.88	83.30	a
Maritime	BEAVA	Chevrolet	93.89	ab	100.19	95.38	ab	102.02	96.51	ab	103.21	97.91	a	104.78	93.53	ab
Maritime	BEAVA	Lightning	106.40	a	102.10	109.75	a	105.74	99.70	a	94.75	109.23	a	102.75	107.43	a
Maritime	BEAVA	BTS 1915	46.53	a	104.49	43.20	a	97.02	41.85	a	93.99	46.53	a	104.49	44.53	a
Maritime	BEAVA	Lightning	89.20	a	108.88	91.00	a	111.08	91.50	a	111.69	82.45	a	100.64	81.93	a
Maritime	BEAVA	Giono	74.72	a	98.83	74.59	a	98.62				75.23	a	99.50	75.61	a
North-East	BEAVA	BTS 9975	35.60	a	89.09	35.30	a	87.97	38.40	a	96.19	41.80	a	104.22	41.20	a
North-East	BEAVA	Everest	66.95	a	111.91	66.04	a	110.40	66.85	a	111.75	61.62	a	103.00	59.82	a
North-East	BEAVA	Wojownik	36.14	cd	83.69	61.67	ab	139.64	60.94	ab	131.74	63.72	a	141.24	46.78	a-d
South-East	BEAVA	KOMODO	46.04	a	125.43	33.08	b	89.16	48.87	a	131.56	40.53	ab	106.65	37.09	ab
South-East	BEAVA	Kipunji Smart (Conviso Smart)	83.56	a	75.56	111.55	a	100.87	120.48	a	108.94	106.68	a	96.46	110.59	a
South-East	BEAVA	Tesla	60.13	ab	99.59	57.84	ab	95.79	57.47	ab	95.19	64.13	a	106.22	60.38	ab
South-East	BEAVA	Grandosa KWS	106.92	a	100.64	111.23	a	103.78	96.45	a	92.09	103.28	a	97.77	106.49	a

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EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha and % relative to untreated)									
			F7B-39-30 @1N	%Unt.	F7B-39-30 @2 N	%Unt.	BETASANA SC @1N	%Unt.	BETASANA SC @2N	%Unt.	UNTREATED	
Maritime EPPO zone (N=13)		Mean		98.96		98.69		91.67		90.82		
		Min		69.95		67.49		46.53		44.53		
		Max		108.88		111.08		134.46		134.16		
North-East EPPO zone (N=3)		Mean		94.90		112.67		55.71		49.27		
		Min		83.69		87.97		41.80		41.20		
		Max		111.91		139.64		63.72		59.82		
North-East EPPO zone + Czech & Germany as Support (N=7)		Mean		93.8		102.0		107.0		108.7		
		Min		70.0		67.5		95.5		100.9		
		Max		111.9		139.6		131.7		141.2		
South-East EPPO zone (N=4)		Mean		100.30		97.40		78.65		78.64		
		Min		75.56		89.16		40.53		37.09		
		Max		125.43		103.78		106.68		110.59		
Central Zone (N=16)		Mean		97.38		99.89		85.00		83.35		
		Min		69.95		67.49		40.53		37.09		
		Max		125.43		139.64		134.46		134.16		
Central Zone + UK + France (N=20)		Mean		98.62		100.53		83.67		82.15		
		Min		69.95		67.49		40.53		37.09		
		Max		125.43		139.64		134.46		134.16		

Means followed by same letter in the row do not significantly differ

Table 3.4-28: Summary of the root yield impact of F7B-39-30 when applied at 3 applications (ABC) on sugar beet by EPPO zone.

EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha and % relative to untreated)											
			F7B-39-30 @1N	%Unt.	F7B-39-30 @2 N	%Unt.	BETASANA A SC @1N	%Unt.	BETASANA A SC @2N	%Unt.	UNTREAT ED			
Maritime	BEAVA	TESSILIAKWS	114.16	a	107.06	110.24	a	107.06	107.69	a	107.06	108.63	a	107.06
Maritime	BEAVA	BTS 4860 N	130.69	a	99.45	127.39	a	96.46				125.76	a	94.94
Maritime	BEAVA	TESSILIAKWS	125.02	a	97.46	125.74	a	97.78				121.64	a	94.56
Maritime	BEAVA	BTS-555	57.03	a	98.81	58.66	a	101.65	58.25	a	100.86	57.95	a	100.36
Maritime	BEAVA	BTS9975	59.55	abc	63.69	63.83	abc	68.26	75.20	abc	80.43	85.73	abc	91.68
Maritime	BEAVA	BTS-8840	80.23	l	101.80	79.40	l	100.73	79.57	l	100.96	79.93	l	101.44
Maritime	BEAVA	BTS 7300 N	92.15	a	97.74	91.58	a	97.13	92.75	a	98.79	90.45	a	96.36
Maritime	BEAVA	Lunella	87.23	a	104.72	83.28	a	99.97	87.31	a	104.81	85.06	a	102.11

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EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha and % relative to untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASAN A SC @1N		%Unt.	BETASAN A SC @2N		%Unt.	UNTREAT ED	
Maritime	BEAVA	Chevrolet	90.00	ab	96.76	93.53	ab	100.28	97.83	ab	104.98	98.88	a	105.83	93.53	ab
Maritime	BEAVA	Lightning	101.10	a	95.86	112.48	a	108.15	100.95	a	96.48	119.95	a	112.62	107.43	a
Maritime	BEAVA	BTS 1915	50.53	a	113.48	56.08	a	125.94	46.75	a	105.00	39.31	a	88.28	44.53	a
Maritime	BEAVA	Lightning	97.73	a	119.29	83.73	a	102.20	105.80	a	129.14	79.85	a	97.47	81.93	a
Maritime	BEAVA	Giono	74.49	a	98.52	76.78	a	101.56				75.61	a	100.00	75.61	a
North-East	BEAVA	BTS 9975	34.10	a	85.63	35.00	a	89.31	42.70	a	106.06	39.10	a	95.66	41.20	a
North-East	BEAVA	Everest	64.44	a	107.72	64.63	a	108.03	61.23	a	102.36	61.31	a	102.48	59.82	a
North-East	BEAVA	Wojownik	55.92	abc	120.63	32.28	d	72.58	57.33	ab	128.49	59.03	ab	130.25	46.78	a-d
South-East	BEAVA	KOMODO	43.37	ab	116.86	46.43	ab	123.96	39.05	ab	105.71	41.93	ab	114.32	37.09	ab
South-East	BEAVA	Kipunji Smart (Conviso Smart)	116.14	a	105.02	102.80	a	92.96	110.64	a	100.05	122.21	a	110.50	110.59	a
South-East	BEAVA	Tesla	60.07	ab	99.49	58.29	ab	96.54	65.00	a	107.66	62.45	ab	103.43	60.38	ab
South-East	BEAVA	Grandosa KWS	92.11	a	87.10	103.35	a	97.30	97.59	a	91.93	106.79	a	100.30	106.49	a
Maritime EPPO zone (N=13)		Mean			99.59			100.55			102.85			99.44		
		Min			63.69			68.26			80.43			88.28		
		Max			119.29			125.94			129.14			112.62		
North-East EPPO zone (N=3)		Mean			104.66			89.97			112.30			109.46		
		Min			85.63			72.58			102.36			95.66		
		Max			120.63			108.03			128.49			130.25		
North-East EPPO zone + Czech & Germany as Support (N=7)		Mean			97.3			91.3			104.0			104.2		
		Min			63.7			68.3			80.4			91.7		
		Max			120.6			108.0			128.5			130.3		
South-East EPPO zone (N=4)		Mean			102.12			102.69			101.33			107.14		
		Min			87.10			92.96			91.93			100.30		
		Max			116.86			123.96			107.66			114.32		
Central Zone (N=16)		Mean			99.37			96.88			102.87			103.20		
		Min			63.69			68.26			80.43			91.68		
		Max			120.63			123.96			128.49			130.25		
Central Zone + UK + France (N=20)		Mean			100.85			99.39			104.16			102.48		
		Min			63.69			68.26			80.43			88.28		
		Max			120.63			125.94			129.14			130.25		

Means followed by same letter in the row do not significantly differ

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**Table 3.4-29: Summary of the root yield impact of F7B-39-30 when applied at 4 applications (ABCD) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha and % relative to untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
Maritime	BEAVA	TESSILIA KWS	113.50	a	106.01	110.65	a	103.35	112.57	a	105.15	108.23	a	101.09	107.06	a
Maritime	BEAVA	BTS 4860 N	132.92	a	100.62	125.47	a	95.36				133.48	a	101.39	134.16	a
Maritime	BEAVA	TESSILIA KWS	124.08	a	96.66	124.42	a	96.95				123.39	a	96.00	128.71	a
Maritime	BEAVA	BTS9975	56.35	abc	60.27	50.23	g	53.72	85.28	abc	91.20	53.43	abc	57.14	93.50	ab
Maritime	BEAVA	BTS-8840	79.48	a	100.82	78.84	a	100.01	78.95	a	100.18	78.66	a	99.77	78.85	a
Maritime	BEAVA	BTS 7300 N	92.23	a	98.05	83.83	a	89.32	89.63	a	95.40	86.43	a	92.03	94.38	a
Maritime	BEAVA	Lunella	82.69	a	99.26	86.32	a	103.63	87.03	a	104.48	84.92	a	101.95	83.30	a
Maritime	BEAVA	Chevrolet	92.96	ab	99.58	89.70	ab	96.22	93.13	ab	99.53	100.72	a	107.95	93.53	ab
Maritime	BEAVA	Lightning	101.98	a	97.02	109.13	a	102.38	105.90	a	98.97	115.95	a	108.72	107.43	a
Maritime	BEAVA	BTS 1915	39.73	a	89.22	45.65	a	102.53	42.08	a	94.50	44.08	a	98.99	44.53	a
Maritime	BEAVA	Lightning	94.38	a	115.20	91.25	a	111.38	86.08	a	105.07	86.08	a	105.07	81.93	a
Maritime	BEAVA	Giono	75.49	a	99.84	74.67	a	98.76				73.23	a	96.85	75.61	a
North-East	BEAVA	BTS 9975	32.00	a	78.20	42.10	a	105.6	34.70	a	87.24	41.70	a	102.92	41.20	a
North-East	BEAVA	Everest	63.61	a	106.32	66.78	a	111.64	61.89	a	103.45	62.65	a	104.73	59.82	a
North-East	BEAVA	Wojownik	49.72	a-d	118.47	49.17	a-d	109.25	54.92	abc	122.20	52.22	a-d	115.13	46.78	a-d
South-East	BEAVA	KOMODO	39.29	ab	105.30	48.29	ab	131.55	40.44	ab	107.37	44.03	ab	118.70	37.09	ab
South-East	BEAVA	Kipunji Smart (Convviso Smart)	119.28	a	107.86	121.16	a	109.56	102.48	a	92.67	109.66	a	99.16	110.59	a
South-East	BEAVA	Tesla	61.64	ab	102.10	57.02	ab	94.43	61.49	ab	101.85	65.24	a	108.05	60.38	ab
South-East	BEAVA	Grandosa KWS	96.90	a	91.82	104.51	a	100.26	101.81	a	95.77	115.16	a	109.38	106.49	a
Maritime EPPO zone (N=13)		Mean			97.32			96.54			99.57			97.50		
		Min			60.27			53.72			91.20			57.14		
		Max			115.20			111.38			105.15			108.72		
North-East EPPO zone (N=3)		Mean			101.00			108.81			104.30			107.59		
		Min			78.20			105.55			87.24			102.92		
		Max			118.47			111.64			122.20			115.13		
North-East EPPO zone + Czech & Germany as Support (N=7)		Mean			94.7			97.2			101.2			98.5		
		Min			60.3			53.7			87.2			57.1		
		Max			118.5			111.6			122.2			115.1		
South-East EPPO zone (N=4)		Mean			101.77			108.95			99.41			108.82		
		Min			91.82			94.43			92.67			99.16		
		Max			107.86			131.55			107.37			118.70		
Central Zone (N=16)		Mean			98.37			100.14			100.55			100.99		
		Min			60.27			53.72			87.24			57.14		
		Max			118.47			131.55			122.20			118.70		



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EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha and % relative to untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
Central Zone + UK + France (N=20)		Mean			98.76			100.86			100.37			101.28		
		Min			60.27			53.72			87.24			57.14		
		Max			118.47			131.55			122.20			118.70		

Means followed by same letter in the row do not significantly differ

**Table 3.4-30: Summary of the fresh leaf yield (fodder beet) impact of F7B-39-30 when applied at 1 application (E) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	Yield – Leaves (T/ha and % relative to untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
North-East	BEAVA	Wojownik	18.55	a	123.71	18.09	a	116.34	20.99	a						
North-East	BEAVA	Everest	25.34	a	123.71	22.96	a	116.34	20.99	a						
South-East	BEAVA	Kipunji Smart (Conviso Smart)				13.01	a	128.90				12.07	a	119.62	10.09	a
South-East	BEAVA	Tesla				13.86	c	89.64				15.12	b	97.75	15.47	ab
South-East	BEAVA	Grandosa KWS	37.45	a	104.11	32.63	a	90.72	33.06	a	91.90	37.41	a	104.00	35.97	a
Maritime	BEAVA	Giono				18.50	a	101.09				19.50	a	106.56	18.30	a
Maritime EPPO zone (N=1)		Mean						101.09						106.56		
		Min						101.09						106.56		
		Max						101.09						106.56		
North-East EPPO zone (N=2)		Mean	18.55	a	123.71	18.55	a	123.71	18.55	a	123.71	18.09	a	116.34	20.99	a
		Min	18.55	a	123.71	18.55	a	123.71	18.55	a	123.71	18.09	a	116.34	20.99	a
		Max	18.55	a	123.71	18.55	a	123.71	18.55	a	123.71	18.09	a	116.34	20.99	a
South-East EPPO zone (N=3)		Mean					103.09						107.13			
		Min						89.64						97.75		
		Max						128.90						119.62		
Central Zone (N=5)		Mean					108.24						109.43			
		Min						89.64						97.75		
		Max						128.90						119.62		
Central Zone + France (N=6)		Mean					106.81						108.86			
		Min						89.64						97.75		

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EPPO zone	Crop	Variety	Yield – Leaves (T/ha and % relative to untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
		Max						128.90						119.62		

Means followed by same letter in the row do not significantly differ

**Table 3.4-31: Summary of the dry matter leaf yield (fodder beet) impact of F7B-39-30 when applied at 1 application (E) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	DRYMAT leaves (T/ha)							
			F7B-39-30 @2 N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
North-East	BEAVA	Wojownik	4.17	a		3.77	a			
North-East	BEAVA	Everest	12.04	a	123.61	11.33	a	116.24	9.74	a
South-East	BEAVA	Kipunji Smart (Conviso Smart)	1.13	a	134.42	1.05	a	124.63	0.84	a
South-East	BEAVA	Tesla	7.83	a	94.85	8.43	a	102.09	8.26	a
North-East EPPO zone (N=2)		Mean			123.61			116.24		
		Min			123.61			116.24		
		Max			123.61			116.24		
South-East EPPO zone (N=2)		Mean			114.64			113.36		
		Min			94.85			102.09		
		Max			134.42			124.63		
Central Zone (N=4)		Mean			117.63			114.32		
		Min			94.85			102.09		
		Max			134.42			124.63		

Means followed by same letter in the row do not significantly differ

**Table 3.4-32: Summary of the fresh leaf yield (Fodder beet) impact of F7B-39-30 when applied at 4 applications (ABCD) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	Fresh leaves (T/ha and % relative to untreated)														
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED		
North-East	BEAVA	Wojownik				18.40	a					18.45	a				
North-East	BEAVA	Everest				23.68	a	115.63				23.05	a	112.26	20.99	a	
South-East	BEAVA	Kipunji Smart (Conviso Smart)				12.82	a	127.03				12.41	a	122.97	10.09	a	
South-East	BEAVA	Tesla				15.77	ab	101.94				16.27	a	105.21	15.47	ab	
South-East	BEAVA	Grandosa KWS	32.21	a	89.53	32.13	a	89.31	33.14	a	92.13	39.90	a	110.91	35.97	a	

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EPPO zone	Crop	Variety	Fresh leaves (T/ha and % relative to untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
Maritime	BEAVA	Giono				20.70	a	113.11				19.80	a	108.20	18.30	a
Maritime EPPO zone (N=1)		Mean						113.11						108.20		
		Min						113.11						108.20		
		Max						113.11						108.20		
North-East EPPO zone (N=2)		Mean						115.63						112.26		
		Min						115.63						112.26		
		Max						115.63						112.26		
South-East EPPO zone (N=3)		Mean						106.09						113.03		
		Min						89.31						105.21		
		Max						127.03						122.97		
Central Zone (N=5)		Mean						108.48						112.84		
		Min						89.31						105.21		
		Max						127.03						122.97		
Central Zone + France (N=6)		Mean						109.41						111.91		
		Min						89.31						105.21		
		Max						127.03						122.97		

Means followed by same letter in the row do not significantly differ

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**Table 3.4-33: Summary of the dry matter leaf yield (fodder beet) impact of F7B-39-30 when applied at 4 applications (ABCD) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	DRYMAT leaves (T/ha and % relative to untreated)							
			F7B-39-30 @2 N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
North-East	BEAVA	Wojownik	4.21	a		3.83	a			
North-East	BEAVA	Everest	10.85	a	111.68	10.27	a	104.96	9.74	a
South-East	BEAVA	Kipunji Smart (Convisto Smart)	1.08	a	128.19	1.06	a	125.22	0.84	a
South-East	BEAVA	Tesla	8.68	a	105.18	7.97	a	96.49	8.26	a
North-East EPPO zone (N=2)		Mean			111.68				104.96	
		Min			111.68				104.96	
		Max			111.68				104.96	
South-East EPPO zone (N=2)		Mean			116.68				110.85	
		Min			105.18				96.49	
		Max			128.19				125.22	
Central Zone (N=4)		Mean			115.02				108.89	
		Min			105.18				96.49	
		Max			128.19				125.22	

Means followed by same letter in the row do not significantly differ

### Yield effect of F7B-39-30 applied in programs in selectivity trials

There were 10 trials conducted between 2021 and 2022 in 6 countries (Netherlands, Czech Republic, Germany, United Kingdom, Poland and Hungary) on sugar beets to test the impact of F7B-39-30 applications in program with other products, on the selectivity, the yield and quality of roots. The 10 trials were covering all three EPPO zones of the Central regulatory zone. Two trials from UK do not belong to the Central regulatory zone but as they were conducted in the Maritime zone they are considered as relevant to be included in this dossier. All details of these trials were already presented in **Błąd! Nie można odnaleźć źródła odwołania. (Selectivity trials with F7B-39-30 applied in program)**. As written in the introduction of **Błąd! Nie można odnaleźć źródła odwołania.**, the results of these selectivity trials with F7B-39-30 set up in program serve as supporting data and are more of practical interest. No claim for the inclusion of **specific** programs on the proposed label are made.

The distribution of these trials across countries, EPPO zones, years and regulatory zone is presented in Table 3.4-34 and visually on Figure 3.4-5

### Material and Methods

All material and methods for presentation trials are the same as in first selectivity chapter 3.4.1.

**Table 3.4-34: Effects on the quality of plants or plant products: Trial distribution throughout EPPO zone when F7B-39-30 is applied in program**

EPPO zone	Year Country	2021	2022	Total	Total EPPO zone
Maritime	Netherlands		1	1	6
	Czech Republic	1	1	2	
	Germany		1	1	
	United Kingdom	1	1	2	
North-East	Poland	1	1	2	2
South-East	Hungary	1	1	2	2
	<b>Total Central Zone + UK</b>	<b>4</b>	<b>6</b>	<b>10</b>	<b>10</b>
	Total Central Zone	3	5	8	8

**Figure 3.4-5: Location of the selectivity trials of F7B-39-30 applied in programs across Maritime, North-East and South-East EPPO zones**



\*Some points on the map overlap

### Formulations applied and application rates

The following treatments were applied in the selectivity trials.

**Table 3.4-35: Formulations tested in the selectivity trials carried for the yield and quality effect of F7B-39-30 in sugar beets.**

Formulation	Type	Active Substances	Concentration and Units	Rates g a.s. or a.e./ha	Rates L or Kg pr/ha
Goltix® 700 SC	Herbicide	metamitron	700 g ai/l	350-700	0.5-1.0
TRAMAT® F	Herbicide	ethofumesatee	500 g ai/l	125-250	0.25-0.5
Actirob® B	Adjuvant	Rapeseed oil methyl ester 733 g in 1 l	-	-	0.5-1.0
BETASANA® SC	Herbicide	phenmedipham	160 g ai/l	160-400	1.0-2.5
F7B-39-30	Herbicide	florpyrauxifen-benzyl	25 g ai/l	0.5-1.33	0.02-0.053
SAFARI	Herbicide	triflusalufuron-methyl	500 g ai/kg	10-15	20-30

### Assessment methods

The root crop was harvested from the plots with a plot harvester or was taken manually. Root or leaf yield was weighed on site and measured in kg/plot. Then the yield was converted from kg/plot to T/ha. Sugar and molasses content measured in specialized laboratories or sugar factories. Results are expressed in % for sugar content and in mmoles or % for Na, K and N content. Sugar and molasses in presented tables include also % calculation of Untreated plots.

### Statistical analysis

Statistical analysis (K2 test) if applicable for specific assessments were performed on each trial using Tukey's HSD (P=0.05) mean test to determine if the means are the same or different from each other. Where appropriate, treatment effects are also reported without statistical analysis in various terms in tables.

To make the headers in the tables easier to understand, here, below is present the program and list of treatments that come from the protocols: EA21F&B038H and EA22F7B025H. The abbreviations/codes of the headings come from the name of the active substance. An overview of the rates and combinations is presented in Table 3.4-36.

### Three applications ABC in different programs:

- BETASANA® SC+Goltix® 700 SC+TRAMAT® F+Actirob® B @160+350+125+0.5 G AI/HA+L PR/HA & BETASANA® SC+Goltix® 700 SC+TRAMAT® F+Actirob® B @200+350+125+0.5 G AI/HA+L PR/HA = **MEP 1N (= single rate)**
- BETASANA® SC+Goltix® 700 SC+TRAMAT® F+Actirob® B @320+700+250+1 G AI/HA+L PR/HA & BETASANA® SC+Goltix® 700 SC+TRAMAT® F+Actirob® B @400+700+250+1 G AI/HA+L PR/HA = **MEP 2N (= double rate)**
- BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+Actirob® B @160+0.67+350+125+0.5 G AI/HA+L PR/HA & BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+Actirob® B @200+0.65+350+125+0.5 G AI/HA+L PR/HA = **MEP+F7B-39-30 1N (= single rate)**
- BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+Actirob® B @320+1.33+700+250+1 G AI/HA+L PR/HA & BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+Actirob® B @400+1.3+700+250+1 G AI/HA+L PR/HA = **MEP+F7B-39-30 2N (= double rate)**
- BETASANA® SC+Goltix® 700 SC+TRAMAT® F+SAFARI+Actirob® B @400+700+250+10+15+1 G AI/HA+L PR/HA = **MEPT 2N (= single rate)**
- BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+SAFARI+Actirob® B @400+1.3+700+250+10+15+1 G AI/HA+L PR/HA = **MEPT+F7B-39-30 2N (= double rate)**

### Four applications ABCD in different programs:

- BETASANA® SC+Goltix® 700 SC+TRAMAT® F+Actirob® B @160+350+125+0.5 G AI/HA+L PR/HA = **MEP 1N (= single rate)**
- BETASANA® SC+Goltix® 700 SC+TRAMAT® F+Actirob® B @320+700+250+1 G AI/HA+L PR/HA = **MEP 2N (= double rate)**
- BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+Actirob® B @160+0.5+350+125 G AI/HA+L PR/HA = **MEP+F7B-39-30 1N (= single rate)**
- BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+Actirob® B @320+1+700+250 G AI/HA+L PR/HA = **MEP+F7B-39-30 2N (= double rate)**
- Goltix® 700 SC+TRAMAT® F+SAFARI+Actirob® B @700+250+10+1 G AI/HA+L PR/HA = **MET 2N (= double rate)**
- F7B-39-30+Goltix® 700 SC+TRAMAT® F+SAFARI+Actirob® B @1+700+250+10 G AI/HA+L PR/HA = **MET+F7B-39-30 2N (= double rate)**
- BETASANA® SC+Goltix® 700 SC+TRAMAT® F+SAFARI+Actirob® B @320+700+250+10+1 G AI/HA+L PR/HA = **MEPT 2N (= double rate)**
- BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+SAFARI+Actirob® B @320+1+700+250+10 G AI/HA+L PR/HA = **MEPT+F7B-39-30 2N (= double rate)**

Table 3.4-37 shows data of yield roots in % of untreated obtained from 10 trials spread over the Maritime, North-East and South-East and all conducted in 2021-2022. The results show the yield of the roots in case of three applications ABC. . 9 of 10 trials noted no negative impact of yield after adding F7B-39-30 at N or 2N to conventional weed control programs. Only one trial from the Maritime zone recorded lower, significant yield in treatment MEPT+F7B-39-30 2N relative to untreated. However, when compared to MEPT 2N without F7B-39-30 no statistically significant difference is observed.

Table 3.4-38 shows similar data but when four applications are applied in the programs. Regardless the weed control program, root yield doesn't record any negative, statistical lower value relative to untreated after adding F7B-39-30 in none of the EPPO-zones.

#### **Summary and evaluation of F7B-39-30 applied in programs on yield**

The result from the statistical analysis shows that there was no impact on root yield from F7B-39-30 applied in programs trials at both N and 2N rate. In trials where certain level of crop phytotoxicity was observed the results from yield showed no negative impact. Based on these results, it can be concluded that F7B-39-30 applied in programs is safe for the sugar beet crop.



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**Table 3.4-36: Trials designed from protocols EA21F&B038H and EA22F7B025H, F7B-39-30 used in program.**

		F7B-39-30 (g/ha)	Goltix® (g/ha) (metamitron)	Tramat® (g/ha) (ethofumesate)	Actirob® (L/ha)	Betasana (g/ha) (phenmedipham)	Safari (g/ha) (triflurosulfuron)	dose	Code	Protocols
1	ABCD		350	125	0.5	160		N dose	MEP 1 N	F7B025+F7B038
2	ABCD		700	250	1	320		2N dose	MEP 2 N	F7B025+F7B038
3	ABCD	0.5	350	125	0.5	160		N dose	MEP+F7B-39-30 1N	F7B025+F7B038
4	ABCD	1	700	250	1	320		2N dose	MEP+F7B-39-30 2N	F7B025+F7B038
5	ABCD		700	250	1	320	10	2N dose	MEPT 2N	F7B025
6	ABCD	1	700	250	1	320	10	2N dose	MEPT+F7B-39-30 2N	F7B025
7	ABCD		700	250	1		10	2N dose	MET 2N	FTB038
8	ABCD	1	700	250	1		10	2N dose	MET+F7B-39-30 2N	FT7B038
9	ABC		350	125	0.5	160-200		N dose	MEP 1 N	F7B025+F7B038
10	ABC	0.65-0.67	350	125	0.5	160-200		2N dose	MEP+F7B-39-30 1N	F7B025+F7B038
11	ABC		700	250	1	320-400		2N dose	MEP 2 N	F7B025+F7B038
12	ABC	1.3-1.33	700	250	1	320-400		2N dose	MEP+F7B-39-30 2N	F7B025+F7B038
13	ABC		700	250	1	400	10g/A, 15g/BC	2N dose	MEPT 2N	F7B025
14	ABC	1.3	700	250	1	400	10g/A, 15g/BC	2N dose	MEPT+F7B-39-30 2N	F7B025
15	ABC	Untreated								

**Table 3.4-37: Summary of the root yield impact of F7B-39-30 used in program when applied at 3 applications (ABC) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha and % relative to untreated)																			
			MEP 1N		% of unt.	MEP 2N		% of unt.	MEP+GF-3206 1N		% of unt.	MEP+GF-3206 2N		% of unt.	MEPT 2N		% of unt.	MEPT+G F-3206 2N		% of unt.	Untreated (T/ha)	
Maritime	BEAVA	BTS-8840	82.1	a	99.1	81.9	a	98.8	81.96	a	98.9	81.67	a	98.6	82.72	a	99.85	82.34	a	99.4	82.9	a
Maritime	BEAVA	Wren	91.5	ab	100.4	88.6	abc	97.2	96.08	a	105.3	82.64	bc	90.6	87.75	abc	96.25	78.28	c	85.8	91.2	ab
Maritime	BEAVA	Lunella	82.1	a	97.4	82.3	a	98.8	82.19	a	97.6	79.79	a	94.6	86.34	a	102.50	82.67	a	97.7	84.5	a
Maritime	BEAVA	Lightning	95.1	a	89.6	106.4	a	100.5	104.70	a	98.5	104.98	a	98.9							106.3	a
Maritime	BEAVA	BTS-555	74.2	a	100.8	75.4	a	102.5	75.03	a	102.0	74.34	a	101.0							73.7	a
Maritime	BEAVA	Caprianna KWS	92.3	a	99.2	93.0	a	100.2	89.58	a	96.1	93.25	a	100.4	99.10	a	106.36	94.02	a	101.2	93.2	a
North-East	BEAVA	BTS 9975	66.4	a	95.3	70.7	a	101.5	71.65	a	102.9	71.75	a	102.8							70.1	a
North-East	BEAVA	BTS3865	70.1	b	102.7	69.2	bc	101.0	66.69	bc	97.2	84.56	a	123.1	62.22	bc	90.98	65.28	b c	95.3	68.8	bc
South-East	BEAVA	Asketa	75.7	a	99.2	74.5	a	97.5	80.00	a	104.8	77.85	a	102.4							76.5	a

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EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha and % relative to untreated)																			
			MEP 1N		% of unt.	MEP 2N		% of unt.	MEP+GF-3206 1N		% of unt.	MEP+GF-3206 2N		% of unt.	MEPT 2N		% of unt.	MEPT+G F-3206 2N		% of unt.	Untreated (T/ha)	
South-East	BEAVA	Asketa	117.8	a	104.9	116.0	a	103.5	116.7 5	a	103.6	111.8 3	a	99.9	110.1 7	a	97.87	117.24	a	104.4	112. 5	a
Maritime EPPO zone (N=6)		Mean			97.7			99.7			99.7			97.3			101.2			96.0		
		Min			89.6			97.17			96.1			90.6			96.3			85.8		
		Max			100.8			102.5			105.3			101.0			106.4			101.2		
North-East EPPO zone (N=2)		Mean			99.0			101.3			101.0			113.0			91.0			95.3		
		Min			95.3			101.0			97.2			102.8			91.0			95.3		
		Max			102.7			101.5			102.9			123.1			91.0			95.3		
South-East EPPO zone (N=2)		Mean			102.1			100.5			104.2			101.2			97.9			104.4		
		Min			99.2			97.5			103.6			99.9			97.9			104.4		
		Max			105.0			103.5			104.8			102.4			97.9			104.4		
Central Zone (N=8)		Mean			99.8			100.5			100.4			102.9			99.5			99.6		
		Min			95.3			97.5			96.1			94.6			91.0			95.3		
		Max			104.9			103.5			104.8			123.1			106.4			104.4		
Central Zone+UK (N=10)		Mean			99.0			100.2			100.7			101.2			99.0			97.3		
		Min			89.6			97.17			96.08			90.6			91.0			85.8		
		Max			104.9			103.5			105.3			123.1			106.4			104.4		

Means followed by same letter in the row do not significantly differ

**Table 3.4-38: Summary of the root yield impact of F7B-39-30 used in program when applied at 4 applications (ABCD) on sugar beet by EPPO zone**

EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha)											
			MEP 1N		% of unt.	MEP 2N		% of unt.	MEP+F7B-39-30 1N		% of unt.	MEP+F7B-39-30 2N		% of unt.
Maritime	BEAVA	BTS-8840	82.69	a	99.80	82.71	a	99.84	83.08	a	100.26	83.08	a	100.30
Maritime	BEAVA	Wren	85.53	abc	93.83	86.92	abc	95.36	88.89	abc	97.51	81.25	bc	89.06
Maritime	BEAVA	Lunella	84.33	a	99.97	81.61	a	96.49	83.58	a	99.24	80.69	a	95.72
Maritime	BEAVA	Lightning	103.90	a	97.97	112.55	a	106.12	104.15	a	97.84	111.53	a	105.44
Maritime	BEAVA	BTS-555	74.23	a	100.85	74.73	a	101.55	73.59	a	99.97	73.68	a	100.14
Maritime	BEAVA	Caprianna KWS	96.92	a	104.27	94.15	a	101.22	91.06	a	98.11	94.10	a	101.37
North-East	BEAVA	BTS 9975	71.07	a	102.12	67.08	a	96.44	69.14	a	99.19	66.83	a	95.83
North-East	BEAVA	BTS3865	65.47	bc	95.29	69.44	b	101.23	59.03	c	85.12	69.50	b	101.97
South-East	BEAVA	Asketa	68.35	a	89.36	70.25	a	92.08	73.68	a	96.64	73.30	a	95.93
South-East	BEAVA	Asketa	117.03	a	104.38	119.85	a	106.71	128.89	a	114.66	114.93	a	102.43

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EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha)											
			MEP 1N		% of unt.	MEP 2N		% of unt.	MEP+F7B-39-30 1N		% of unt.	MEP+F7B-39-30 2N		% of unt.
Maritime EPPO zone (N=6)		Mean			99.5			100.1			98.8			98.7
		Min			93.8			95.4			97.5			89.1
		Max			104.3			106.1			100.3			105.4
North-East EPPO zone (N=2)		Mean			98.7			98.8			92.2			98.9
		Min			95.3			96.4			85.1			95.8
		Max			102.1			101.2			99.2			102.0
South-East EPPO zone (N=2)		Mean			96.9			99.4			105.6			99.2
		Min			89.4			92.1			96.6			95.9
		Max			104.4			106.7			114.7			102.4
Central Zone (N=8)		Mean			99.5			99.4			99.2			99.2
		Min			89.4			92.1			85.1			95.7
		Max			104.4			106.7			114.7			102.4
Central Zone+UK (N=10)		Mean			98.8			99.7			98.9			98.8
		Min			89.4			92.1			85.1			89.1
		Max			104.4			106.7			114.7			105.4

EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha)													
			MET 2N		% of unt.	MET+F7B-39-30 2N		% of unt.	MEPT 2N		% of unt.	MEPT+F7B-39-30 2N		% of unt.	Untreated	
Maritime	BEAVA	BTS-8840							81.67	a	98.58	82.64	a	99.75	82.87	a
Maritime	BEAVA	Wren							82.25	bc	90.22	80.42	bc	88.21	91.22	ab
Maritime	BEAVA	Lunella							79.85	a	94.62	78.80	a	93.04	84.55	a
Maritime	BEAVA	Lightning	101.25	a	95.67	99.83	a	93.91				96.60	a	91.03	106.28	a
Maritime	BEAVA	BTS-555	74.35	a	101.04	72.83	a	98.95				74.00	a	100.51	73.66	a
Maritime	BEAVA	Caprianna KWS							92.23	a	99.36	90.33	a	97.23	93.21	a
North-East	BEAVA	BTS 9975	68.42	a	99.08	67.28	a	97.05				62.85	a	91.33	70.10	a
North-East	BEAVA	BTS3865							64.14	bc	93.93	72.39	b	105.85	68.83	bc
South-East	BEAVA	Asketa	66.45	a	87.07	78.43	a	102.74				73.80	a	96.71	76.45	a
South-East	BEAVA	Asketa							114.17	a	101.60	117.34	a	104.28	112.48	a
Maritime EPPO zone (N=6)		Mean			98.4			96.4			95.7			95.0		
		Min			95.7			93.9			90.2			88.2		
		Max			101.0			98.9			99.4			100.5		

EPPO zone	Crop	Variety	Yield – sugar beet root (T/ha)													
			MET 2N		% of unt.	MET+F7B-39-30 2N		% of unt.	MEPT 2N		% of unt.	MEPT+F7B-39-30 2N		% of unt.	Untreated	
North-East EPPO zone (N=2)		Mean			99.1			97.1			93.9			98.6		
		Min			99.1			97.1			93.9			91.3		
		Max			99.1			97.1			93.9			105.9		
South-East EPPO zone (N=2)		Mean			87.1			102.7			101.6			100.5		
		Min			87.1			102.7			101.6			96.7		
		Max			87.1			102.7			101.6			104.3		
Central Zone (N=8)		Mean			95.7			99.6			97.6			98.6		
		Min			87.1			97.1			93.9			91.3		
		Max			101.0			102.7			101.6			105.8		
Central Zone+UK (N=10)		Mean			95.7			98.2			96.4			96.8		
		Min			87.1			93.9			90.2			88.2		
		Max			101.0			102.7			101.6			105.9		

Means followed by same letter in the row do not significantly differ

### Yield effect of F7B-39-30 applied in programs in Conviso® SMART System

To prove crop selectivity of F7B-39-30 on Conviso Smart variety, one selectivity trial was setup, comparing phytotoxicity and root yield after applying F7B-39-30 at N (2g) and 2N (4g) rates to Conviso target rate (2 x 40g) and (1 x 80g).

### Effects on yield quality parameters after applying F7B-39-30 at applications A, AB, C in Conviso variety.

The data comes from 1 trial located in the South-East EPPO zone and was conducted in 2022. F7B-39-30 was applied from 2 to 8 g ai/ha in application A, AB, C in a Conviso sugar beet variety. As shown in the table below, regardless the application timing and the rate of F7B-39-30, the yield root was never statistically significant from the untreated or the herbicide Conviso® one.

**Table 3.4-39: Summary of the root yield impact of F7B-39-30 used in Conviso® SMART System when applied at application timing A, AB or C**  
**Application timing A**

Application timing A																					
EPPO zone	Crop	Yield – sugar beet root (T/ha)																			
		F7B-39-30 2 G AI/HA		% Unt	F7B-39-30 4 G AI/HA		% Unt	F7B-39-30 5 G AI/HA		% Unt	F7B-39-30 6 G AI/HA		% Unt	F7B-39-30 8 G AI/HA		% Unt	Conviso One 80 G AI/HA		% Unt	Untreated	
South-East	BEAVA	44.87	a-d	99.16	45.04	a-d	99.40	44.70	a-d	98.36	45.29	a-d	99.79	42.52	a-d	93.93	51.93	a	114.52	45.46	a-d

### Application timing AB

EPPO zone	Crop	Yield – sugar beet root (T/ha)																			
		F7B-39-30 1 G AI/HA		%Unt.	F7B-39-30 2 G AI/HA		%Unt.	F7B-39-30 2.5 G AI/HA		%Unt.	F7B-39-30 3 G AI/HA		%Unt.	F7B-39-30 4 G AI/HA		%Unt.	Conviso One 40 G AI/HA		%Unt.	Untreated	
South-East	BEAV A	46.63	abc	102.56	44.82	a-d	99.03	43.39	a-d	95.75	42.74	a-d	94.08	41.65	bcd	91.55	47.95	ab	105.37	45.46	a-d

### Application timing C

EPPO zone	Crop	Yield – sugar beet root (T/ha)									
		F7B-39-30 2 G AI/HA		%Unt.	F7B-39-30 4 G AI/HA		%Unt.	F7B-39-30 6 G AI/HA		%Unt.	Untreated
South-East	BEAVA	43.17	a-d	95.27	36.19	d	79.79	37.12	cd	81.85	45.46 a-d

dRR point 3.4.2	Effect on the yield of treated plants or plant product
<p>ZRMS conclusion:</p> <p style="text-align: center;"><u>F7B-39-30 applied solo</u></p> <p><b><u>The NE EPPO climate zone</u></b> Effects on the yield of plants or plant products after application of F7B-39-30 were checked in 9 selectivity trials carried out in 2021 and 2022, in CZ, DE, PL. F7B-39-30 at the rates 1N and 2N had no negative effect on the yield of sugar beet roots in single and split applications. Only in one CZ trial where single application was tested, results showed a statistical decrease in yield after the application of F7B-39-30 at a dose rate of 2N in comparison to the untreated. There was no statistical difference in results between application of F7B-39-30 and Betasana SC. The product was also safe for sugar beet treated at BBCH 18/19, as no statistical difference in yield of sugar beet roots between treated with F7B-39-30, untreated and the reference product was observed.</p> <p>Yield of sugar beet leaves was tested in 2 trials, where product was applied as one application and 4 applications. There was no negative effect on fresh leaf yield and dry matter of leaves.</p> <p><b><u>The Maritime EPPO climate zone</u></b> Effects on the yield of plants or plant products after application of F7B-39-30 were checked in 13 selectivity trials carried out in 2021 and 2022, in CZ, DE, BE, UK, FR. F7B-39-30 at the rates 1N and 2N had no negative effect on the yield of sugar beet roots in single and split applications. Only in one CZ trial where single application was tested, results showed a statistical decrease in yield after the application of F7B-39-30 at a dose rate of 2N in comparison to the untreated. There was no statistical difference in results between application of F7B-39-30 and Betasana SC. The product was also safe for sugar beet treated at BBCH 18/19, as no statistical difference in yield of sugar beet roots between treated with F7B-39-30, untreated and the reference product was observed.</p> <p>Yield of sugar beet leaves was tested in 1 trial, where product was applied as one application and 4 applications. There was no negative effect on fresh leaf yield and dry matter of leaves.</p> <p><b><u>The SEEPPO climate zone</u></b> Effects on the yield of plants or plant products after application of F7B-39-30 were checked in 5 selectivity trials carried out in 2021 and 2022, in HU. F7B-39-30 at the rates 1N and 2N had no negative effect on the yield of sugar beet roots in single and split applications.</p> <p>Yield of sugar beet leaves was tested in 3 trials, where product was applied as one application and 4 applications. In the one trial (HU22F7B024-JPA15C, variety Tesla) a statistical lower value of fresh leaf yield was observed in treatment with F7B-39-30 at dose 2N in comparison to the reference product at dose rate 2N and to the untreated.</p> <p>The number of trials cannot be sufficient to confirm the sugar beet safety. The final decision is in the remit of CMS.</p> <p style="text-align: center;"><u>F7B-39-30 applied in programs</u></p>	

For the Maritime climate zone 6 trials were presented, for NE-2 trials and for SE 2 trials.

The Applicant has presented limited data showing selectivity of herbicides mixtures in the spray program of in 3 and 4 applications of the herbicides.

In one UK case (the Maritime EPPO climate zone) with addition of F7B-39-30 at 2N dose rate, statical lowering of the yield was observed when compared to untreated.

It is possible that addition of F7B-39-30 to the mixtures (spilt applications: 3 and 4 applications) may not effect negatively on the yield. Nevertheless presented data is insufficient to draw the right conclusions.

F7B-39-30 applied in Conviso Smart System

Yield of F7B-39-30 on Conviso Smart variety (trial conducted in SE EEPO climate zone - HU22F7B060-JPA01) was tested. F7B-39-30 was applied from 2 to 8 g ai/ha in application in Conviso variety KWS Djerba. Results were compared to the untreated and the herbicide Conviso one were no statistical differences in yield were observed.

It should be underlined that the above data is very limited and that definitive conclusions cannot be drawn.

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

This section shows the effects of F7B-39-30 on quality parameters on the sugarbeet crop such as nitrogen (mmoles), potassium (mmoles), sodium (mmoles) and sugar (%). The data were obtained in the same 30 selectivity trials presented in the previous section **Błąd! Nie można odnaleźć źródła odwołania.**, of which 20 were carried out with F7B-39-30 applied alone and 10 trials with F7B-39-30 as part of a weed control program.

#### Formulations applied and application rates

Details of the formulations tested in the selectivity yielded trials are provided below. Trials also received standard farming agronomic treatments.

#### Effect on quality parameters of F7B-39-30 when applied in SOLO selectivity trials

There were 20 trials conducted between 2021 and 2022 in 7 countries (and 3 EPPO climatic zones) on sugar beets to test the impact of F7B-39-30 applications to the quality of roots (see Table 3.4.3-1).

#### Material and Methods

All selectivity trials summarized in **Błąd! Nie można odnaleźć źródła odwołania.**, were brought to yield and afterwards also the yield quality of the sugar beet roots was assessed.

Below trials are referring to selectivity trials of F7B-39-30 applied alone. All material and methods for presentation trials are the same as in first selectivity chapter 3.4.1. Table 3.4-40 presents the trial distribution throughout the different EPPO zones.

**Table 3.4-40: Effects on the quality of plants or plant products: Trial distribution throughout EPPO zone.**

EPPO zone	Year Country	2021	2022	Total	Total EPPO zone
Maritime	Belgium	1	2	3	13
	Czech Republic	1	2	3	
	Germany	1	2	3	
	United Kingdom	1	2	3	
	France	-	1	1	
North-East	Poland	1	2	3	3
South-East	Hungary	1	3	4	4
	<b>Total Central Zone + UK + Southern Zone</b>	<b>6</b>	<b>14</b>	<b>20</b>	<b>20</b>
	Total Central Zone	5	11	17	16
	Total non-EU regulatory (UK)	1	2	3	3
	Total Southern Zone (FR)	0	1	1	1

**Trials highlighted in green to support the impact of F7B-39-30 on quality parameter of sugarbeet for Poland**

#### Formulations applied and application rates

The following treatments were applied in the selectivity trials.



**Table 3.4-41 Formulations tested in the selectivity trials carried for the yield and quality effect of F7B-39-30 in sugar beets.**

Formulation	Type	Active Substances	Concentration and Units	Rates g a.s. or a.e./ha	Rates L or Kg pr/ha
F7B-39-30 EC	Herbicide	Florpyrauxifen-benzyl	25 g ai/L	2 – 4 g ai/ha in 1 to 4 applications (N – 2N)	0.08 – 0.16 L/ha in 1 to 4 applications (N-2N)
Betasana® SC	Herbicide	phenmedipham	160 g ai/l	960 - 1920 g ai/ha in 1 to 4 applications (N-2N)	6-12 L/ha in 1 to 4 applications (N-2N)

### Assessment methods

The root crop was harvested from the plots with a plot harvester or was taken manually. Root or leaf yield was weighed on site and measured in kg/plot. Then the yield was converted from kg/plot to T/ha. Sugar and molasses content were measured in specialized laboratories or sugar factories. Results are expressed in % for sugar content and in mmols or % for Na, K and N content. For the easiness of the interpretation of the results, sugar and molasses in presented tables include also % calculation of Untreated plots.

### Statistical analysis

Statistical analysis (K2 test) if applicable for specific assessments were performed on each trial using Tukey's HSD (P=0.05) mean test to determine if the means are the same or different from each other. Where appropriate, treatment effects are also reported without statistical analysis in various terms in tables.

For each use (single applications and 2 to 4 split applications) the effect on the sugar, Na, K and N content was assessed after a N and 2N rate of F7B-39-30. The data comes from 3 EPPO zones - Maritime, North-east and South-East, a total of 20 trials conducted in 2021-2022. Tables were taken from the single trial results whereby the individual trial numbers are removed.

### Single application

A single application at the application timing A (BBCH10-11/12) (application timing A) did not result in any negative effects on the selected yield quality parameters after applying F7B-39-30 at 1N and 2N (Table 3.4-42 till Table 3.4-45) There are no statistical lower differences between the treatments or of F7B-39-30 relative to untreated.

When the single application takes place at the later stage BBCH 18-19 (application timing E), with the exception of one Maritime trial, no statistical lower differences are observed for all yield quality parameters after use of F7B-39-30 relative to the untreated. Trial summary results on sugar, Na, K and N content are presented from Table 3.4-46 to Table 3.4-49.

### Two applications AB

When F7B-39-30 is applied at the N and 2N rate in two applications A and B, then with exception of one North-East EPPO zone trial, no statistically significant differences are observed amongst the treatments for sugar content and molasses. Table 3.4-50 to Table 3.4-53 show the summary tables for respectively sugar, Na, K and N content after two applications of F7B-39-30 at N and 2N rate.

### Three applications ABC

Table 3.4-54 to Table 3.4-57 show the summary results for respectively sugar, Na, K and N content after three applications of N and 2N into timing A, B and C of F7B-39-30. No statistical lower difference was observed after the use of F7B-39-30 relative to untreated, not a N nor at 2N rate. Also, no significant differences were observed compared to the reference product Betasana® SC.

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**Four applications ABCD**

Table 3.4-58 to Table 3.4-61 show the summary results for respectively sugar, Na, K and N content after four applications of N and 2N into timing A, B, C and D of F7B-39-30. As similar to the three applications, also for the split application at 4 application timings no statistical lower difference was observed after the use of F7B-39-30 relative to untreated, not a N nor at 2N rate. Also, no significant differences were observed compared to the reference product Betasana® SC.

**In general, and based on these results it is concluded that the application of F7B-39-30 does not affect the quality parameters of sugar beet (Sugar, Nitrogen, Potassium and Sodium content), and it is equivalent to the reference product Betasana® SC.**

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**Table 3.4-42 Summary of the sugar content impact of F7B-39-30 when applied at 1 application (A) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	SUGAR ( % and % relative to the untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
Maritime	BEAVA	TESSILIA KWS	18.64	a	100.72	18.98	a	102.58	18.63	a	100.68	18.86	a	101.90	18.51	a
Maritime	BEAVA	BTS 4860 N	18.22	a	100.55	18.22	a	100.54	18.27	a	100.83	18.30	a	100.97	18.12	a
Maritime	BEAVA	BTS-555	19.55	ab	98.90	19.38	abc	98.04	19.74	ab	99.86	19.74	ab	99.87	19.77	ab
Maritime	BEAVA	BTS9975	17.08	a	98.51	16.96	a	97.81	17.16	a	98.95	17.45	a	100.63	17.34	a
Maritime	BEAVA	BTS-8840	19.79	a	101.21	19.66	a	100.56	19.48	a	99.64	19.86	a	101.56	19.55	a
Maritime	BEAVA	BTS 7300 N	13.99	ab	100.20	14.44	ab	103.55	14.03	ab	100.57	13.98	ab	100.44	13.97	ab
Maritime	BEAVA	Lunella	16.75	a	98.67	16.93	a	99.71	16.93	a	99.71	16.83	a	99.12	16.98	a
Maritime	BEAVA	Chevrolet	17.26	a	99.00	16.68	a	95.63	17.00	a	97.49	16.93	a	97.06	17.44	a
Maritime	BEAVA	Lightning	18.29	a	100.25	17.98	a	98.59	18.05	a	98.93	18.30	a	100.30	18.24	a
Maritime	BEAVA	BTS 1915	19.02	a	103.57	18.63	a	101.43	18.46	a	100.53	19.05	a	103.72	18.37	a
Maritime	BEAVA	Lightning	16.78	a	98.98	16.99	a	100.19	16.71	a	98.53	16.35	a	96.42	16.96	a
Maritime	BEAVA	Giono	17.97	a	95.54	17.94	a	99.62	18.09	a	99.90	18.10	a	99.67	17.96	a
North-East	BEAVA	BTS 9975	17.95	ab	100.72	17.24	ab	96.70	18.01	ab	101.04	17.63	ab	98.89	17.82	ab
North-East	BEAVA	Everest	16.42	a	96.92	16.21	a	95.66	16.99	a	100.28	16.71	a	98.63	16.94	a
North-East	BEAVA	Wojownik	17.89	ab	98.20	18.10	ab	99.39	18.02	ab	98.94	17.42	ab	95.63	18.21	ab
South-East	BEAVA	KOMODO	18.49	a	97.31	19.64	a	98.91	19.79	a	99.98	19.87	a	100.00	18.98	a
South-East	BEAVA	Kipunji Smart (Conviso Smart)	15.24	a	110.60	15.06	a	109.29	14.51	a	105.34	14.61	a	106.03	13.78	a
South-East	BEAVA	Tesla	15.13	a	99.29	15.21	a	99.82	14.78	a	96.98	16.26	a	106.71	15.24	a
South-East	BEAVA	Grandosa KWS	17.61	a	94.88	17.47	a	94.15	18.26	a	98.38	17.06	a	91.94	18.56	a
Maritime EPPO zone (N=12)		Mean			99.68			99.85			99.63			100.14		
		Min			95.54			95.63			97.49			96.42		
		Max			103.57			103.55			100.83			103.72		
North-East EPPO zone (N=3)		Mean			98.61			97.25			100.09			97.72		
		Min			96.92			95.66			98.94			95.63		
		Max			100.72			99.39			101.04			98.89		
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			99.0			97.9			99.5			98.9		
		Min			96.9			95.6			97.5			95.6		
		Max			101.2			100.6			101.0			101.6		
South-East EPPO zone (N=4)		Mean			100.52			100.54			100.17			101.17		
		Min			94.88			94.15			96.98			91.94		
		Max			110.60			109.29			105.34			106.71		
Central Zone (N=15)		Mean			99.71			99.49			99.91			99.96		

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EPPO zone	Crop	Variety	SUGAR ( % and % relative to the untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
Central Zone + UK + France (N=19)		Min			94.88			94.15			96.98			91.94		
		Max			110.60			109.29			105.34			106.71		
		Mean			99.68			99.59			99.82			99.97		
		Min			94.88			94.15			96.98			91.94		
		Max			110.60			109.29			105.34			106.71		

Means followed by same letter in the row do not significantly differ

**Table 3.4-43 Summary of the Na content impact of F7B-39-30 when applied at 1 application (A) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	Na content (% or mmoles and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)	
Maritime	BEAVA	BTS 4860 N	2.50	a	91.89	2.73	a	99.69	2.58	a	94.44	2.75	a	100.96	2.75	a
Maritime	BEAVA	BTS9975	0.42	a	91.85	0.54	a	117.39	0.49	a	105.43	0.46	a	100.00	0.46	a
Maritime	BEAVA	BTS-8840	3.13	a	79.11	2.53	a	63.92	3.75	a	94.94	3.60	a	91.14	3.95	a
Maritime	BEAVA	Lunella	3.03	a	91.67	3.03	a	91.67	2.78	a	84.09	3.73	a	112.88	3.30	a
Maritime	BEAVA	Chevrolet	2.28	a	86.67	2.56	ab	97.62	2.68	ab	101.90	2.85	ab	108.57	2.63	ab
Maritime	BEAVA	BTS 1915	4456.53	a	95.58	4880.45	a	101.97	4782.60	a	101.50	4467.40	a	94.73	4782.63	a
Maritime	BEAVA	Lightning	9565.23	a	114.50	8858.70	a	104.72	9086.98	a	105.45	9326.08	a	114.32	8728.28	a
Maritime	BEAVA	TESSILIA KWS	0.50	a	97.55	0.47	a	92.16	0.45	a	88.73	0.45	a	87.75	0.51	a
Maritime	BEAVA	BTS-555	0.02	a	105.43	0.02	a	96.74	0.02	a	102.17	0.02	a	100.00	0.02	a
Maritime	BEAVA	BTS 7300 N	48.63	ab	106.34	42.50	c	92.95	46.55	abc	abc	45.25	abc	98.96	45.73	abc
Maritime	BEAVA	Lightning	12.50	a	98.04	13.00	a	101.96	10.75	a	84.31	16.25	a	127.45	12.75	a
Maritime	BEAVA	Giono	0.25	a	100.91	0.24	a	97.94	0.25	a	101.07	0.24	a	98.06	0.25	a
North-East	BEAVA	BTS 9975	6.10	abc	98.79	6.65	ab	107.69	5.33	bc	86.23	5.60	abc	90.69	6.18	abc
North-East	BEAVA	Everest	7.63	a	108.16	7.60	a	107.80	7.03	a	99.65	6.68	a	94.68	7.05	a
North-East	BEAVA	Wojownik	2.90	abc	105.91	2.73	bc	100.33	3.33	abc	124.64	3.25	abc	117.79	2.75	bc
South-East	BEAVA	KOMODO	13.80	a	61.85	19.10	a	83.86	20.45	a	90.70	22.15	a	91.26	22.68	a
South-East	BEAVA	Kipunji Smart (Convivo Smart)	16.13	a	81.44	15.10	a	76.26	15.70	a	79.29	15.88	a	80.18	19.80	a
South-East	BEAVA	Tesla	4.33	a	140.65	3.03	a	98.37	3.78	a	122.76	3.28	a	106.50	3.08	a

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EPPO zone	Crop	Variety	Na content (% or mmoles and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)	
South-East	BEAVA	Grandosa KWS	9.50	a	137.18	8.23	a	118.77	6.28	a	90.61	6.95	a	100.36	6.93	a
Maritime EPPO zone (N=12)	Mean				96.63			96.56			96.73			102.90		
	Min				79.11			63.92			84.09			87.75		
	Max				114.50			117.39			105.45			127.45		
North-East EPPO zone (N=3)	Mean				104.28			105.28			103.51			101.05		
	Min				98.79			100.33			86.23			90.69		
	Max				108.16			107.80			124.64			117.79		
North-East EPPO zone + Czech & Germany as Support (N=8)	Mean				95.9			97.9			99.9			102.0		
	Min				79.1			63.9			84.1			90.7		
	Max				108.2			117.4			124.6			117.8		
South-East EPPO zone (N=4)	Mean				105.28			94.32			95.84			94.57		
	Min				61.85			76.26			79.29			80.18		
	Max				140.65			118.77			122.76			106.50		
Central Zone (N=15)	Mean				98.97			96.35			97.54			98.78		
	Min				61.85			63.92			79.29			80.18		
	Max				140.65			118.77			124.64			117.79		
Central Zone + UK + France (N=19)	Mean				99.66			97.46			97.66			100.86		
	Min				61.85			63.92			79.29			80.18		
	Max				140.65			118.77			124.64			127.45		

Means followed by same letter in the row do not significantly differ

**Table 3.4-44 Summary of the K content of F7B-39-30 when applied at 1 application (A) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	K content (% or mmoles and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)	
Maritime	BEAVA	BTS 4860 N	30.73	a	100.73	31.55	a	103.13	30.98	a	101.40	30.75	a	100.56	30.63	a
Maritime	BEAVA	BTS9975	3.06	a	96.83	2.90	a	91.77	2.98	a	94.46	3.15	a	99.84	3.16	a

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EPPO zone	Crop	Variety	K content (% or mmoles and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)	
Maritime	BEAVA	BTS-8840	38.03	ab	101.00	41.75	ab	110.89	40.08	ab	106.44	39.85	ab	105.84	37.65	ab
Maritime	BEAVA	Lunella	43.15	a	103.73	42.20	a	101.44	42.00	a	100.96	39.60	a	95.19	41.60	a
Maritime	BEAVA	Chevrolet	40.46	cd	90.37	44.56	a-d	99.53	43.13	bcd	96.31	41.71	bcd	93.16	44.78	a-d
Maritime	BEAVA	BTS 1915	38974.38	ab	106.26	36730.78	ab	100.05	36538.48	ab	99.48	38076.90	ab	103.69	36794.88	ab
Maritime	BEAVA	Lightning	30576.93	a	91.42	32756.43	a	98.04	31602.58	a	94.46	29551.28	a	88.36	33525.63	a
Maritime	BEAVA	TESSILIA KWS	4.27	a	96.23	4.24	a	95.61	4.20	a	94.70	4.23	a	95.32	4.44	a
Maritime	BEAVA	BTS-555	0.42	b	98.30	0.42	b	98.77	0.42	ab	99.29	0.43	ab	100.35	0.43	ab
Maritime	BEAVA	BTS 7300 N	4.45	a	98.34	4.48	a	98.90	4.48	a	98.90	4.13	a	91.16	4.53	a
Maritime	BEAVA	Lightning	146.50	a	91.14	161.00	a	100.16	132.75	a	82.58	143.25	a	89.11	160.75	a
Maritime	BEAVA	Giono	3.73	bc	96.37	3.78	bc	97.72	3.65	c	94.29	3.85	abc	99.52	3.87	abc
North-East	BEAVA	BTS 9975	35.75	a	82.37	39.60	a	91.24	36.93	a	85.08	36.30	a	83.64	43.40	a
North-East	BEAVA	Everest	32.60	ab	100.54	32.18	ab	99.23	36.60	ab	112.88	29.90	b	92.21	32.43	ab
North-East	BEAVA	Wojownik	40.30	bcd	93.27	39.15	bcd	90.59	36.20	d	83.76	39.30	bcd	90.95	43.20	abc
South-East	BEAVA	KOMODO	42.78	ab	85.92	46.78	a	93.66	46.78	a	93.99	47.63	a	95.65	49.78	a
South-East	BEAVA	Kipunji Smart (Conviso Smart)	31.05	a	108.47	32.33	a	112.93	32.93	a	115.02	34.10	a	119.13	28.63	a
South-East	BEAVA	Tesla	36.73	ab	97.22	39.75	ab	105.23	37.53	ab	99.34	38.78	ab	102.65	37.78	ab
South-East	BEAVA	Grandosa KWS	48.15	a	98.12	49.35	a	100.56	48.93	a	99.69	48.15	a	98.12	49.08	a
Maritime EPPO zone (N=12)		Mean			97.56			99.67			96.94			96.84		
		Min			90.37			91.77			82.58			88.36		
		Max			108.47			112.93			115.02			119.13		
North-East EPPO zone (N=3)		Mean			92.06			93.69			93.90			88.93		
		Min			82.37			90.59			83.76			83.64		
		Max			100.54			99.23			112.88			92.21		
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			95.8			97.9			97.4			95.1		
		Min			82.4			90.6			83.8			83.6		
		Max			103.7			110.9			112.9			105.8		
South-East EPPO zone (N=4)		Mean			97.43			103.09			102.01			103.88		
		Min			85.92			93.66			93.99			95.65		
		Max			108.47			112.93			115.02			119.13		
Central Zone (N=15)		Mean			96.76			99.56			98.82			97.58		
		Min			82.37			90.59			83.76			83.64		

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EPPO zone	Crop	Variety	K content (% or mmoles and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)	
Central Zone + UK + France (N=19)		Max			108.47			112.93			115.02			119.13		
		Mean			96.66			99.44			97.53			97.08		
		Min			82.37			90.59			82.58			83.64		
		Max			108.47			112.93			115.02			119.13		

Means followed by same letter in the row do not significantly differ

Table 3.4-45 Summary of the N content impact of F7B-39-30 when applied at 1 application (A) on sugar beet by EPPO zone.

EPPO zone	Crop	Variety	Nitrogen content (% and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (%)	
Maritime	BEAVA	BTS 4860 N	8.48	b	99.41	8.83	ab	102.93	8.53	b	99.46	9.50	ab	110.37	8.63	ab
Maritime	BEAVA	BTS9975	0.73	ab	91.48	0.56	ab	70.03	0.75	ab	94.32	0.78	ab	98.74	0.79	ab
Maritime	BEAVA	BTS-8840	11.35	a	81.51	8.88	a	63.73	12.50	a	89.77	11.63	a	83.48	13.93	a
Maritime	BEAVA	Lunella	12.73	a	94.43	12.33	a	91.47	12.05	a	89.42	14.38	a	106.68	13.48	a
Maritime	BEAVA	Chevrolet	15.93	b	92.39	18.86	ab	109.43	19.53	ab	113.27	21.54	ab	124.95	17.24	ab
Maritime	BEAVA	BTS 1915	12857.18	a	97.22	14285.70	a	107.38	13035.70	a	98.98	12138.38	a	92.07	13214.25	a
Maritime	BEAVA	Lightning	16785.73	ab	141.78	15178.55	ab	140.98	17678.58	ab	147.39	20714.30	ab	169.98	13035.73	ab
Maritime	BEAVA	TESSILIA KWS	0.88	a	92.89	0.86	a	90.26	0.77	a	81.32	0.88	a	92.63	0.95	a
Maritime	BEAVA	BTS-555	0.08	a	105.69	0.08	a	104.68	0.08	a	109.03	0.07	a	99.67	0.07	a
Maritime	BEAVA	BTS 7300 N	10.30	a	89.96	10.90	a	95.20	11.78	a	102.84	11.30	a	98.69	11.45	a
Maritime	BEAVA	Lightning	8.00	a	94.12	9.00	a	105.88	6.50	a	76.47	9.25	a	108.82	8.50	a
Maritime	BEAVA	Giono	1.47	ab	94.10	1.49	ab	95.92	1.42	ab	91.33	1.48	ab	94.60	1.56	ab
North-East	BEAVA	BTS 9975	23.50	a	82.53	25.38	a	89.11	23.10	a	81.12	25.20	a	88.50	28.48	a
North-East	BEAVA	Everest	13.93	b	88.98	16.08	ab	102.72	18.10	ab	115.65	14.80	ab	94.57	15.65	ab
North-East	BEAVA	Wojownik	24.95	a	107.52	24.35	a	106.06	21.53	a	92.36	25.85	a	111.91	23.25	a
South-East	BEAVA	KOMODO	37.68	ab	76.57	43.30	ab	87.38	47.48	ab	92.62	53.45	a	99.69	49.70	a



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EPPO zone	Crop	Variety	Nitrogen content (% and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (%)	
South-East	BEAVA	Kipunji Smart (Conviso Smart)	24.80	a	92.11	26.48	a	98.33	31.35	a	116.43	28.80	a	106.96	26.93	a
South-East	BEAVA	Tesla	19.48	ab	111.44	15.28	b	87.41	17.78	b	101.72	13.80	b	78.97	17.48	b
South-East	BEAVA	Grandosa KWS	35.68	b	104.47	40.73	ab	119.25	36.70	b	107.47	37.70	b	110.40	34.15	b
Maritime EPPO zone (N=12)			Mean		97.91			98.16			99.47			106.72		
			Min		81.51			63.73			76.47			83.48		
			Max		141.78			140.98			147.39			169.98		
North-East EPPO zone (N=3)			Mean		93.01			99.30			96.38			98.33		
			Min		82.53			89.11			81.12			88.50		
			Max		107.52			106.06			115.65			111.91		
North-East EPPO zone + Czech & Germany as Support (N=8)			Mean		93.1			92.2			98.1			101.1		
			Min		81.5			63.7			81.1			83.5		
			Max		107.5			109.4			115.7			125.0		
South-East EPPO zone (N=4)			Mean		96.15			98.09			104.56			99.00		
			Min		76.57			87.38			92.62			78.97		
			Max		111.44			119.25			116.43			110.40		
Central Zone (N=15)			Mean		94.09			94.53			99.12			100.41		
			Min		76.57			63.73			81.12			78.97		
			Max		111.44			119.25			116.43			124.95		
Central Zone + UK + France (N=19)			Mean		96.77			98.32			100.05			103.77		
			Min		76.57			63.73			76.47			78.97		
			Max		141.78			140.98			147.39			169.98		

Means followed by same letter in the row do not significantly differ

**Table 3.4-46 Summary of the sugar content impact of F7B-39-30 when applied at 1 application (E) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	SUGAR %													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED D	
Maritime	BEAVA	TESSILIA KWS	18.51	a	100.00	17.90	a	96.74	18.94	a	102.32	18.57	a	100.34	18.51	a
Maritime	BEAVA	BTS 4860 N	18.32	a	101.09	17.97	a	99.16	18.28	a	100.84	18.04	a	99.54	18.12	a

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EPPO zone	Crop	Variety	SUGAR %													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATE D	
Maritime	BEAVA	BTS-555	19.13	bc	96.80	18.72	c	94.73	19.27	abc	97.47	19.48	abc	98.57	19.77	ab
Maritime	BEAVA	BTS9975	16.94	a	97.68	17.52	a	101.02	17.21	a	99.24	17.28	a	99.68	17.34	a
Maritime	BEAVA	BTS-8840	19.37	a	99.05	19.58	a	100.13	19.54	a	99.95	19.38	a	99.12	19.55	a
Maritime	BEAVA	BTS 7300 N	14.74	a	105.70	14.75	a	105.79	14.69	a	105.38	14.27	ab	102.39	13.97	ab
Maritime	BEAVA	Lunella	16.78	a	98.82	16.78	a	98.82	16.90	a	99.56	17.18	a	101.18	16.98	a
Maritime	BEAVA	Chevrolet	17.05	a	97.78	16.86	a	96.70	17.10	a	98.06	16.31	a	93.55	17.44	a
Maritime	BEAVA	Lightning	18.12	a	99.36	18.27	a	100.14	18.32	a	100.42	18.17	a	99.60	18.24	a
Maritime	BEAVA	BTS 1915	18.47	a	100.57	18.71	a	101.88	18.79	a	102.30	19.25	a	104.79	18.37	a
Maritime	BEAVA	Lightning	16.96	a	100.01	16.62	a	98.01	16.85	a	99.40	16.93	a	99.84	16.96	a
Maritime	BEAVA	Giono	18.19	a	99.78	17.84	a	99.26	17.99	a	99.67	17.82	a	99.09	17.96	a
North-East	BEAVA	BTS 9975	17.61	ab	98.78	17.13	b	96.10	18.11	ab	101.61	18.32	a	102.78	17.82	ab
North-East	BEAVA	Everest	16.80	a	99.13	16.59	a	97.89	16.25	a	95.88	16.64	a	98.20	16.94	a
North-East	BEAVA	Wojownik	17.45	ab	95.83	16.98	b	93.24	18.25	ab	100.21	17.95	ab	98.53	18.21	ab
South-East	BEAVA	KOMODO	19.01	a	96.62	19.22	a	98.45	19.02	a	97.04	23.93	a	95.80	18.98	a
South-East	BEAVA	Kipunji Smart (Conviso Smart)	14.62	a	106.13	14.19	a	103.01	12.40	a	89.98	14.54	a	105.55	13.78	a
South-East	BEAVA	Tesla	15.91	a	104.40	14.46	a	94.90	14.24	a	93.44	15.83	a	103.92	15.24	a
South-East	BEAVA	Grandosa KWS	18.54	a	99.89	16.62	a	89.57	18.10	a	97.55	19.00	a	102.37	18.56	a
Maritime EPPO zone (N=12)		Mean			99.72			99.37			100.38			99.81		
		Min			96.80			94.73			97.47			93.55		
		Max			105.70			105.79			105.38			104.79		
North-East EPPO zone (N=3)		Mean			97.91			95.74			99.23			99.84		
		Min			95.83			93.24			95.88			98.20		
		Max			99.13			97.89			101.61			102.78		
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			98.0			97.3			99.0			99.0		
		Min			95.8			93.2			95.9			93.6		
		Max			99.1			101.0			101.6			102.8		
South-East EPPO zone (N=4)		Mean			101.76			96.48			94.50			101.91		
		Min			96.62			89.57			89.98			95.80		
		Max			106.13			103.01			97.55			105.55		
Central Zone (N=15)		Mean			99.85			97.75			98.57			100.10		
		Min			95.83			89.57			89.98			93.55		
		Max			106.13			105.79			105.38			105.55		
Central Zone + UK + France (N=19)		Mean			99.86			98.19			98.96			100.26		
		Min			95.83			89.57			89.98			93.55		
		Max			106.13			105.79			105.38			105.55		

Means followed by same letter in the row do not significantly differ

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**Table 3.4-47 Summary of the Na content impact of F7B-39-30 when applied at 1 application (E) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	Na content (% or mmoles and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)	
Maritime	BEAVA	BTS 4860 N	2.68	a	97.89	2.95	a	107.71	2.70	a	98.71	2.95	a	108.42	2.75	a
Maritime	BEAVA	BTS9975	0.49	a	106.52	0.47	a	102.17	0.51	a	110.33	0.47	a	102.17	0.46	a
Maritime	BEAVA	BTS-8840	3.93	a	99.37	2.83	a	71.52	3.35	a	84.81	2.68	a	67.72	3.95	a
Maritime	BEAVA	Lunella	3.33	a	100.76	3.13	a	94.70	3.28	a	99.24	2.95	a	89.39	3.30	a
Maritime	BEAVA	Chevrolet	2.59	ab	98.57	2.68	ab	101.90	2.21	b	84.29	3.36	a	128.10	2.63	ab
Maritime	BEAVA	BTS 1915	4728.30	a	102.30	5217.40	a	110.04	4434.80	a	93.99	4858.73	a	102.75	4782.63	a
Maritime	BEAVA	Lightning	8576.08	a	100.80	10358.70	a	123.29	8923.93	a	111.72	8891.33	a	105.83	8728.28	a
Maritime	BEAVA	TESSILIA KWS	0.50	a	97.06	0.66	a	128.92	0.48	a	94.61	0.49	a	95.10	0.51	a
Maritime	BEAVA	BTS-555	0.02	a	101.09	0.02	a	107.61	0.02	a	100.00	0.02	a	96.74	0.02	a
Maritime	BEAVA	BTS 7300 N	43.58	abc	95.30	44.30	abc	96.88	43.63	abc	95.41	43.58	abc	95.30	45.73	abc
Maritime	BEAVA	Lightning	11.75	a	92.16	15.25	a	119.61	16.25	a	127.45	16.50	a	129.41	12.75	a
Maritime	BEAVA	Giono	0.24	a	96.76	0.26	a	104.01	0.25	a	100.95	0.25	a	100.91	0.25	a
North-East	BEAVA	BTS 9975	6.23	abc	100.81	6.68	a	108.10	5.78	abc	93.52	6.05	abc	97.98	6.18	abc
North-East	BEAVA	Everest	7.58	a	107.45	7.20	a	102.13	7.08	a	100.35	7.38	a	104.61	7.05	a
North-East	BEAVA	Wojownik	2.65	bc	96.36	2.95	abc	107.27	3.35	abc	121.82	2.85	abc	103.64	2.75	bc
South-East	BEAVA	KOMODO	19.80	a	85.85	19.68	a	80.50	21.50	a	88.79	21.18	a	61.28	22.68	a
South-East	BEAVA	Kipunji Smart (Conviso Smart)	18.05	a	91.16	21.20	a	107.07	21.95	a	110.86	19.73	a	99.62	19.80	a
South-East	BEAVA	Tesla	2.65	a	86.18	5.90	a	191.87	3.88	a	126.02	2.15	a	69.92	3.08	a
South-East	BEAVA	Grandosa KWS	8.30	a	119.86	11.70	a	168.95	8.95	a	129.24	10.58	a	152.71	6.93	a
Maritime EPPO zone (N=12)		Mean			99.05			105.70			100.13			101.82		
		Min			92.16			71.52			84.29			67.72		
		Max			106.52			128.92			127.45			129.41		
North-East EPPO zone (N=3)		Mean			101.54			105.83			105.23			102.07		
		Min			96.36			102.13			93.52			97.98		
		Max			107.45			108.10			121.82			104.61		
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			101.4			99.4			99.3			98.8		
		Min			96.4			71.5			84.3			67.7		
		Max			107.5			108.1			121.8			128.1		
South-East EPPO zone (N=4)		Mean			95.76			137.10			113.73			95.88		
		Min			85.85			80.50			88.79			61.28		

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EPPO zone	Crop	Variety	Na content (% or mmoles and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)	
		Max			119.86			191.87			129.24			152.71		
Central Zone (N=15)		Mean			98.95			111.82			102.53			98.18		
		Min			85.85			71.52			84.29			61.28		
		Max			119.86			191.87			129.24			152.71		
		Mean			98.75			112.33			103.79			100.61		
Central Zone + UK + France (N=19)		Min			85.85			71.52			84.29			61.28		
		Max			119.86			191.87			129.24			152.71		

Means followed by same letter in the row do not significantly differ

Table 3.4-48 Summary of the K content impact of F7B-39-30 when applied at 1 application (E) on sugar beet by EPPO zone.

EPPO zone	Crop	Variety	K content (% or mmoles and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)	
Maritime	BEAVA	BTS 4860 N	31.18	a	101.93	31.18	a	101.99	31.23	a	102.41	30.00	a	98.20	30.63	a
Maritime	BEAVA	BTS9975	3.53	a	111.64	3.14	a	99.52	2.89	a	91.53	2.95	a	93.27	3.16	a
Maritime	BEAVA	BTS-8840	42.33	ab	112.42	41.98	ab	111.49	41.88	ab	111.22	38.20	b	101.46	37.65	b
Maritime	BEAVA	Lunella	44.70	a	107.45	44.78	a	107.63	42.15	a	101.32	42.45	a	102.04	41.60	a
Maritime	BEAVA	Chevrolet	42.95	bcd	95.92	43.88	bcd	97.99	40.78	cd	91.07	49.59	a	110.75	44.78	a-d
Maritime	BEAVA	BTS 1915	38974.38	ab	106.30	36602.55	ab	99.62	37435.90	ab	102.03	38333.33	ab	104.37	36794.88	ab
Maritime	BEAVA	Lightning	30705.15	a	91.96	31730.80	a	94.96	31025.65	a	92.39	31025.68	a	92.62	33525.63	a
Maritime	BEAVA	TESSILIA KWS	4.46	a	100.39	4.98	a	112.17	4.30	a	96.85	4.38	a	98.65	4.44	a
Maritime	BEAVA	BTS-555	0.42	b	98.00	0.42	ab	99.41	0.42	b	97.77	0.41	b	96.71	0.43	ab
Maritime	BEAVA	BTS 7300 N	4.43	a	97.79	4.53	a	100.00	4.53	a	100.00	4.45	a	98.34	4.53	a
Maritime	BEAVA	Lightning	131.50	a	81.80	161.50	a	100.47	159.50	a	99.22	170.50	a	106.07	160.75	a
Maritime	BEAVA	Giono	4.05	ab	104.57	4.15	a	107.20	3.78	bc	97.62	3.69	c	95.37	3.87	abc
North-East	BEAVA	BTS 9975	44.50	a	102.53	44.68	a	102.94	39.03	a	89.92	40.60	a	93.55	43.40	a
North-East	BEAVA	Everest	37.68	ab	116.19	42.25	a	130.30	39.18	ab	120.82	34.33	ab	105.86	32.43	ab

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EPPO zone	Crop	Variety	K content (% or mmols and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmols)	
North-East	BEAVA	Wojownik	41.50	a-d	96.08	38.53	cd	89.11	47.15	a	109.15	39.43	bcd	91.26	43.20	abc
South-East	BEAVA	KOMODO	47.35	a	95.12	46.88	a	94.20	46.95	a	94.29	34.48	b	69.26	49.78	a
South-East	BEAVA	Kipunji Smart (Conviso Smart)	32.85	a	114.76	36.60	a	127.86	24.28	a	84.80	25.50	a	89.08	28.63	a
South-East	BEAVA	Tesla	42.20	ab	111.71	34.03	b	90.07	34.55	ab	91.46	35.83	ab	94.84	37.78	ab
South-East	BEAVA	Grandosa KWS	49.35	a	100.56	48.18	a	98.17	48.95	a	99.75	49.25	a	100.36	49.08	a
Maritime EPPO zone (N=12)		Mean			100.85			102.70			98.62			99.82		
		Min			81.80			94.96			91.07			92.62		
		Max			112.42			112.17			111.22			110.75		
North-East EPPO zone (N=3)		Mean			104.94			107.45			106.63			96.89		
		Min			96.08			89.11			89.92			91.26		
		Max			116.19			130.30			120.82			105.86		
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			105.0			104.8			101.6			99.4		
		Min			95.9			89.1			89.9			91.3		
		Max			116.2			130.3			120.8			110.8		
South-East EPPO zone (N=4)		Mean			105.54			102.57			92.58			88.39		
		Min			95.12			90.07			84.80			69.26		
		Max			114.76			127.86			99.75			100.36		
Central Zone (N=15)		Mean			104.17			104.19			98.82			96.24		
		Min			95.12			89.11			84.80			69.26		
		Max			116.19			130.30			120.82			110.75		
Central Zone + UK + France (N=19)		Mean			102.48			103.43			98.61			96.95		
		Min			81.80			89.11			84.80			69.26		
		Max			116.19			130.30			120.82			110.75		

Means followed by same letter in the row do not significantly differ

Table 3.4-49 Summary of the N content impact of F7B-39-30 when applied at 1 application (E) on sugar beet by EPPO zone.

EPPO zone	Crop	Variety	Nitrogen content (% and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (%)	
Maritime	BEAVA	BTS 4860 N	9.30	ab	109.11	10.00	ab	117.17	11.00	a	129.14	9.93	ab	114.57	8.63	b
Maritime	BEAVA	BTS9975	0.70	ab	88.33	0.72	ab	90.54	0.69	ab	87.07	0.67	ab	83.91	0.79	ab
Maritime	BEAVA	BTS-8840	12.23	a	87.79	8.43	a	60.50	5.63	a	40.39	9.85	a	70.74	13.93	a
Maritime	BEAVA	Lunella	14.40	a	106.86	12.30	a	91.28	14.90	a	110.58	11.70	a	86.83	13.48	a
Maritime	BEAVA	Chevrolet	20.19	ab	117.11	17.73	ab	102.83	15.14	b	87.82	23.50	a	136.33	17.24	ab

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EPPO zone	Crop	Variety	Nitrogen content (% and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (%)	
Maritime	BEAVA	BTS 1915	10892.85	a	82.31	13035.73	a	98.98	10892.85	a	82.82	16250.00	a	123.25	13214.25	a
Maritime	BEAVA	Lightning	14642.85	ab	119.08	16964.30	ab	154.86	11964.30	b	102.75	14642.85	ab	122.32	13035.73	ab
Maritime	BEAVA	TESSILIA KWS	0.91	a	95.79	1.02	a	107.63	0.91	a	95.26	0.88	a	92.11	0.95	a
Maritime	BEAVA	BTS-555	0.07	a	97.32	0.08	a	100.33	0.07	a	98.33	0.07	a	92.64	0.07	a
Maritime	BEAVA	BTS 7300 N	10.48	a	91.48	10.60	a	92.58	9.68	a	84.50	11.25	a	98.25	11.45	a
Maritime	BEAVA	Lightning	8.25	a	97.06	7.75	a	91.18	9.75	a	114.71	11.00	a	129.41	8.50	a
Maritime	BEAVA	Giono	1.60	ab	103.07	1.65	ab	105.80	1.57	ab	100.60	1.47	ab	94.33	1.56	ab
North-East	BEAVA	BTS 9975	24.38	a	85.60	32.43	a	113.87	22.50	a	79.02	26.28	a	92.27	28.48	a
North-East	BEAVA	Everest	18.93	ab	120.93	23.60	a	150.80	20.70	ab	132.27	15.63	ab	99.84	15.65	ab
North-East	BEAVA	Wojownik	25.90	a	111.51	23.55	a	100.93	26.45	a	114.42	21.15	a	91.84	23.25	a
South-East	BEAVA	KOMODO	48.98	ab	86.87	53.53	a	94.98	47.88	ab	90.67	30.78	b	60.62	49.70	a
South-East	BEAVA	Kipunji Smart (Conviso Smart)	34.43	a	127.86	22.80	a	84.68	27.15	a	100.84	25.65	a	95.26	26.93	a
South-East	BEAVA	Tesla	13.28	b	75.97	19.58	ab	112.02	12.53	b	71.67	14.58	b	83.40	17.48	b
South-East	BEAVA	Grandosa KWS	42.38	ab	124.08	53.73	a	157.32	38.60	ab	113.03	33.85	b	99.12	34.15	b
Maritime EPPO zone (N=12)		Mean			99.61			101.14			94.50			103.72		
		Min			82.31			60.50			40.39			70.74		
		Max			119.08			154.86			129.14			136.33		
North-East EPPO zone (N=3)		Mean			106.01			121.87			108.57			94.65		
		Min			85.60			100.93			79.02			91.84		
		Max			120.93			150.80			132.27			99.84		
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			101.9			101.4			93.7			94.3		
		Min			85.6			60.5			40.4			70.7		
		Max			120.9			150.8			132.3			136.3		
South-East EPPO zone (N=4)		Mean			103.69			112.25			94.05			84.60		
		Min			75.97			84.68			71.67			60.62		
		Max			127.86			157.32			113.03			99.12		
Central Zone (N=15)		Mean			101.77			105.16			95.67			93.18		
		Min			75.97			60.50			40.39			60.62		
		Max			127.86			157.32			132.27			136.33		
Central Zone + UK + France (N=19)		Mean			101.48			106.75			96.62			98.27		
		Min			75.97			60.50			40.39			60.62		
		Max			127.86			157.32			132.27			136.33		

Means followed by same letter in the row do not significantly differ

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**Table 3.4-50 Summary of the sugar content impact of F7B-39-30 when applied at 2 applications (AB) on sugar beet by EPPO zone.**

Table 5.4.36 Summary of the sugar content impact of F7B-39-30 when applied at 2 applications (AB) on sugar beet by EPPO zone.																
EPPO zone	Crop	Variety	SUGAR (% and % relative to untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
Maritime	BEAVA	TESSILIA KWS	18.45	a	99.70	18.38	a	99.34	18.16	a	98.15	18.28	a	98.76	18.51	a
Maritime	BEAVA	BTS 4860 N	18.17	a	100.28	18.23	a	100.59				18.29	a	100.91	18.12	a
Maritime	BEAVA	BTS-555	19.59	ab	99.13	19.82	ab	100.29	19.77	ab	100.00	19.61	ab	99.20	19.77	ab
Maritime	BEAVA	BTS9975	17.25	a	99.47	16.88	a	97.38	17.02	a	98.14	17.19	a	99.12	17.34	a
Maritime	BEAVA	BTS-8840	19.22	a	98.30	19.75	a	101.00	19.67	a	100.59	19.80	a	101.25	19.55	a
Maritime	BEAVA	BTS 7300 N	14.85	a	106.48	14.68	a	105.33	14.20	ab	101.77	14.09	ab	100.95	13.97	ab
Maritime	BEAVA	Lunella	16.78	a	98.82	16.90	a	99.56	16.88	a	99.41	16.85	a	99.26	16.98	a
Maritime	BEAVA	Chevrolet	16.99	a	97.42	16.96	a	97.28	16.65	a	95.48	16.70	a	95.77	17.44	a
Maritime	BEAVA	Lightning	17.95	a	98.38	18.21	a	99.82	17.65	a	96.78	18.29	a	100.27	18.24	a
Maritime	BEAVA	BTS 1915	19.47	a	106.03	18.36	a	99.99	18.55	a	100.99	18.40	a	100.19	18.37	a
Maritime	BEAVA	Lightning	16.82	a	99.19	17.20	a	101.45	16.90	a	99.68	16.72	a	98.60	16.96	a
Maritime	BEAVA	Giono	18.00	a	99.76	17.92	a	99.24				17.78	a	98.73	17.96	a
North-East	BEAVA	BTS 9975	18.32	a	102.76	17.92	ab	100.53	17.74	ab	99.51	17.67	ab	99.12	17.82	ab
North-East	BEAVA	Everest	16.50	a	97.40	16.68	a	98.45	16.72	a	98.69	16.84	a	99.41	16.94	a
North-East	BEAVA	Wojownik	17.59	ab	96.55	17.27	b	94.80	17.82	ab	97.82	17.56	ab	96.44	18.21	ab
South-East	BEAVA	KOMODO	18.72	a	98.50	18.84	a	96.57	19.34	a	98.04	18.92	a	97.44	18.98	a
South-East	BEAVA	Kipunji Smart (Conviso Smart)	14.08	a	102.18	14.66	a	106.39	14.21	a	103.12	14.70	a	106.68	13.78	a
South-East	BEAVA	Tesla	15.65	a	102.71	15.36	a	100.80	15.36	a	100.84	16.29	a	106.89	15.24	a
South-East	BEAVA	Grandosa KWS	17.21	a	92.72	17.80	a	95.93	18.21	a	98.14	18.23	a	98.25	18.56	a
Maritime EPPO zone (N=12)		Mean			100.25			100.10			99.10			99.42		
		Min			97.42			97.28			95.48			95.77		
		Max			106.48			105.33			101.77			101.25		
North-East EPPO zone (N=3)		Mean			98.91			97.93			98.67			98.32		
		Min			96.55			94.80			97.82			96.44		
		Max			102.76			100.53			99.51			99.41		
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			98.7			98.7			98.7			98.7		
		Min			96.6			94.8			95.5			95.8		
		Max			102.8			101.0			100.6			101.3		
South-East EPPO zone (N=4)		Mean			99.03			99.92			100.04			102.31		
		Min			92.72			95.93			98.04			97.44		
		Max			102.71			106.39			103.12			106.89		
Central Zone (N=15)		Mean			99.49			99.62			99.26			99.96		
		Min			92.72			94.80			95.48			95.77		
		Max			106.48			106.39			103.12			106.89		
Central Zone + UK + France (N=19)		Mean			99.78			99.72			99.24			99.85		
		Min			92.72			94.80			95.48			95.77		

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EPPO zone	Crop	Variety	SUGAR (% and % relative to untreated)									
			F7B-39-30 @1N	%Unt.	F7B-39-30 @2 N	%Unt.	BETASANA SC @1N	%Unt.	BETASANA SC @2N	%Unt.	UNTREATED	
		Max		106.48		106.39		103.12		106.89		

Means followed by same letter in the row do not significantly differ

**Table 3.4-51 Summary of the Na content impact of F7B-39-30 when applied at 2 applications (AB) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	Na content (% or mmoles and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)	
Maritime	BEAVA	BTS 4860 N	2.68	a	97.78	2.73	a	100.09		a		2.70	a	98.33	2.75	a
Maritime	BEAVA	BTS9975	0.43	a	93.48	0.47	a	102.72	0.57	a	123.37	0.48	a	103.26	0.46	a
Maritime	BEAVA	BTS-8840	2.58	a	65.19	3.28	a	82.91	2.63	a	66.46	2.75	a	69.62	3.95	a
Maritime	BEAVA	Lunella	3.30	a	100.00	3.05	a	92.42	3.28	a	99.24	3.15	a	95.45	3.30	a
Maritime	BEAVA	Chevrolet	2.51	ab	95.71	2.69	ab	102.38	3.01	ab	114.76	2.85	ab	108.57	2.63	ab
Maritime	BEAVA	BTS 1915	4684.80	a	100.38	5065.25	a	109.77	5282.70	a	113.00	5206.55	a	112.69	4782.63	a
Maritime	BEAVA	Lightning	8923.93	a	109.97	10043.48	a	122.11	9195.68	a	109.91	8543.50	a	103.64	8728.28	a
Maritime	BEAVA	TESSILIA KWS	0.53	a	102.94	0.66	a	129.41	0.61	a	120.10	0.63	a	122.55	0.51	a
Maritime	BEAVA	BTS-555	0.02	a	92.39	0.02	a	97.83	0.02	a	104.35	0.02	a	100.00	0.02	a
Maritime	BEAVA	BTS 7300 N	43.55	abc	95.24	45.45	abc	99.40	44.70	abc	97.76	48.45	abc	105.96	45.73	abc
Maritime	BEAVA	Lightning	11.25	a	88.24	14.50	a	113.73	17.75	a	139.22	13.25	a	103.92	12.75	a
Maritime	BEAVA	Giono	0.25	a	101.98	0.25	a	100.04				0.25	a	101.77	0.25	a
North-East	BEAVA	BTS 9975	5.75	abc	93.12	6.18	abc	100.00	5.25	c	85.02	6.25	abc	101.21	6.18	abc
North-East	BEAVA	Everest	7.85	a	111.35	7.08	a	100.35	7.03	a	99.65	6.55	a	92.91	7.05	a
North-East	BEAVA	Wojownik	3.95	a	148.29	3.75	ab	135.81	2.53	c	92.42	3.05	abc	113.86	2.75	bc
South-East	BEAVA	KOMODO	18.95	a	83.08	21.95	a	89.82	13.93	a	62.56	17.03	a	75.10	22.68	a
South-East	BEAVA	Kipunji Smart (Convivo Smart)	17.60	a	88.89	15.38	a	77.65	16.28	a	82.20	15.88	a	80.18	19.80	a
South-East	BEAVA	Tesla	3.93	a	127.64	3.23	a	104.88	3.80	a	123.58	2.70	a	87.80	3.08	a
South-East	BEAVA	Grandosa KWS	10.48	a	151.26	9.55	a	137.91	8.30	a	119.86	7.63	a	110.11	6.93	a
Maritime EPPO zone (N=12)		Mean			95.27			104.40			108.82			102.15		
		Min			65.19			82.91			66.46			69.62		
		Max			109.97			129.41			139.22			122.55		
North-East EPPO zone (N=3)		Mean			117.58			112.06			92.36			102.66		
		Min			93.12			100.00			85.02			92.91		
		Max			148.29			135.81			99.65			113.86		
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			99.9			101.8			98.2			98.1		
		Min			65.2			82.9			66.5			69.6		



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EPPO zone	Crop	Variety	Na content (% or mmoles and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)	
		Max			148.3			135.8			123.4			113.9		
South-East EPPO zone (N=4)		Mean			112.72			102.57			97.05			88.30		
		Min			83.08			77.65			62.56			75.10		
		Max			151.26			137.91			123.58			110.11		
Central Zone (N=15)		Mean			103.09			103.57			99.38			97.66		
		Min			65.19			77.65			62.56			69.62		
		Max			151.26			137.91			123.58			122.55		
Central Zone + UK + France (N=19)		Mean			102.47			105.22			103.14			99.31		
		Min			65.19			77.65			62.56			69.62		
		Max			151.26			137.91			139.22			122.55		

Means followed by same letter in the row do not significantly differ

**Table 3.4-52 Summary of the K content impact of F7B-39-30 when applied at 2 applications (AB) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	K content (% or mmoles and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)	
Maritime	BEAVA	BTS 4860 N	31.20	a	102.25	30.53	a	99.97				30.68	a	100.64	30.63	a
Maritime	BEAVA	BTS9975	3.20	a	101.35	3.09	a	97.94	3.04	a	96.12	2.93	a	92.87	3.16	a
Maritime	BEAVA	BTS-8840	41.70	ab	110.76	41.35	ab	109.83	40.18	ab	106.71	40.40	ab	107.30	37.65	b
Maritime	BEAVA	Lunella	43.90	a	105.53	43.43	a	104.39	42.18	a	101.38	41.45	a	99.64	41.60	a
Maritime	BEAVA	Chevrolet	43.76	bcd	97.74	43.43	bcd	96.98	43.38	bcd	96.87	41.39	bcd	92.43	44.78	a-d
Maritime	BEAVA	BTS 1915	40103.18	a	109.32	38076.90	ab	103.66	37051.28	ab	101.04	36666.65	ab	99.80	36794.88	ab
Maritime	BEAVA	Lightning	31602.53	a	94.27	33012.83	a	98.74	33141.03	a	98.77	32115.38	a	95.82	33525.63	a
Maritime	BEAVA	TESSILIA KWS	4.40	a	99.04	4.81	a	108.28	4.74	a	106.76	4.50	a	101.35	4.44	a
Maritime	BEAVA	BTS-555	0.41	b	96.42	0.44	ab	103.41	0.43	ab	101.06	0.42	ab	99.00	0.43	ab
Maritime	BEAVA	BTS 7300 N	4.50	a	99.45	4.15	a	91.71	5.05	a	111.60	4.88	a	107.73	4.53	a
Maritime	BEAVA	Lightning	143.25	a	89.11	162.00	a	100.78	146.25	a	90.98	139.00	a	86.47	160.75	a
Maritime	BEAVA	Giono	3.78	bc	97.72	3.82	bc	98.74				3.64	c	97.07	3.87	abc
North-East	BEAVA	BTS 9975	38.50	a	88.71	41.40	a	95.39	39.73	a	91.53	42.58	a	98.10	43.40	a
North-East	BEAVA	Everest	34.13	ab	105.24	34.50	ab	106.40	34.15	ab	105.32	33.75	ab	104.09	32.43	ab
North-East	BEAVA	Wojownik	35.33	a	81.83	39.60	bcd	91.71	36.40	a	84.23	37.83	cd	87.55	43.20	abc
South-East	BEAVA	KOMODO	47.53	a	95.40		a	96.64	44.03	a	88.21	46.63	a	93.64	49.78	a

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EPPO zone	Crop	Variety	K content (% or mmols and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmols)	
South-East	BEAVA	Kipunji Smart (Conviso Smart)	26.93	a	94.06	29.08	a	101.57	30.38	a	106.11	30.13	a	105.24	28.63	a
South-East	BEAVA	Tesla	37.05	ab	98.08	42.15	ab	111.58	35.65	ab	94.37	43.68	a	115.62	37.78	ab
South-East	BEAVA	Grandosa KWS	49.68	a	101.22	46.70	a	95.16	48.63	a	99.08	49.48	a	100.82	49.08	a
Maritime EPPO zone (N=12)		Mean			100.25			101.20			101.13			98.34		
		Min			89.11			91.71			90.98			86.47		
		Max			110.76			109.83			111.60			107.73		
North-East EPPO zone (N=3)		Mean			91.93			97.83			93.69			96.58		
		Min			81.83			91.71			84.23			87.55		
		Max			105.24			106.40			105.32			104.09		
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			98.4			100.8			97.9			97.6		
		Min			81.8			91.7			84.2			87.6		
		Max			110.8			109.8			106.7			107.3		
South-East EPPO zone (N=4)		Mean			97.19			101.24			96.95			103.83		
		Min			94.06			95.16			88.21			93.64		
		Max			101.22			111.58			106.11			115.62		
Central Zone (N=15)		Mean			98.47			100.73			99.24			100.40		
		Min			81.83			91.71			84.23			87.55		
		Max			110.76			111.58			111.60			115.62		
Central Zone + UK + France (N=19)		Mean			98.29			100.68			98.83			99.22		
		Min			81.83			91.71			84.23			86.47		
		Max			110.76			111.58			111.60			115.62		

Means followed by same letter in the row do not significantly differ

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**Table 3.4-53 Summary of the N content impact of F7B-39-30 when applied at 2 applications (AB) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	Nitrogen content (% and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (%)	
Maritime	BEAVA	BTS 4860 N	8.80	ab	103.24	9.83	ab	115.64				9.23	ab	107.65	8.63	b
Maritime	BEAVA	BTS9975	0.76	ab	95.27	0.67	ab	84.23	0.70	ab	88.64	0.75	ab	94.95	0.79	ab
Maritime	BEAVA	BTS-8840	10.18	a	73.07	13.05	a	93.72	9.78	a	70.20	9.05	a	64.99	13.93	a
Maritime	BEAVA	Lunella	14.55	a	107.98	12.48	a	92.58	15.25	a	113.17	13.98	a	103.71	13.48	a
Maritime	BEAVA	Chevrolet	20.66	ab	119.87	20.21	ab	117.26	19.61	ab	113.78	18.68	ab	108.34	17.24	ab
Maritime	BEAVA	BTS 1915	12678.58	a	95.69	13928.55	a	105.48	10714.30	a	81.14	11428.58	a	86.77	13214.25	a
Maritime	BEAVA	Lightning	14821.43	ab	121.37	16785.73	ab	150.37	17500.00	ab	144.22	13035.73	ab	111.79	13035.73	ab
Maritime	BEAVA	TESSILIA KWS	0.82	a	86.58	1.09	a	115.00	1.09	a	114.47	1.01	a	106.05	0.95	a
Maritime	BEAVA	BTS-555	0.07	a	89.63	0.09	a	114.72	0.09	a	116.39	0.07	a	91.97	0.07	a
Maritime	BEAVA	BTS 7300 N	10.18	a	88.86	10.30	a	89.96	11.33	a	98.91	11.23	a	98.03	11.45	a
Maritime	BEAVA	Lightning	8.50	a	100.00	8.50	a	100.00	14.75	a	173.53	8.50	a	100.00	8.50	a
Maritime	BEAVA	Giono	1.53	ab	98.11	1.50	ab	96.13				1.50	ab	95.80	1.56	ab
North-East	BEAVA	BTS 9975	27.15	a	95.35	29.18	a	102.46	29.70	a	104.30	25.88	a	90.87	28.48	a
North-East	BEAVA	Everest	17.65	ab	112.78	18.75	ab	119.81	17.00	ab	108.63	16.53	ab	105.59	15.65	ab
North-East	BEAVA	Wojownik	23.10	a	100.19	23.65	a	102.63	23.53	a	101.32	21.83	a	94.67	23.25	a
South-East	BEAVA	KOMODO	45.40	ab	89.49	48.63	ab	92.92	36.98	ab	73.35	43.80	ab	86.17	49.70	a
South-East	BEAVA	Kipunji Smart (Conviso Smart)	24.90	a	92.48	41.73	a	154.97	35.40	a	131.48	34.25	a	127.21	26.93	a
South-East	BEAVA	Tesla	16.48	b	94.28	19.28	ab	110.30	17.90	b	102.43	15.73	b	89.99	17.48	b
South-East	BEAVA	Grandosa KWS	39.03	ab	114.28	35.18	b	103.00	37.38	b	109.44	35.88	b	105.05	34.15	b
Maritime EPPO zone (N=12)		Mean			98.31			106.26			111.45			97.51		
		Min			73.07			84.23			70.20			64.99		
		Max			121.37			150.37			173.53			111.79		
North-East EPPO zone (N=3)		Mean			102.77			108.30			104.75			97.04		
		Min			95.35			102.46			101.32			90.87		
		Max			112.78			119.81			108.63			105.59		
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			99.3			103.4			102.1			94.4		
		Min			73.1			84.2			70.2			65.0		
		Max			119.9			119.8			116.4			108.3		
South-East EPPO zone (N=4)		Mean			97.63			115.30			104.17			102.10		
		Min			89.49			92.92			73.35			86.17		
		Max			114.28			154.97			131.48			127.21		
Central Zone (N=15)		Mean			97.56			107.28			103.32			98.35		
		Min			73.07			84.23			70.20			64.99		
		Max			119.87			154.97			131.48			127.21		
Central Zone + UK + France (N=19)		Mean			98.87			108.48			108.55			98.40		
		Min			73.07			84.23			70.20			64.99		

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EPPO zone	Crop	Variety	Nitrogen content (% and % of untreated)									
			F7B-39-30 @1N	%Unt.	F7B-39-30 @2 N	%Unt.	BETASANA SC @1N	%Unt.	BETASANA SC @2N	%Unt.	UNTREATED (%)	
		Max		121.37		154.97		173.53		127.21		

Means followed by same letter in the row do not significantly differ

**Table 3.4-54 Summary of the sugar content impact of F7B-39-30 when applied at 3 applications (ABC) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	SUGAR %													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
Maritime	BEAVA	TESSILIA KWS	18.25	a	98.64	18.86	a	101.89	18.62	a	100.63	18.40	a	99.45	18.51	a
Maritime	BEAVA	BTS 4860 N	18.23	a	100.57	18.28	a	100.84				18.20	a	100.41	18.12	a
Maritime	BEAVA	BTS-555	19.38	abc	98.03	19.60	ab	99.17	19.33	ab	97.79	19.76	ab	99.96	19.77	ab
Maritime	BEAVA	BTS9975	17.28	a	99.68	16.99	a	97.98	16.89	a	97.39	17.24	a	99.45	17.34	a
Maritime	BEAVA	BTS-8840	19.19		98.15	19.36		98.99	20.04		102.49	19.86		101.59	19.55	
Maritime	BEAVA	BTS 7300 N	14.57	ab	104.44	14.61	ab	104.73	14.22	b	101.98	13.22	ab	94.85	13.97	ab
Maritime	BEAVA	Lunella	17.00	a	100.15	16.73	a	98.53	16.88	a	99.41	16.88	a	99.41	16.98	a
Maritime	BEAVA	Chevrolet	16.84	a	96.56	17.33	a	99.35	16.64	a	95.41	16.38	a	93.91	17.44	a
Maritime	BEAVA	Lightning	18.06	a	99.03	18.09	a	99.18	18.14	a	99.44	18.14	a	99.47	18.24	a
Maritime	BEAVA	BTS 1915	18.50	a	100.74	18.43	a	100.33	18.94	a	103.14	18.85	a	102.64	18.37	a
Maritime	BEAVA	Lightning	17.05	a	100.58	16.95	a	99.97	17.16	a	101.22	16.86	a	99.41	16.96	a
Maritime	BEAVA	Giono	18.02	a	99.97	17.91	a	99.39				18.17	a	99.92	17.96	a
North-East	BEAVA	BTS 9975	17.57	ab	98.58	17.73	ab	99.47	17.74	ab	99.52	17.05	b	95.65	17.82	ab
North-East	BEAVA	Everest	16.56	a	97.71	17.06	a	100.69	16.82	a	99.29	16.61	a	98.05	16.94	a
North-East	BEAVA	Wojownik	17.92	ab	98.40	17.27	b	94.84	17.43	ab	95.67	17.73	ab	97.32	18.21	ab
South-East	BEAVA	KOMODO	18.73	a	97.54	19.42	a	99.62	19.68	a	99.26	18.38	a	95.24	18.98	a
South-East	BEAVA	Kipunji Smart (Conviso Smart)	13.69	a	99.38	13.65	a	99.06	14.80	a	107.44	14.60	a	105.95	13.78	a
South-East	BEAVA	Tesla	15.72	a	103.18	14.73	a	96.67	15.52	a	101.85	16.18	a	106.19	15.24	a
South-East	BEAVA	Grandosa KWS	18.82	a	101.40	18.64	a	100.46	17.99	a	96.93	18.23	a	98.22	18.56	a
Maritime EPPO zone (N=12)		Mean			99.71			100.03			99.89			99.21		
		Min			96.56			97.98			95.41			93.91		
		Max			104.44			104.73			103.14			102.64		
North-East EPPO zone (N=3)		Mean			98.23			98.33			98.16			97.01		
		Min			97.71			94.84			95.67			95.65		

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EPPO zone	Crop	Variety	SUGAR %													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
		Max			98.58			100.69			99.52			98.05		
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			98.4			98.6			98.4			98.2		
		Min			96.6			94.8			95.4			93.9		
		Max			100.2			100.7			102.5			101.6		
South-East EPPO zone (N=4)		Mean			100.38			98.95			101.37			101.40		
		Min			97.54			96.67			96.93			95.24		
		Max			103.18			100.46			107.44			106.19		
Central Zone (N=15)		Mean			99.49			99.49			99.65			99.04		
		Min			96.56			94.84			95.41			93.91		
		Max			104.44			104.73			107.44			106.19		
Central Zone + UK + France (N=19)		Mean			99.62			99.53			99.93			99.32		
		Min			96.56			94.84			95.41			93.91		
		Max			104.44			104.73			107.44			106.19		

Means followed by same letter in the row do not significantly differ

Table 3.4-55 Summary of the Na content impact of F7B-39-30 when applied at 3 applications (ABC) on sugar beet by EPPO zone.

EPPO zone	Crop	Variety	Na content (% or mmoles and % of untreated)												
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)
Maritime	BEAVA	BTS 4860 N	2.68	a	97.32	2.58	a	94.10				2.85	a	105.05	2.75 a
Maritime	BEAVA	BTS9975	0.48	a	103.80	0.56	a	121.74	0.52	a	111.96	0.47	a	101.63	0.46 a
Maritime	BEAVA	BTS-8840	3.68	a	93.04	3.68	a	93.04	2.58	a	65.19	2.23	a	56.33	3.95 a
Maritime	BEAVA	Lunella	3.30	a	100.00	3.33	a	100.76	2.63	a	79.55	3.33	a	100.76	3.30 a
Maritime	BEAVA	Chevrolet	2.90	ab	110.48	2.71	ab	103.33	2.94	ab	111.90	2.81	ab	107.14	2.63 ab
Maritime	BEAVA	BTS 1915	4554.38	a	96.49	4532.60	a	97.28	4239.15	a	89.09	4728.28	a	101.63	4782.63 a
Maritime	BEAVA	Lightning	8771.75	a	101.37	9576.08	a	114.27	8217.40	a	98.03	7608.73	a	92.58	8728.28 a
Maritime	BEAVA	TESSILIA KWS	0.53	a	104.41	0.47	a	92.16	0.51	a	99.02	0.58	a	113.73	0.51 a
Maritime	BEAVA	BTS-555	0.02	a	102.17	0.02	a	98.91	0.02	a	102.17	0.02	a	100.00	0.02 a
Maritime	BEAVA	BTS 7300 N	44.63	ab	97.59	43.73	ab	95.63	46.05	b	100.71	49.30	ab	107.82	45.73 ab
Maritime	BEAVA	Lightning	13.00	a	101.96	15.50	a	121.57	13.75	a	107.84	13.75	a	107.84	12.75 a
Maritime	BEAVA	Giono	0.26	a	103.62	0.25	a	102.07				0.25	a	98.74	0.25 a
North-East	BEAVA	BTS 9975	6.08	abc	98.38	5.90	abc	95.55	5.85	abc	94.74	6.23	abc	100.81	6.18 abc
North-East	BEAVA	Everest	7.85	a	111.35	7.65	a	108.51	7.30	a	103.55	7.40	a	104.96	7.05 a

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EPPO zone	Crop	Variety	Na content (% or mmoles and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)	
North-East	BEAVA	Wojownik	3.10	abc	115.53	3.65	abc	134.76	2.80	bc	103.38	2.63	bc	96.09	2.75	bc
South-East	BEAVA	KOMODO	16.65	a	72.32	21.40	a	92.37	24.35	a	99.46	17.73	a	78.06	22.68	a
South-East	BEAVA	Kipunji Smart (Convivo Smart)	17.35	a	87.63	18.65	a	94.19	17.90	a	90.40	15.48	a	78.16	19.80	a
South-East	BEAVA	Tesla	2.95	a	95.93	4.68	a	152.03	2.85	a	92.68	2.25	a	73.17	3.08	a
South-East	BEAVA	Grandosa KWS	7.75	a	111.91	5.83	a	84.12	9.50	a	137.18	7.13	a	102.89	6.93	a
Maritime EPPO zone (N=12)		Mean			101.02			102.91			96.55			99.44		
		Min			93.04			92.16			65.19			56.33		
		Max			110.48			121.74			111.96			113.73		
North-East EPPO zone (N=3)		Mean			108.42			112.94			100.55			100.62		
		Min			98.38			95.55			94.74			96.09		
		Max			115.53			134.76			103.55			104.96		
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			104.3			107.1			96.6			96.0		
		Min			93.0			93.0			65.2			56.3		
		Max			115.5			134.8			112.0			107.1		
South-East EPPO zone (N=4)		Mean			91.95			105.68			104.93			83.07		
		Min			72.32			84.12			90.40			73.17		
		Max			111.91			152.03			137.18			102.89		
Central Zone (N=15)		Mean			100.12			104.08			99.42			95.11		
		Min			72.32			84.12			65.19			56.33		
		Max			115.53			152.03			137.18			113.73		
Central Zone + UK + France (N=19)		Mean			100.28			105.07			99.23			96.18		
		Min			72.32			84.12			65.19			56.33		
		Max			115.53			152.03			137.18			113.73		

Means followed by same letter in the row do not significantly differ

Table 3.4-56 Summary of the K content impact of F7B-39-30 when applied at 3 applications (ABC) on sugar beet by EPPO zone.

EPPO zone	Crop	Variety	K content (% or mmoles and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)	
Maritime	BEAVA	BTS 4860 N	29.55	a	96.76	29.93	a	97.97				29.38	a	96.27	30.63	a
Maritime	BEAVA	BTS9975	3.44	a	108.87	3.28	a	103.72	2.90	a	91.69	3.11	a	98.57	3.16	a
Maritime	BEAVA	BTS-8840	39.83	ab	105.78	44.90	a	119.26	39.90	ab	105.98	40.13	ab	106.57	37.65	b

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EPPO zone	Crop	Variety	K content (% or mmols and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmols)	
Maritime	BEAVA	Lunella	43.45	a	104.45	42.75	a	102.76	43.68	a	104.99	42.23	a	101.50	41.60	a
Maritime	BEAVA	Chevrolet	45.65	abc	101.95	46.61	ab	104.10	42.51	bcd	94.95	41.65	bcd	93.02	44.78	a-d
Maritime	BEAVA	BTS 1915	37756.38	ab	102.87	38141.00	ab	104.00	38205.13	ab	104.16	38397.45	ab	104.71	36794.88	ab
Maritime	BEAVA	Lightning	32435.90	a	96.74	34423.08	a	102.34	30064.10	a	89.91	33269.25	a	99.35	33525.63	a
Maritime	BEAVA	TESSILIA KWS	4.24	a	95.49	4.29	a	96.62	4.26	a	96.06	4.34	a	97.80	4.44	a
Maritime	BEAVA	BTS-555	0.43	ab	100.06	0.44	ab	103.76	0.42	b	98.35	0.43	ab	100.29	0.43	ab
Maritime	BEAVA	BTS 7300 N	4.53	a	100.00	4.20	a	92.82	4.08	a	90.06	5.58	a	123.20	4.53	a
Maritime	BEAVA	Lightning	147.00	a	91.45	160.75	a	100.00	146.25	a	90.98	157.00	a	97.67	160.75	a
Maritime	BEAVA	Giono	3.89	abc	104.43	3.83	abc	98.97				3.69	c	95.48	3.87	abc
North-East	BEAVA	BTS 9975	38.00	a	87.56	38.70	a	89.17	41.65	a	95.97	38.58	a	88.88	43.40	a
North-East	BEAVA	Everest	35.35	ab	87.96	32.98	ab	105.48	33.55	ab	92.58	35.33	ab	92.25	32.43	ab
North-East	BEAVA	Wojownik	38.03	cd	88.02	45.55	ab	105.44	40.00	bcd	92.59	39.85	bcd	92.25	43.20	abc
South-East	BEAVA	KOMODO	46.10	a	92.63	47.28	a	95.00	49.35	a	99.15	47.48	a	95.32	49.78	a
South-East	BEAVA	Kipunji Smart (Convivo Smart)	34.58	a	120.79	31.63	a	110.48	31.53	a	110.13	31.10	a	108.65	28.63	a
South-East	BEAVA	Tesla	36.68	ab	97.09	42.05	ab	111.32	36.65	ab	97.02	38.10	ab	100.86	37.78	ab
South-East	BEAVA	Grandosa KWS	49.45	a	100.76	49.40	a	100.66	48.93	a	99.69	49.55	a	100.97	49.08	a
Maritime EPPO zone (N=12)		Mean			100.74			102.19			96.71			101.20		
		Min			91.45			92.82			89.91			93.02		
		Max			108.87			119.26			105.98			123.20		
North-East EPPO zone (N=3)		Mean			87.85			100.03			93.71			91.13		
		Min			87.56			89.17			92.58			88.88		
		Max			88.02			105.48			95.97			92.25		
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			98.1			104.2			97.1			96.7		
		Min			87.6			89.2			91.7			88.9		
		Max			108.9			119.3			106.0			106.6		
South-East EPPO zone (N=4)		Mean			102.82			104.36			101.50			101.45		
		Min			92.63			95.00			97.02			95.32		
		Max			120.79			111.32			110.13			108.65		
Central Zone (N=15)		Mean			99.21			102.57			97.80			99.76		
		Min			87.56			89.17			90.06			88.88		
		Max			120.79			119.26			110.13			123.20		
Central Zone + UK + France (N=19)		Mean			99.14			102.31			97.31			99.67		
		Min			87.56			89.17			89.91			88.88		
		Max			120.79			119.26			110.13			123.20		

Means followed by same letter in the row do not significantly differ

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**Table 3.4-57 Summary of the N content impact of F7B-39-30 when applied at 3 applications (ABC) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	Nitrogen content (% and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (%)	
Maritime	BEAVA	BTS 4860 N	8.90	ab	104.11	9.00	ab	105.36				8.88	ab	104.65	8.63	b
Maritime	BEAVA	BTS9975	0.70	ab	88.33	0.78	ab	98.74	0.65	ab	81.70	0.98	a	123.97	0.79	ab
Maritime	BEAVA	BTS-8840	14.88	a	106.82	5.81	a	41.74	11.10	a	79.71	9.55	a	68.58	13.93	a
Maritime	BEAVA	Lunella	14.40	a	106.86	12.23	a	90.72	11.75	a	87.20	13.63	a	101.11	13.48	a
Maritime	BEAVA	Chevrolet	19.64	ab	113.92	21.19	ab	122.92	19.50	ab	113.13	20.71	ab	120.16	17.24	ab
Maritime	BEAVA	BTS 1915	10714.28	a	80.85	10714.30	a	80.99	10178.58	a	77.12	12321.40	a	93.49	13214.25	a
Maritime	BEAVA	Lightning	13392.88	ab	118.02	13035.70	ab	119.81	11249.98	b	98.36	12321.43	b	106.81	13035.73	ab
Maritime	BEAVA	TESSILIA KWS	0.91	a	95.79	0.92	a	96.58	0.93	a	97.37	1.01	a	106.32	0.95	a
Maritime	BEAVA	BTS-555	0.07	a	96.66	0.08	a	107.36	0.08	a	107.36	0.08	a	111.37	0.07	a
Maritime	BEAVA	BTS 7300 N	10.73	a	93.67	11.03	a	96.29	11.25	a	98.25	11.95	a	104.37	11.45	a
Maritime	BEAVA	Lightning	8.00	a	94.12	10.00	a	117.65	8.50	a	100.00	10.50	a	123.53	8.50	a
Maritime	BEAVA	Giono	1.56	ab	100.03	1.68	a	107.23				1.50	ab	95.83	1.56	ab
North-East	BEAVA	BTS 9975	24.83	a	87.18	25.90	a	90.96	28.73	a	100.88	25.15	a	88.32	28.48	a
North-East	BEAVA	Everest	17.83	ab	113.90	16.13	ab	103.04	14.95	ab	95.53	17.78	ab	113.58	15.65	ab
North-East	BEAVA	Wojownik	20.55	a	88.63	26.95	a	116.70	25.65	a	109.91	26.35	a	113.58	23.25	a
South-East	BEAVA	KOMODO	45.78	ab	90.11	46.00	ab	89.01	49.95	ab	95.97	45.55	a	90.89	49.70	a
South-East	BEAVA	Kipunji Smart (Conviso Smart)	25.25	a	93.78	37.13	a	137.88	28.55	a	106.04	29.48	a	109.47	26.93	a
South-East	BEAVA	Tesla	16.53	b	94.56	27.38	a	156.65	14.65	b	83.83	17.25	b	98.71	17.48	b
South-East	BEAVA	Grandosa KWS	41.10	ab	120.35	32.95	b	96.49	36.25	b	106.15	38.03	b	111.35	34.15	b
Maritime EPPO zone (N=12)		Mean			99.93			98.78			94.02			105.02		
		Min			80.85			41.74			77.12			68.58		
		Max			118.02			122.92			113.13			123.97		
North-East EPPO zone (N=3)		Mean			96.57			103.56			102.11			105.16		
		Min			87.18			90.96			95.53			88.32		
		Max			113.90			116.70			109.91			113.58		
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			100.3			96.5			96.9			105.1		
		Min			87.2			41.7			79.7			68.6		
		Max			113.9			122.9			113.1			124.0		
South-East EPPO zone (N=4)		Mean			99.70			120.01			98.00			102.60		
		Min			90.11			89.01			83.83			90.89		
		Max			120.35			156.65			106.15			111.35		
Central Zone (N=15)		Mean			99.65			103.36			97.36			104.43		
		Min			87.18			41.74			79.71			68.58		
		Max			120.35			156.65			113.13			123.97		
Central Zone + UK + France (N=19)		Mean			99.35			104.01			96.38			104.53		
		Min			80.85			41.74			77.12			68.58		



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EPPO zone	Crop	Variety	Nitrogen content (% and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (%)	
		Max			120.35			156.65			113.13			123.97		

Means followed by same letter in the row do not significantly differ

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**Table 3.4-58 Summary of the sugar content impact of F7B-39-30 when applied at 4 applications (ABCD) on sugar beet by EPPO zone.**

Table S.4.36 Summary of the sugar content impact of F7B-39-30 when applied at 4 applications (ABCDEF) on sugar beet by EPPO zone.																
EPPO zone	Crop	Variety	SUGAR %													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED	
Maritime	BEAVA	TESSILIA KWS	18.50	a	99.95	18.12	a	97.91	18.36	a	99.20	18.87	a	101.99	18.51	a
Maritime	BEAVA	BTS 4860 N	18.20	a	100.44	18.26	a	100.73		a		18.06	a	99.67	18.12	a
Maritime	BEAVA	BTS-555	19.41	abc	98.18	19.34	abc	97.82	19.89	a	100.65	19.95	ab	100.94	19.77	ab
Maritime	BEAVA	BTS9975	17.11	a	98.70	16.86	a	97.23	16.93	a	97.66	17.05	a	98.31	17.34	a
Maritime	BEAVA	BTS-8840	19.45	a	99.49	19.27	a	98.57	19.55	a	99.96	20.13	a	102.95	19.55	a
Maritime	BEAVA	BTS 7300 N	14.36	ab	103.00	14.37	ab	103.11	14.71	a	105.50	14.38	ab	102.99	13.97	ab
Maritime	BEAVA	Lunella	16.43	a	96.76	16.95	a	99.85	16.88	a	99.41	16.98	a	100.00	16.98	a
Maritime	BEAVA	Chevrolet	16.75	a	96.06	17.34	a	99.43	16.93	a	97.06	16.96	a	97.28	17.44	a
Maritime	BEAVA	Lightning	18.22	a	99.89	17.72	a	97.15	18.14	a	99.45	18.46	a	101.18	18.24	a
Maritime	BEAVA	BTS 1915	18.27	a	99.46	18.52	a	100.83	18.86	a	102.67	18.50	a	100.72	18.37	a
Maritime	BEAVA	Lightning	16.66	a	98.26	16.90	a	99.68	16.85	a	99.38	17.09	a	100.80	16.96	a
Maritime	BEAVA	Giono	17.97	a	99.25	18.09	a	99.76				17.81	a	98.94	17.96	a
North-East	BEAVA	BTS 9975	17.67	ab	99.12	17.71	ab	99.37	17.95	ab	100.74	17.85	ab	100.17	17.82	ab
North-East	BEAVA	Everest	16.49	a	97.33	16.16	a	95.38	16.34	a	96.44	16.73	a	98.72	16.94	a
North-East	BEAVA	Wojownik	18.70	a	102.65	17.46	ab	95.88	17.35	ab	95.26	17.38	ab	95.42	18.21	ab
South-East	BEAVA	KOMODO	18.87	a	96.73	18.57	a	96.67	18.77	a	97.73	19.26	a	98.00	18.98	a
South-East	BEAVA	Kipunji Smart (Conviso Smart)	14.62	a	106.13	14.04	a	101.92	13.20	a	95.83	14.40	a	104.50	13.78	a
South-East	BEAVA	Tesla	15.83	a	103.89	14.67	a	96.31	14.77	a	96.96	15.49	a	101.67	15.24	a
South-East	BEAVA	Grandosa KWS	17.98	a	96.90	18.39	a	99.08	18.67	a	100.59	18.49	a	99.62	18.56	a
Maritime EPPO zone (N=12)		Mean			99.12			99.34			100.09			100.48		
		Min			96.06			97.15			97.06			97.28		
		Max			103.00			103.11			105.50			102.99		
North-East EPPO zone (N=3)		Mean			99.70			96.88			97.48			98.10		
		Min			97.33			95.38			95.26			95.42		
		Max			102.65			99.37			100.74			100.17		
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			98.5			97.9			98.4			99.2		
		Min			96.1			95.4			95.3			95.4		
		Max			102.7			99.9			100.7			103.0		
South-East EPPO zone (N=4)		Mean			100.91			98.50			97.78			100.95		
		Min			96.73			96.31			95.83			98.00		
		Max			106.13			101.92			100.59			104.50		
Central Zone (N=15)		Mean			99.69			98.62			98.79			100.15		
		Min			96.06			95.38			95.26			95.42		
		Max			106.13			103.11			105.50			104.50		
Central Zone + UK + France (N=19)		Mean			99.59			98.77			99.09			100.20		
		Min			96.06			95.38			95.26			95.42		

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EPPO zone	Crop	Variety	SUGAR %									
			F7B-39-30 @1N	%Unt.	F7B-39-30 @2 N	%Unt.	BETASANA SC @1N	%Unt.	BETASANA SC @2N	%Unt.	UNTREATED	
		Max		106.13		103.11		105.50		104.50		

Means followed by same letter in the row do not significantly differ

**Table 3.4-59 Summary of the Na content impact of F7B-39-30 when applied at 4 applications (ABCD) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	Na content (% or mmoles and % of untreated)													
			F7B-39-30 @1N	%Unt.	F7B-39-30 @2 N	%Unt.	BETASANA SC @1N	%Unt.	BETASANA SC @2N	%Unt.	UNTREATED (% or mmoles)					
Maritime	BEAVA	BTS 4860 N	2.75	a	100.00	2.83	a	102.73		0.00	3.15	a	114.55	2.75	a	
Maritime	BEAVA	BTS9975	0.50	a	108.70	0.48	a	104.35	0.59	a	127.17	0.53	a	115.22	0.46	a
Maritime	BEAVA	BTS-8840	3.48	a	87.97	4.65	a	117.72	3.30	a	83.54	2.10	a	53.16	3.95	a
Maritime	BEAVA	Lunella	3.20	a	96.97	3.33	a	100.76	2.75	a	83.33	3.00	a	90.91	3.30	a
Maritime	BEAVA	Chevrolet	2.36	b	90.00	2.18	b	82.86	2.70	ab	102.86	2.59	ab	98.57	2.63	ab
Maritime	BEAVA	BTS 1915	5076.10	a	107.49	4337.00	a	91.34	5108.73	a	110.30	5673.95	a	120.54	4782.63	a
Maritime	BEAVA	Lightning	9554.35	a	109.68	8315.25	a	103.16	7576.10	a	87.46	9978.28	a	119.43	8728.28	a
Maritime	BEAVA	TESSILIA KWS	0.50	a	98.53	0.60	a	117.16	0.62	a	121.57	0.53	a	104.41	0.51	a
Maritime	BEAVA	BTS-555	0.02	a	102.17	0.02	a	106.52	0.02	a	103.26	0.02	a	97.83	0.02	a
Maritime	BEAVA	BTS 7300 N	44.00	abc	96.23	44.85	abc	98.09	45.25	abc	98.96	42.85	bc	93.71	45.73	abc
Maritime	BEAVA	Lightning	14.50	a	113.73	12.50	a	98.04	13.75	a	107.84	17.75	a	139.22	12.75	a
Maritime	BEAVA	Giono	0.26	a	105.89	0.26	a	103.07			0.26	a	103.62	0.25	a	
North-East	BEAVA	BTS 9975	5.83	abc	94.33	6.08	abc	98.38	6.29	abc	101.82	6.25	abc	101.21	6.18	abc
North-East	BEAVA	Everest	8.18	a	115.96	7.40	a	104.96	7.40	a	104.96	7.28	a	103.19	7.05	a
North-East	BEAVA	Wojownik	2.95	abc	108.72	3.15	abc	114.35	2.75	bc	100.00	3.05	abc	111.59	2.75	bc
South-East	BEAVA	KOMODO	16.60	a	72.43	16.35	a	71.91	18.08	a	76.59	20.55	a	85.62	22.68	a
South-East	BEAVA	Kipunji Smart (Convivo Smart)	13.50	a	68.18	21.08	a	106.44	20.00	a	101.01	16.98	a	85.73	19.80	a
South-East	BEAVA	Tesla	3.00	a	97.56	5.98	a	194.31	3.53	a	114.63	2.78	a	90.24	3.08	a
South-East	BEAVA	Grandosa KWS	7.65	a	110.47	8.20	a	118.41	5.05	a	72.92	8.70	a	125.63	6.93	a
Maritime EPPO zone (N=12)			Mean		101.45			102.15			93.30			104.26		
			Min		87.97			82.86			0.00			53.16		
			Max		113.73			117.72			127.17			139.22		
North-East EPPO zone (N=3)			Mean		106.34			105.90			102.26			105.33		
			Min		94.33			98.38			100.00			101.21		
			Max		115.96			114.35			104.96			111.59		
North-East EPPO zone + Czech & Germany as Support (N=8)			Mean		100.6			103.7			100.9			96.5		
			Min		88.0			82.9			83.3			53.2		
			Max		116.0			117.7			127.2			115.2		

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EPPO zone	Crop	Variety	Na content (% or mmoles and % of untreated)											
			F7B-39-30 @1N	%Unt.	F7B-39-30 @2 N	%Unt.	BETASANA SC @1N	%Unt.	BETASANA SC @2N	%Unt.	UNTREATED (% or mmoles)			
South-East EPPO zone (N=4)		Mean		87.16		122.77		91.29		96.81				
		Min		68.18		71.91		72.92		85.62				
		Max		110.47		194.31		114.63		125.63				
Central Zone (N=15)		Mean		96.55		109.26		92.84		98.10				
		Min		68.18		71.91		0.00		53.16				
		Max		115.96		194.31		127.17		125.63				
Central Zone + UK + France (N=19)		Mean		99.21		107.08		94.35		102.86				
		Min		68.18		71.91		0.00		53.16				
		Max		115.96		194.31		127.17		139.22				

Means followed by same letter in the row do not significantly differ

**Table 3.4-60 Summary of the K content impact of F7B-39-30 when applied at 4 applications (ABCD) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	K content (% or mmoles and % of untreated)													
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)	
Maritime	BEAVA	BTS 4860 N	30.95	a	101.48	30.53	a	99.89				30.93	a	101.60	30.63	a
Maritime	BEAVA	BTS9975	3.05	a	96.60	3.23	a	102.14	3.17	a	100.40	3.10	a	98.02	3.16	a
Maritime	BEAVA	BTS-8840	40.38	ab	107.24	41.00	ab	108.90	40.08	ab	106.44	38.95	b	103.45	37.65	b
Maritime	BEAVA	Lunella	43.28	a	104.03	45.00	a	108.17	43.38	a	104.27	41.63	a	100.06	41.60	a
Maritime	BEAVA	Chevrolet	43.45	bcd	97.04	39.34	d	87.86	42.71	bcd	95.39	42.86	bcd	95.73	44.78	a-d
Maritime	BEAVA	BTS 1915	34935.90	b	95.12	39935.88	ab	108.44	35961.53	ab	97.88	37179.50	ab	101.19	36794.88	ab
Maritime	BEAVA	Lightning	32179.48	a	96.18	31025.63	a	92.62	30128.20	a	89.94	32628.23	a	97.43	33525.63	a
Maritime	BEAVA	TESSILIA KWS	4.47	a	100.62	4.63	a	104.39	4.67	a	105.13	4.32	a	97.35	4.44	a
Maritime	BEAVA	BTS-555	0.45	ab	104.64	0.46	a	108.17	0.44	ab	103.64	0.43	ab	100.71	0.43	ab
Maritime	BEAVA	BTS 7300 N	4.38	a	96.69	4.83	a	106.63	3.70	a	81.77	4.78	a	105.52	4.53	a
Maritime	BEAVA	Lightning	145.50	a	90.51	148.25	a	92.22	146.75	a	91.29	157.75	a	98.13	160.75	a
Maritime	BEAVA	Giono	3.90	abc	100.65	3.87	abc	100.09				3.71	c	96.04	3.87	abc
North-East	BEAVA	BTS 9975	40.08	a	92.34	39.93	a	91.99	39.76	a	91.62	39.53	a	91.07	43.40	a
North-East	BEAVA	Everest	36.50	ab	112.57	38.33	ab	118.20	31.55	ab	97.30	33.20	ab	102.39	32.43	ab
North-East	BEAVA	Wojownik	43.75	abc	101.33	43.85	abc	101.47	38.55	cd	89.20	37.80	cd	87.45	43.20	abc
South-East	BEAVA	KOMODO	46.28	a	92.70	47.40	a	95.00	44.98	a	90.37	48.63	a	97.65	49.78	a
South-East	BEAVA	Kipunji Smart (Conviso Smart)	32.83	a	114.67	31.13	a	108.73	27.63	a	96.51	26.53	a	92.66	28.63	a
South-East	BEAVA	Tesla	40.00	ab	105.89	36.48	ab	96.56	41.03	ab	108.60	37.43	ab	99.07	37.78	ab
South-East	BEAVA	Grandosa KWS	49.28	a	100.41	48.93	a	99.69	49.08	a	100.00	48.90	a	99.64	49.08	a

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EPPO zone	Crop	Variety	K content (% or mmoles and % of untreated)												
			F7B-39-30 @1N		%Unt.	F7B-39-30 @2N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (% or mmoles)
Maritime EPPO zone (N=12)		Mean			99.23			101.63			97.61			99.60	
		Min			90.51			87.86			81.77			95.73	
		Max			107.24			108.90			106.44			105.52	
North-East EPPO zone (N=3)		Mean			102.08			103.89			92.71			93.64	
		Min			92.34			91.99			89.20			87.45	
		Max			112.57			118.20			97.30			102.39	
North-East EPPO zone + Czech & Germany as Support (N=8)		Mean			102.0			103.4			98.5			97.4	
		Min			92.3			87.9			89.2			87.5	
		Max			112.6			118.2			106.4			103.5	
South-East EPPO zone (N=4)		Mean			103.42			100.00			98.87			97.26	
		Min			92.70			95.00			90.37			92.66	
		Max			114.67			108.73			108.60			99.64	
Central Zone (N=15)		Mean			101.88			102.52			97.90			98.16	
		Min			92.34			87.86			81.77			87.45	
		Max			114.67			118.20			108.60			105.52	
Central Zone + UK + France (N=19)		Mean			100.56			101.64			97.04			98.17	
		Min			90.51			87.86			81.77			87.45	
		Max			114.67			118.20			108.60			105.52	

Means followed by same letter in the row do not significantly differ

**Table 3.4-61 Summary of the N content impact of F7B-39-30 when applied at 4 applications (ABCD) on sugar beet by EPPO zone.**

EPPO zone		Crop	Variety	Nitrogen content (% and % of untreated)													
				F7B-39-30 @1N		%Unt.	F7B-39-30 @2N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (%)	
Maritime		BEAVA	BTS 4860 N	8.35	b	98.13	9.78	ab	114.83			10.08	ab	118.03	8.63	b	
Maritime		BEAVA	BTS9975	0.62	ab	78.55	0.80	ab	100.95	0.71	ab	89.87	0.63	ab	78.86	0.79	ab
Maritime		BEAVA	BTS-8840	11.88	a	85.28	5.71	a	41.02	11.55	a	82.91	7.85	a	56.37	13.93	a
Maritime		BEAVA	Lunella	13.68	a	101.48	13.35	a	99.07	11.53	a	85.53	12.73	a	94.43	13.48	a
Maritime		BEAVA	Chevrolet	15.93	a	92.39	15.40	a	89.34	19.14	a	11.02	17.61	a	102.18	17.24	a
Maritime		BEAVA	BTS 1915	11964.28	a	90.57	11785.70	a	89.33	12678.60	a	95.69	13571.43	a	103.00	13214.25	a
Maritime		BEAVA	Lightning	25178.55	a	215.61	16785.73	ab	142.68	15535.70	ab	130.07	10535.73	b	88.50	13035.73	ab
Maritime		BEAVA	TESSILIA KWS	0.92	a	96.58	0.95	a	100.26	1.08	a	113.16	0.97	a	101.84	0.95	a
Maritime		BEAVA	BTS-555	0.26	a	344.82	0.08	a	108.36	0.07	a	98.66	0.08	a	112.37	0.07	a
Maritime		BEAVA	BTS 7300 N	10.63	a	92.79	10.73	a	93.67	10.38	a	90.61	11.00	a	96.07	11.45	a
Maritime		BEAVA	Lightning	9.75	a	114.71	10.75	a	126.47	9.50	a	111.76	9.75	a	114.71	8.50	a

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EPPO zone		Crop	Variety	Nitrogen content (% and % of untreated)													
				F7B-39-30 @1N		%Unt.	F7B-39-30 @2 N		%Unt.	BETASANA SC @1N		%Unt.	BETASANA SC @2N		%Unt.	UNTREATED (%)	
Maritime		BEAVA	Giono	1.51	ab	97.15	1.52	ab	97.07				1.39	b	89.49	1.56	ab
North-East		BEAVA	BTS 9975	25.58	a	89.82	24.60	a	86.39	29.49	a	103.56	25.20	a	88.50	28.48	a
North-East		BEAVA	Everest	18.28	ab	116.77	19.65	ab	125.56	15.50	ab	99.04	16.85	ab	107.67	15.65	ab
North-East		BEAVA	Wojownik	26.35	a	114.89	24.90	a	107.03	24.35	a	104.51	22.80	a	96.83	23.25	a
South-East		BEAVA	KOMODO	43.95	ab	88.18	41.88	ab	83.85	44.80	ab	89.29	49.90	a	97.93	49.70	a
South-East		BEAVA	Kipunji Smart (Conviso Smart)	25.35	a	94.15	28.30	a	105.11	25.93	a	96.29	26.15	a	97.12	26.93	a
South-East		BEAVA	Tesla	16.20	b	92.70	18.35	ab	105.01	15.95	b	91.27	17.18	b	98.28	17.48	b
South-East		BEAVA	Grandosa KWS	35.05	b	102.64	40.00	ab	117.13	33.68	b	98.61	38.65	ab	113.18	34.15	b
Maritime EPPO zone (N=12)			Mean			125.67			100.25			106.66			96.32		
			Min			78.55			41.02			90.61			56.37		
			Max			344.82			142.68			130.07			118.03		
North-East EPPO zone (N=3)			Mean			107.16			106.33			102.37			97.67		
			Min			89.82			86.39			99.04			88.50		
			Max			116.77			125.56			104.51			107.67		
North-East EPPO zone + Czech & Germany as Support (N=8)			Mean			128.0			94.7			101.4			92.2		
			Min			78.6			41.0			98.7			56.4		
			Max			344.8			125.6			104.5			112.4		
South-East EPPO zone (N=4)			Mean			94.42			102.77			93.87			101.63		
			Min			88.18			83.85			89.29			97.12		
			Max			102.64			117.13			98.61			113.18		
Central Zone (N=15)			Mean			112.61			98.51			98.50			97.31		
			Min			78.55			41.02			89.29			56.37		
			Max			344.82			125.56			113.16			118.03		
Central Zone + UK + France (N=19)			Mean			116.17			101.74			101.73			97.65		
			Min			78.55			41.02			89.29			56.37		
			Max			344.82			142.68			130.07			118.03		

Means followed by same letter in the row do not significantly differ

### Effect on quality parameters of F7B-39-30 when applied in PROGRAM selectivity trials

10 selectivity trials in which F7B-39-30 was applied in program were brought to yield and yield quality parameters were assessed. All details on the several weed control programs tested with and without F7B-39-30 can be consulted in the chapter on the effect on the yield of the treated plants (**Błąd! Nie można odnaleźć źródła odwołania.**).

The different programs consisted of three applications ABC or four applications ABCD.

As written in the introduction of **Błąd! Nie można odnaleźć źródła odwołania.**, the results of these selectivity trials with F7B-39-30 set up in program serve as supporting data and are more of practical interest. No claim for the inclusion of **specific** programs on the proposed label are made.

To make the headers in the tables easier to understand, here, below is present the program and list of treatments that come from the protocols: EA21F&B038H and EA22F7B025H. The abbreviations/codes of the headings come from the name of the active substance.

### Three applications ABC in different programs:

- BETASANA® SC+Goltix® 700 SC+TRAMAT® F+Actirob® B @160+350+125+0.5 G AI/HA+L PR/HA & BETASANA® SC+Goltix® 700 SC+TRAMAT® F+Actirob® B @200+350+125+0.5 G AI/HA+L PR/HA = **MEP 1N (= single rate)**
- BETASANA® SC+Goltix® 700 SC+TRAMAT® F+Actirob® B @320+700+250+1 G AI/HA+L PR/HA & BETASANA® SC+Goltix® 700 SC+TRAMAT® F+Actirob® B @400+700+250+1 G AI/HA+L PR/HA = **MEP 2N (= double rate)**
- BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+Actirob® B @160+0.67+350+125+0.5 G AI/HA+L PR/HA & BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+Actirob® B @200+0.65+350+125+0.5 G AI/HA+L PR/HA = **MEP+F7B-39-30 1N (= single rate)**
- BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+Actirob® B @320+1.33+700+250+1 G AI/HA+L PR/HA & BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+Actirob® B @400+1.3+700+250+1 G AI/HA+L PR/HA = **MEP+F7B-39-30 2N (= double rate)**
- BETASANA® SC+Goltix® 700 SC+TRAMAT® F+SAFARI+Actirob® B @400+700+250+10+15+1 G AI/HA+L PR/HA = **MEPT 2N (= single rate)**
- BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+SAFARI+Actirob® B @400+1.3+700+250+10+15+1 G AI/HA+L PR/HA = **MEPT+F7B-39-30 2N (= double rate)**

### Four applications ABCD in different programs:

- BETASANA® SC+Goltix® 700 SC+TRAMAT® F+Actirob® B @160+350+125+0.5 G AI/HA+L PR/HA = **MEP 1N (= single rate)**
- BETASANA® SC+Goltix® 700 SC+TRAMAT® F+Actirob® B @320+700+250+1 G AI/HA+L PR/HA = **MEP 2N (= double rate)**
- BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+Actirob® B @160+0.5+350+125 G AI/HA+L PR/HA = **MEP+F7B-39-30 1N (= single rate)**
- BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+Actirob® B @320+1+700+250 G AI/HA+L PR/HA = **MEP+F7B-39-30 2N (= double rate)**
- Goltix® 700 SC+TRAMAT® F+SAFARI+Actirob® B @700+250+10+1 G AI/HA+L PR/HA = **MET 2N (= double rate)**
- F7B-39-30+Goltix® 700 SC+TRAMAT® F+SAFARI+Actirob® B @1+700+250+10 G AI/HA+L PR/HA = **MET+F7B-39-30 2N (= double rate)**

- BETASANA® SC+Goltix® 700 SC+TRAMAT® F+SAFARI+Actirob® B  
@320+700+250+10+1 G AI/HA+L PR/HA = **MEPT 2N (= double rate)**
- BETASANA® SC+F7B-39-30+Goltix® 700 SC+TRAMAT® F+SAFARI+Actirob® B  
@320+1+700+250+10 G AI/HA+L PR/HA = **MEPT+F7B-39-30 2N (= double rate)**

**Effects on yield quality parameters after applying F7B-39-30 in weed control programs at three applications timing ABC.**

The data comes from 10 trials conducted across the 3 EPPO zones- Maritime, North-East and South-East in 2021-22.

Table 3.4-62 to Table 3.4-65 present the , respectively sugar, Sodium, Potassium and Nitrogen content in different programs at N and 2N rate with and without F7B-39-30. These tables refer to data of trials with three applications. None of these parameters is negatively impacted when F7B-39-30 is added to the program, regardless the N or 2N rate.

**Effects on yield quality parameters after applying F7B-39-30 in weed control programs at four applications timing ABCD.**

The data were obtained from the same trials as for the three applications.

Table 3.4-66Table 3.4-62 to Table 3.4-69 present the , respectively sugar, Sodium, Potassium and Nitrogen content in different programs at N and 2N rate with and without F7B-39-30 and in which 4 applications took place.

With exception of potassium content in one trial, none of these parameters is negatively impacted when F7B-39-30 is added to the program, regardless the N or 2N rate. All these parameters don't record any negative, statistical lower value relative to untreated after adding F7B-39-30 to standard program. One trial from Hungary, EA21F7B038H-DHP024, shows a statistical lower value in potassium content in trt. MEP+F7B-39-30 1N relative to untreated. However, no statistical differences were observed for the remaining treatments, also not for the 2N of MEP+F7B-39-30 .

**In general, and based on these results it is concluded that the application of F7B-39-30 does not affect the quality parameters of sugar beet (Sugar, Nitrogen, Potassium and Sodium content), when added to different conventional weed control programs.**



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**Table 3.4-62 Summary of the sugar content impact of F7B-39-30 used in program when applied at 3 applications (ABC) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	SUGAR (% and % relative to untreated)																			
			MEP 1N		% of unt.	MEP 2N		% of unt.	MEP+F7B-39-30 1N		% of unt.	MEP+F7B-39-30 2N		% of unt.	MEPT 2N		% of unt.	MEPT+F7B-39-30 2N		% of unt.	Untreated (%)	
Maritime	BEAVA	BTS-8840	20.04	a	102.7	19.68	a	100.9	19.50	a	99.97	19.74	a	101.2	19.63	a	100.6	19.62	a	100.60	19.5	a
Maritime	BEAVA	Wren	16.16	a	99.6	16.04	a	98.72	16.19	a	99.14	15.99	a	98.34	16.16	a	98.92	15.86	a	97.76	16.2	a
Maritime	BEAVA	Lunella	16.73	a	100.2	16.63	a	99.55	16.78	a	100.5	16.78	a	100.5	16.88	a	101.1	16.83	a	100.75	16.7	a
Maritime	BEAVA	Lightning	18.70	a	102.1	18.66	a	101.9	18.65	a	101.8	19.31	a	105.4							18.3	a
Maritime	BEAVA	BTS-555	20.51	a	102.7	19.91	a	99.66	20.55	a	102.9	19.92	a	99.72							20.0	a
Maritime	BEAVA	Caprianna KWS	17.15	a	99.2	17.16	a	102.3	17.42	a	99.6	17.25	a	95.32	17.21	a	97.21	17.41	a	101.79	17.3	a
North-East	BEAVA	BTS 9975	16.94	a	98.5	17.23	a	100.2	16.87	a	98.04	17.12	a	99.49							17.2	a
North-East	BEAVA	BTS3865	17.90	ab	107.7	16.98	bc	102.2	17.37	ab c	104.6	17.70	abc	106.5	17.35	abc	104.3	17.20	a b c	103.53	16.6	c
South-East	BEAVA	Asketa	18.33	ab	109.9	18.70	a	112.3	17.89	ab	107.3	16.99	ab	102.0							16.7	b
South-East	BEAVA	Asketa	13.11	a	93.6	13.10	a	93.5	13.19	a	94.13	13.63	a	97.27	13.53	a	96.59	13.71	a	97.88	14.0	a
Maritime EPPO zone (N=6)		Mean			101.1			100.5			100.6			100.1			99.45			100.23		
		Min			99.18			98.72			99.14			95.32			97.21			97.76		
		Max			102.7			102.3			102.9			105.4			101.1			101.79		
North-East EPPO zone (N=2)		Mean			103.1			101.2			101.3			103.0			104.3			103.53		
		Min			98.5			100.2			98.04			99.49			104.3			103.53		
		Max			107.7			102.2			104.6			106.5			104.3			103.53		
South-East EPPO zone (N=2)		Mean			101.8			102.9			100.7			99.63			96.59			97.88		
		Min			93.61			93.50			94.13			97.27			96.59			97.88		
		Max			109.9			112.3			107.3			102.0			96.59			97.88		
Central Zone (N=8)		Mean			101.8			101.3			100.9			100.2			99.97			100.91		
		Min			93.61			93.50			94.13			95.32			96.59			97.88		
		Max			109.9			112.3			107.3			106.5			104.3			103.53		
Central Zone+UK (N=10)		Mean			101.6			101.1			100.8			100.6			99.79			100.39		
		Min			93.61			93.50			94.13			95.32			96.59			97.76		
		Max			110.0			112.3			107.3			106.5			104.3			103.53		

Means followed by same letter in the row do not significantly differ

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**Table 3.4-63 Summary of the Na content impact of F7B-39-30 used in program when applied at 3 applications (ABC) on sugar beet by EPPO zone.**

Na content (in % or mmoles and % relative to untreated)																						
EPPO zone	Crop	Variety	MEP 1N		% of unt.	MEP 2N		% of unt.	MEP+F7B-39-30 1N		% of unt.	MEP+F7B-39-30 2N		% of unt.	MEPT 2N		% of unt.	MEPT+F7B-39-30 2N		% of unt.	Untreated	
Maritime	BEAVA	BTS-8840	0.02	a	111.8	0.02	a	102.4	0.04	a	167.1	0.03	a	134.1	0.02	a	110.6	0.02	a	112.94	0.02	a
Maritime	BEAVA	Wren	0.02	ab	98.19	0.01		71.4	0.02	ab	100.0	0.02	ab	93.39	0.02	a b	95.73	0.02	ab	92.20	0.01	a
Maritime	BEAVA	Lunella	3.68	a	104.3	3.85	a	109.2	3.60	a	102.1	3.88	a	109.9	3.45	a	97.87	3.53	a	100.00	3.53	
Maritime	BEAVA	Lightning	27.3	a	100.0	26.00	a	95.41	22.0	a	80.73	30.75	a	112.8							27.3	
Maritime	BEAVA	BTS-555	0.45	abc	104.2	0.44	bc	101.3	0.47	abc	109.0	0.48	abc	109.6							0.43	
Maritime	BEAVA	Caprianna KWS	4.78	a	107.6	4.88	a	109.4	4.40	a	98.47	4.48	a	100.7 4	4.60	a	103.1	4.58	a	101.86	4.50	
North-East	BEAVA	BTS 9975	6.48	a	105.3	6.23	a	101.2	5.83	a	94.72	7.76	a	126.2 2							6.15	
North-East	BEAVA	BTS3865	3.45	ab	85.54	4.65	a	114.9	3.50	ab	87.23	3.60	ab	89.25	4.70	a	116.1	3.25	ab	80.45	4.03	a
South-East	BEAVA	Asketa	0.01	a	87.50	0.01	a	100.0	0.01	a	87.50	0.02	a	125.0							0.01	
Maritime EPPO zone (N=6)		Mean			104.3			98.17			109.6			110.1			101.8			101.75		
		Min			98.19			71.37			80.73			93.39			95.73			92.20		
		Max			111.8			109.4			167.1			134.1			110.6			112.94		
North-East EPPO zone (N=2)		Mean			95.41			108.1			90.97			107.7			116.1			80.45		
		Min			85.54			101.2			87.23			89.25			116.1			80.45		
		Max			105.3			114.9			94.72			126.2			116.1			80.45		
South-East EPPO zone (N=1)		Mean			87.50			100.0			87.50			125.0								
		Min			87.50			100.0			87.50			125.0			0.00			0.00		
		Max			87.50			100.0			87.50			125.0			0.00			0.00		
Central Zone (N=7)		Mean			100.9			105.5			106.6			113.5			106.9			98.81		
		Min			85.54			100			87.23			89.25			97.87			80.45		
		Max			111.8			114.9			167.1			134.1			116.1			112.9		
Central Zone+UK (N=9)		Mean			100.5			100.6			103			111.2			104.7			97.49		
		Min			85.54			71.37			80.73			89.25			95.73			80.45		
		Max			111.8			114.9			167.1			134.1			116.1			112.9		

Means followed by same letter in the row do not significantly differ

EPPO zone	Crop	Variety	K content (% or mmol/L and % relative to untreated)																			
			MEP 1N		% of unt.	MEP 2N		% of unt.	MEP+F7B-39-30 1N		% of unt.	MEP+F7B-39-30 2N		% of unt.	MEPT 2N		% of unt.	MEPT+F7B-39-30 2N		% of unt.	Untreated	
Maritime	BEAVA	BTS-8840	0.41	a	99.15	0.41	a	99.09	0.42	a	102.5	0.43	a	104.0	0.41	a	100.2	0.42	a	100.91	0.41	a
Maritime	BEAVA	Wren	0.26	a	98.58	0.27	a	74.62	0.25	a	95.51	0.27	a	98.81	0.26	a	99.36	0.24	a	93.06	0.26	a
Maritime	BEAVA	Lunella	41.55	a	99.70	42.28	a	101.4	41.73	a	100.1	42.78	a	102.6	41.95	a	100.7	41.98	a	100.72	41.7	a
Maritime	BEAVA	Lightning	186.3	a	100.0	197.5	a	106.0	155.3	a	83.36	199.5	a	107.1							186.3	a
Maritime	BEAVA	BTS-555	0.02	a	96.81	0.02	a	98.94	0.08	a	345.7	0.02	a	104.3							0.02	a
Maritime	BEAVA	Caprianna KWS	36.88	a	99.18	38.03	a	102.3	37.05	a	99.56	35.45	a	95.32	36.18	a	97.21	37.88	a	101.79	37.2	a
North-East	BEAVA	BTS 9975	45.90	a	93.44	44.03	a	89.62	39.08	a	79.54	44.20	a	89.97							49.1	a
North-East	BEAVA	BTS3865	44.35	ab c	100.9	33.35	d	76.48	45.33	ab	103.7	45.73	ab	103.5	45.33	ab	103.2	44.93	a b	102.22	44.0	a b c
South-East	BEAVA	Asketa	0.12	ab c	92.58	0.12	abc	94.67	0.13	ab c	98.37	0.14	a	104.0							0.13	a b
Maritime EPPO zone (N=6)		Mean			98.90			97.06			137.80			102.01			99.35			99.12		
		Min			96.81			74.62			83.36			95.32			97.21			93.06		
		Max			100.0			106.0			345.7			107.1			100.7			101.79		
North-East EPPO zone (N=2)		Mean			97.14			83.05			91.62			96.73			103.18			102.22		
		Min			93.44			76.48			79.54			89.97			103.2			102.22		
		Max			100.9			89.62			103.7			103.5			103.2			102.22		
South-East EPPO zone (N=1)		Mean			92.58			94.67			98.37			104.0								
		Min			92.58			94.67			98.37			104.0			0.00			0.00		
		Max			92.58			94.67			98.37			104.0			0.00			0.00		
Central Zone (N=7)		Mean			97.39			94.64			132.8			100.5			100.3			101.41		
		Min			92.58			76.48			79.54			89.97			97.21			100.72		
		Max			100.9			102.3			345.7			104.3			103.2			102.22		
Central Zone+UK (N=9)		Mean			97.81			93.68			123.2			101.1			100.1			99.74		
		Min			92.58			74.62			79.54			89.97			97.21			93.06		
		Max			197.5			155.3			345.7			107.1			103.2			186.25		

Means followed by same letter in the row do not significantly differ

EPPO zone	Crop	Variety	N content
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			MEP 1N		% of unt.	MEP 2N		% of unt.	MEP+F7 B-39-30 1N		% of unt.	MEP+F7B-39-30 2N		% of unt.	MEPT 2N		% of unt.	MEPT+ F7B-39-30 2N		% of unt.	Untreated	
Maritime	BEAVA	BTS-8840	0.09	a	110.8	0.09	a	117.1	0.10	a	122.3	0.13	a	166.0	0.11	a	135.9	0.10	a	126.4	0.08	a
Maritime	BEAVA	Wren	0.01	a	82.99	0.01	a	64.66	0.02	a	100.0	0.02	a	81.25	0.02	a	80.21	0.02	a	89.35	0.02	a
Maritime	BEAVA	Lunella	13.7	a	96.48	14.0	a	98.42	15.10	a	106.3	15.20	a	107.0	16.00	a	112.7	12.93	a	91.02	14.2	a
Maritime	BEAVA	Lightning	16.3	a	104.8	14.3	a	91.94	11.25	a	72.58	14.00	a	90.32							15.5	a
Maritime	BEAVA	BTS-555	0.09	a	89.57	0.09	a	88.55	0.10	a	97.20	0.08	a	86.26							0.10	a
Maritime	BEAVA	Caprianna KWS	11.5	a	113.4	11.0	a	107.9	10.75	a	105.9	10.25	a	101.3	10.83	a	106.7	11.43	a	112.7	10.2	a
North-East	BEAVA	BTS 9975	32.6	a	91.69	32.5	a	91.55	31.08	a	87.54	29.19	a	82.22							35.5	a
North-East	BEAVA	BTS3865	26.4	a	93.94	20.1	b	71.26	28.35	a	101.8	23.70	ab	84.21	25.30	ab	89.84	26.15	a	93.43	28.2	a
South-East	BEAVA	Asketa	0.77	a	92.07	0.73	a	92.59	0.75	a	95.10	0.80	a	93.83							0.79	a
Maritime EPPO zone (N=6)		Mean			99.67			94.76			100.7			105.4			108.9			104.8		
		Min			82.99			64.66			72.58			81.25			80.21			89.35		
		Max			113.4			117.1			122.3			166.0			135.9			126.4		
North-East EPPO zone (N=2)		Mean			92.81			81.41			94.65			83.21			89.84			93.43		
		Min			91.69			71.26			87.54			82.22			89.84			93.43		
		Max			93.94			91.55			101.8			84.21			89.84			93.43		
South-East EPPO zone (N=1)		Mean			92.07			92.59			95.10			93.83								
		Min			92.07			92.59			95.10			93.83			0.00			0.00		
		Max			92.07			92.59			95.10			93.83			0.00			0.00		
Central Zone (N=7)		Mean			98.27			95.34			102.3			103.0			111.3			105.9		
		Min			89.57			71.26			87.54			82.22			89.84			91.02		
		Max			113.4			117.1			122.3			166.0			135.9			126.3		
Central Zone+UK (N=9)		Mean			97.30			91.55			98.74			99.17			105.1			102.6		
		Min			82.99			64.66			72.58			81.25			80.21			89.35		
		Max			113.4			117.1			122.3			166.0			135.9			126.4		

Means followed by same letter in the row do not significantly differ

**Table 3.4-66 Summary of sugar content impact of F7B-39-30 used in program when applied at 4 applications (ABCD) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	SUGAR (%)											
			MEP 1N		% of unt.	MEP 2N		% of unt.	MEP+F7B-39-30 1N		% of unt.	MEP+F7B-39-30 2N		% of unt.
Maritime	BEAVA	BTS-8840	19.55	a	100.24	19.83	a	101.65	19.59	a	100.42	19.71	a	101.06
Maritime	BEAVA	Wren	16.04	a	98.50	15.93	a	97.95	16.32	a	99.39	16.28	a	99.73

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Maritime	BEAVA	Lunella	16.98	a	101.65	16.65	a	99.70	16.70	a	100.00	16.60	a	99.40
Maritime	BEAVA	Lightning	18.60	a	101.54	18.92	a	103.25	19.00	a	103.70	18.80	a	102.63
Maritime	BEAVA	BTS-555	19.85	a	99.39	20.47	a	102.47	19.88	a	99.51	20.25	a	101.36
Maritime	BEAVA	Caprianna KWS	17.37	a	94.86	17.52	a	100.68	17.32	a	101.86	17.63	a	104.84
North-East	BEAVA	BTS 9975	17.29	a	100.51	17.49	a	101.67	17.44	a	101.40	17.42	a	101.26
North-East	BEAVA	BTS3865	17.12	ab	103.05	17.90	ab	107.69	17.78	abc	107.04	17.47	abc	105.12
South-East	BEAVA	Asketa	18.36	ab	110.21	17.32	ab	103.98	17.61	ab	105.60	17.28	ab	103.38
South-East	BEAVA	Asketa	13.64	a	97.36	13.47	a	96.18	13.76	a	98.20	13.64	a	97.36
Maritime EPPO zone (N=6)		Mean			99.36			100.95			100.81			101.50
		Min			94.86			97.95			99.39			99.40
		Max			101.65			103.25			103.70			104.84
North-East EPPO zone (N=2)		Mean			101.78			104.68			104.22			103.19
		Min			100.51			101.67			101.40			101.26
		Max			103.05			107.69			107.04			105.12
South-East EPPO zone (N=2)		Mean			103.78			100.08			101.90			100.37
		Min			97.36			96.18			98.20			97.36
		Max			110.21			103.98			105.60			103.38
Central Zone (N=8)		Mean			100.91			101.75			101.75			101.72
		Min			94.86			96.18			98.20			97.36
		Max			110.21			107.69			107.04			105.12
Central Zone+UK (N=10)		Mean			100.73			101.52			101.71			101.62
		Min			94.86			96.18			98.20			97.36
		Max			110.21			107.69			107.04			105.12

EPPO zone	Crop	Variety	SUGAR (%)													
			MET 2N		% of unt.	MET+F7B-39-30 2N		% of unt.	MEPT 2N		% of unt.	MEPT+F7B-39-30 2N		% of unt.	Untreated	
Maritime	BEAVA	BTS-8840							19.64	a	100.71	19.51	a	100.04	19.50	a
Maritime	BEAVA	Wren							16.12	a	98.75	15.83	a	97.73	16.20	a
Maritime	BEAVA	Lunella							16.98	a	101.65	16.63	a	99.55	16.70	a
Maritime	BEAVA	Lightning	19.27	a	105.16	18.15	a					19.02	a	103.82	18.32	a
Maritime	BEAVA	BTS-555	20.15	a	100.86	20.02	a					20.10	a	100.65	19.97	a
Maritime	BEAVA	Caprianna KWS							17.32	a	99.52	17.05	a	101.48	17.28	a
North-East	BEAVA	BTS 9975	17.11	a	99.46	17.60	a	102.30				17.24	a	100.23	17.20	a
North-East	BEAVA	BTS3865							18.30	a	110.11	17.15	abc	103.25	16.62	c
South-East	BEAVA	Asketa	18.55	ab	111.26	17.73	ab	106.34				17.78	ab	106.61	16.69	b
South-East	BEAVA	Asketa							13.55	a	96.70	13.24	a	94.50	14.01	a
Maritime EPPO zone (N=6)		Mean			103.01						100.16			100.55		
		Min			100.86						98.75			97.73		

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EPPO zone	Crop	Variety	SUGAR (%)													
			MET 2N		% of unt.	MET+F7B-39-30 2N		% of unt.	MEPT 2N		% of unt.	MEPT+F7B-39-30 2N		% of unt.	Untreated	
North-East EPPO zone (N=2)		Max			105.16						101.65			103.82		
		Mean			99.46			102.30			110.11			101.74		
		Min			99.46			102.30			110.11			100.23		
		Max			99.46			102.30			110.11			103.25		
South-East EPPO zone (N=2)		Mean			111.26			106.34			96.70			100.56		
		Min			111.26			106.34			96.70			94.50		
		Max			111.26			106.34			96.70			106.61		
Central Zone (N=8)		Mean			103.86			104.32			101.74			100.79		
		Min			99.46			102.30			96.70			94.50		
		Max			111.26			106.34			110.11			106.61		
Central Zone+UK (N=10)		Mean			104.19			104.32			101.24			100.79		
		Min			99.46			102.30			96.70			94.50		
		Max			111.26			106.34			110.11			106.61		

Means followed by same letter in the row do not significantly differ

**Table 3.4-67 Summary of the Na content of F7B-39-30 used in program when applied at 4 applications (ABCD) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	Na content (% or mmols and % relative to untreated)											
			MEP 1N		% of unt.	MEP 2N		% of unt.	MEP+F7B-39-30 1N		% of unt.	MEP+F7B-39-30 2N		% of unt.
Maritime	BEAVA	BTS-8840	0.02	a	105.88	0.02	a	114.12	0.02	a	104.71	0.02	a	114.12
Maritime	BEAVA	Wren	0.02	ab	98.70	0.02	ab	90.80	0.02	ab	92.65	0.01	b	90.45
Maritime	BEAVA	Lunella	3.50	a	99.29	3.50	a	99.29	3.75	a	106.38	3.95	a	112.06
Maritime	BEAVA	Lightning	24.50	a	89.91	27.25	a	100.00	30.25	a	111.01	28.00	a	102.75
Maritime	BEAVA	BTS-555	0.44	bc	102.07	0.45	abc	104.49	0.46	abc	106.85	0.48	abc	110.94
Maritime	BEAVA	Caprianna KWS	4.48	a	100.83	4.45	a	98.70	4.33	a	95.66	5.43	a	121.21
North-East	BEAVA	BTS 9975	6.08	a	98.78	6.33	a	102.85	6.25	a	101.63	5.83	a	94.72
North-East	BEAVA	BTS3865	3.40	ab	84.35	3.45	abc	85.65	2.95	b	73.27	4.45	ab	110.01
South-East	BEAVA	Asketa	0.01	a	87.50	0.01	a	112.50	0.01	a	87.50	0.01	a	112.50
South-East	BEAVA	Asketa	0.02	a	105.88	0.02	a	114.12	0.02	a	104.71	0.02	a	114.12
Maritime EPPO zone (N=6)		Mean			99.45			101.23			102.88			108.59
		Min			89.91			90.80			92.65			90.45
		Max			105.88			114.12			111.01			121.21
North-East EPPO zone (N=2)		Mean			91.57			94.25			87.45			102.36
		Min			84.35			85.65			73.27			94.72
		Max			98.78			102.85			101.63			110.01

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EPPO zone	Crop	Variety	Na content (% or mmols and % relative to untreated)							
			MEP 1N	% of unt.	MEP 2N	% of unt.	MEP+F7B-39-30 1N	% of unt.	MEP+F7B-39-30 2N	% of unt.
South-East EPPO zone (N=1)		Mean		87.50		112.50		87.50		112.50
		Min		87.50		112.50		87.50		112.50
		Max		87.50		112.50		87.50		112.50
Central Zone (N=7)		Mean		96.96		102.51		96.57		110.79
		Min		84.35		85.65		73.27		94.72
		Max		105.88		114.12		106.85		121.21
Central Zone+UK (N=9)		Mean		96.37		100.93		97.74		107.64
		Min		84.35		85.65		73.27		90.45
		Max		105.88		114.12		111.01		121.21

EPPO zone	Crop	Variety	Na content (% or mmols and % relative to untreated)									
			MET 2N	% of unt.	MET+F7B-39-30 2N	% of unt.	MEPT 2N	% of unt.	MEPT+F7B-39-30 2N	% of unt.	Untreated	
Maritime	BEAVA	BTS-8840					0.03	a	148.24	0.03	a	
Maritime	BEAVA	Wren					0.02	ab	93.39	0.02	a	ab
Maritime	BEAVA	Lunella					3.55	a	100.71	3.30	a	a
Maritime	BEAVA	Lightning	21.50	a	78.90	26.75	a	98.17		24.00	a	a
Maritime	BEAVA	BTS-555	0.46	abc	105.70	0.50	a	115.60		0.50	ab	c
Maritime	BEAVA	Caprianna KWS					4.70	a	105.51	4.60	a	a
North-East	BEAVA	BTS 9975	6.18	a	100.41	5.98	a	97.15		5.93	a	a
North-East	BEAVA	BTS3865					3.15	ab	78.32	4.75	a	ab
South-East	BEAVA	Asketa	0.01	a	87.50	0.02	a	125.00		0.01	a	a
South-East	BEAVA	Asketa					0.02	ab	93.39	0.02	a	ab
Maritime EPPO zone (N=6)		Mean		92.30		106.88		111.96		106.65		
		Min		78.90		98.17		93.39		88.07		
		Max		105.70		115.60		148.24		143.53		
North-East EPPO zone (N=2)		Mean		100.41		97.15		78.32		106.98		
		Min		100.41		97.15		78.32		96.34		
		Max		100.41		97.15		78.32		117.62		
South-East EPPO zone (N=1)		Mean		87.50		125.00				112.50		
		Min		87.50		125.00				112.50		
		Max		87.50		125.00				112.50		
Central Zone (N=7)		Mean		97.87		112.59		108.19		111.61		
		Min		87.50		97.15		78.32		93.62		
		Max		105.70		125.00		148.24		143.53		

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EPPO zone	Crop	Variety	Na content (% or mmoles and % relative to untreated)													
			MET 2N		% of unt.	MET+F7B-39-30 2N		% of unt.	MEPT 2N		% of unt.	MEPT+F7B-39-30 2N		% of unt.	Untreated	
Central Zone+UK (N=9)		Mean			93.13			108.98			105.23			107.37		
		Min			78.90			97.15			78.32			88.07		
		Max			105.70			125.00			148.24			143.53		

Means followed by same letter in the row do not significantly differ



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**Table 3.4-68 Summary of the K content of F7B-39-30 used in program when applied at 4 applications (ABCD) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	K content (% or mmoles and % relative to untreated)											
			MEP 1N		% of unt.	MEP 2N		% of unt.	MEP+F7B-39-30 1N		% of unt.	MEP+F7B-39-30 2N		% of unt.
Maritime	BEAVA	BTS-8840	0.42	a	102.24	0.41	a	98.18	0.43	a	104.06	0.42	a	102.12
Maritime	BEAVA	Wren	0.26	a	98.32	0.24	a	92.53	0.25	a	95.64	0.26	a	97.39
Maritime	BEAVA	Lunella	41.10	a	98.62	42.28	a	101.44	42.48	a	101.92	44.15	a	105.94
Maritime	BEAVA	Lightning	181.25	a	97.32	197.50	a	106.04	189.75	a	101.88	177.50	a	95.30
Maritime	BEAVA	BTS-555	0.02	a	96.81	0.02	a	96.81	0.02	a	103.19	0.03	a	107.45
Maritime	BEAVA	Caprianna KWS	35.28	a	94.86	37.43	a	100.68	37.85	a	101.86	39.00	a	104.84
North-East	BEAVA	BTS 9975	43.75	a	89.06	43.88	a	89.31	44.55	a	90.69	43.20	a	87.94
North-East	BEAVA	BTS3865	43.30	abc	98.63	43.33	abc	98.74	39.93	bcd	90.93	37.83	cd	85.81
South-East	BEAVA	Asketa	0.11	c	86.93	0.12	abc	93.04	0.11	c	80.56	0.12	abc	92.74
Maritime EPPO zone (N=6)	Mean						98.03			99.28			101.42	
	Min						94.86			92.53			95.64	
	Max						102.24			106.04			104.06	
North-East EPPO zone (N=2)	Mean						93.85			94.03			90.81	
	Min						89.06			89.31			90.69	
	Max						98.63			98.74			90.93	
South-East EPPO zone (N=1)	Mean						86.93			93.04			80.56	
	Min						86.93			93.04			80.56	
	Max						86.93			93.04			80.56	
Central Zone (N=7)	Mean						95.31			96.89			96.17	
	Min						86.93			89.31			80.56	
	Max						102.24			101.44			104.06	
Central Zone+UK (N=9)	Mean						95.86			97.42			96.75	
	Min						86.93			89.31			80.56	
	Max						102.24			106.04			104.06	

EPPO zone	Crop	Variety	K content (% or mmoles and % relative to untreated)													
			MET 2N		% of unt.	MET+F7B-39-30 2N		% of unt.	MEPT 2N		% of unt.	MEPT+F7B-39-30 2N		% of unt.	Untreated	
Maritime	BEAVA	BTS-8840							0.42	a	101.39	0.44	a	105.69	0.41	a
Maritime	BEAVA	Wren							0.27	a	98.90	0.28	a	99.72	0.26	a
Maritime	BEAVA	Lunella													40.85	a
Maritime	BEAVA	Lightning							170.75	a		170.25	a	91.41		
Maritime	BEAVA	BTS-555							0.02	a		0.03	a	107.45		
Maritime	BEAVA	Caprianna KWS							37.03		99.52	37.75	a	101.48	37.23	a
North-East	BEAVA	BTS 9975	44.00	a	89.57	43.28	a	88.09				42.76	a	87.05	49.13	a

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North-East	BEAVA	BTS3865							49.60	a	113.02	46.05	ab	104.81	44.00	abc
South-East	BEAVA	Asketa	0.11	bc	84.87	0.12	abc	92.58				0.13	abc	98.05	0.13	ab
<b>Maritime EPPO zone (N=6)</b>		<b>Mean</b>						<b>99.43</b>			<b>99.46</b>			<b>102.59</b>		
		<b>Min</b>						<b>91.41</b>			<b>98.02</b>			<b>99.72</b>		
		<b>Max</b>						<b>107.45</b>			<b>101.39</b>			<b>105.69</b>		
<b>North-East EPPO zone (N=2)</b>		<b>Mean</b>			<b>89.57</b>			<b>88.09</b>			<b>113.02</b>			<b>95.93</b>	<b>89.57</b>	
		<b>Min</b>			<b>89.57</b>			<b>88.09</b>			<b>113.02</b>			<b>87.05</b>	<b>89.57</b>	
		<b>Max</b>			<b>89.57</b>			<b>88.09</b>			<b>113.02</b>			<b>104.81</b>	<b>89.57</b>	
<b>South-East EPPO zone (N=1)</b>		<b>Mean</b>			<b>84.87</b>			<b>92.58</b>						<b>98.05</b>	<b>84.87</b>	
		<b>Min</b>			<b>84.87</b>			<b>92.58</b>						<b>98.05</b>	<b>84.87</b>	
		<b>Max</b>			<b>84.87</b>			<b>92.58</b>						<b>98.05</b>	<b>84.87</b>	
<b>Central Zone (N=7)</b>		<b>Mean</b>			<b>87.22</b>			<b>96.04</b>			<b>102.99</b>			<b>100.09</b>	<b>87.22</b>	
		<b>Min</b>			<b>84.87</b>			<b>88.09</b>			<b>98.02</b>			<b>87.05</b>	<b>84.87</b>	
		<b>Max</b>			<b>89.57</b>			<b>107.45</b>			<b>113.02</b>			<b>105.69</b>	<b>89.57</b>	
<b>Central Zone+UK (N=9)</b>		<b>Mean</b>			<b>87.22</b>			<b>94.88</b>			<b>102.17</b>			<b>100.04</b>	<b>87.22</b>	
		<b>Min</b>			<b>84.87</b>			<b>88.09</b>			<b>98.02</b>			<b>87.05</b>	<b>84.87</b>	
		<b>Max</b>			<b>89.57</b>			<b>107.45</b>			<b>113.02</b>			<b>105.69</b>	<b>89.57</b>	

Means followed by same letter in the row do not significantly differ

**Table 3.4-69 Summary of the N content of F7B-39-30 used in program when applied at 4 applications (ABCD) on sugar beet by EPPO zone.**

EPPO zone	Crop	Variety	N content											
			MEP 1N		% of unt.	MEP 2N		% of unt.	MEP+F7B-39-30 1N		% of unt.	MEP+F7B-39-30 2N		% of unt.
Maritime	BEAVA	BTS-8840	0.09	a	110.79	0.10	a	129.84	0.09	a	112.38	0.09	a	117.46
Maritime	BEAVA	Wren	0.02	a	85.47	0.02	a	99.07	0.02	a	81.37	0.02	a	84.26
Maritime	BEAVA	Lunella	14.63	a	102.99	14.20	a	100.00	13.90	a	97.89	15.78	a	111.09
Maritime	BEAVA	Lightning	12.50	a	80.65	15.00	a	96.77	16.25	a	104.84	16.25	a	104.84
Maritime	BEAVA	BTS-555	0.09	a	87.02	0.10	a	103.56	0.09	a	90.08	0.09	a	92.11
Maritime	BEAVA	Caprianna KWS	10.33	a	102.48	11.58	a	113.51	10.93	a	107.40	12.33	a	121.58
North-East	BEAVA	BTS 9975	29.78	a	83.87	33.03	a	93.03	27.23	a	76.69	30.78	a	86.69
North-East	BEAVA	BTS3865	25.53	ab	91.74	24.53	ab	87.65	22.63	ab	82.12	24.85	ab	88.99
South-East	BEAVA	Asketa	0.77	a	92.91	0.78	a	98.01	0.69	a	87.45	0.82	a	97.44
Maritime EPPO zone (N=6)		Mean			94.90			107.13			98.99			105.22
		Min			80.65			96.77			81.37			84.26
		Max			110.79			129.84			112.38			121.58
North-East EPPO zone (N=2)		Mean			87.81			90.34			79.40			87.84
		Min			83.87			87.65			76.69			86.69

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	<b>Max</b>			<b>91.74</b>			<b>93.03</b>			<b>82.12</b>			<b>88.99</b>
<b>South-East EPPO zone (N=1)</b>	<b>Mean</b>			<b>92.91</b>			<b>98.01</b>			<b>87.45</b>			<b>97.44</b>
	<b>Min</b>			<b>92.91</b>			<b>98.01</b>			<b>87.45</b>			<b>97.44</b>
	<b>Max</b>			<b>92.91</b>			<b>98.01</b>			<b>87.45</b>			<b>97.44</b>
<b>Central Zone (N=7)</b>	<b>Mean</b>			<b>95.97</b>			<b>103.66</b>			<b>93.43</b>			<b>102.20</b>
	<b>Min</b>			<b>83.87</b>			<b>87.65</b>			<b>76.69</b>			<b>86.69</b>
	<b>Max</b>			<b>110.79</b>			<b>129.84</b>			<b>112.38</b>			<b>121.58</b>
<b>Central Zone+UK (N=9)</b>	<b>Mean</b>			<b>93.10</b>			<b>102.38</b>			<b>93.36</b>			<b>100.50</b>
	<b>Min</b>			<b>80.65</b>			<b>87.65</b>			<b>76.69</b>			<b>84.26</b>
	<b>Max</b>			<b>110.79</b>			<b>129.84</b>			<b>112.38</b>			<b>121.58</b>

EPPO zone		Crop	Variety	N content												Untreated	
				MET 2N		% of unt.	MET+F7B-39-30 2N		% of unt.	MEPT 2N		% of unt.	MEPT+F7B-39-30 2N		% of unt.		
Maritime		BEAVA	BTS-8840							0.13	a	166.35	0.12	a	149.52	0.08	a
Maritime		BEAVA	Wren							0.01	a	73.55	0.02	a	95.37	0.02	a
Maritime		BEAVA	Lunella							13.85	a	97.54	14.53	a	102.29	14.20	a
Maritime		BEAVA	Lightning	11.75	a	75.81	13.75	a	88.71				16.00	a	103.23	15.50	a
Maritime		BEAVA	BTS-555	0.10	a	97.20	0.10	a	104.07				0.10	a	99.24	0.10	a
Maritime		BEAVA	Caprianna KWS							10.88		107.29	11.33	a	111.65	10.15	a
North-East		BEAVA	BTS 9975	34.75	a	97.89	32.78	a	92.32				30.53	a	85.99	35.50	a
North-East		BEAVA	BTS3865							25.75	ab	91.57	25.13	ab	90.83	28.15	a
South-East		BEAVA	Asketa	0.75	a	92.34	0.70	a	87.69				0.75	a	95.17	0.79	a
<b>Maritime EPPO zone (N=6)</b>			<b>Mean</b>			<b>86.50</b>			<b>96.39</b>			<b>111.18</b>			<b>110.22</b>		
			<b>Min</b>			<b>75.81</b>			<b>88.71</b>			<b>73.55</b>			<b>95.37</b>		
			<b>Max</b>			<b>97.20</b>			<b>104.07</b>			<b>166.35</b>			<b>149.52</b>		
<b>North-East EPPO zone (N=2)</b>			<b>Mean</b>			<b>97.89</b>			<b>92.32</b>			<b>91.57</b>			<b>88.41</b>		
			<b>Min</b>			<b>97.89</b>			<b>92.32</b>			<b>91.57</b>			<b>85.99</b>		
			<b>Max</b>			<b>97.89</b>			<b>92.32</b>			<b>91.57</b>			<b>90.83</b>		
<b>South-East EPPO zone (N=1)</b>			<b>Mean</b>			<b>92.34</b>			<b>87.69</b>						<b>95.17</b>		
			<b>Min</b>			<b>92.34</b>			<b>87.69</b>						<b>95.17</b>		
			<b>Max</b>			<b>92.34</b>			<b>87.69</b>						<b>95.17</b>		
<b>Central Zone (N=7)</b>			<b>Mean</b>			<b>95.81</b>			<b>94.69</b>			<b>115.69</b>			<b>104.95</b>		
			<b>Min</b>			<b>92.34</b>			<b>87.69</b>			<b>91.57</b>			<b>85.99</b>		
			<b>Max</b>			<b>97.89</b>			<b>104.07</b>			<b>166.35</b>			<b>149.52</b>		
<b>Central Zone+UK (N=9)</b>			<b>Mean</b>			<b>90.81</b>			<b>93.20</b>			<b>107.26</b>			<b>103.70</b>		
			<b>Min</b>			<b>75.81</b>			<b>87.69</b>			<b>73.55</b>			<b>85.99</b>		
			<b>Max</b>			<b>97.89</b>			<b>104.07</b>			<b>166.35</b>			<b>149.52</b>		

Means followed by same letter in the row do not significantly differ

dRR point 3.4.3	Effect on the quality of plants or plant products
<p>ZRMS conclusion:</p> <p style="text-align: center;"><u>F7B-39-30 applied solo</u></p> <p><b><u>The NE EPPO climate zone</u></b> The quality of plants or plant products after application of F7B-39-30 were checked in 9 selectivity trials carried out in 2021 and 2022, in CZ, DE, PL. The following quality parameters of the sugar beet were tested: content of nitrogen[ mmoles], content of potassium [mmoles], content of sodium [mmoles] and content of sugar [%]. F7B-39-30 at the rates 1N and 2N had no negative effect on the quality parameters of sugar beet roots in single and split applications. Only in one DE trial where single application was tested at BBCH 18/19, results showed a statistical decrease in sugar content after the application of F7B-39-30 at a dose rate of 2N in comparison to the untreated. There was no statistical difference in results between application of F7B-39-30 and Betasana SC.</p> <p><b><u>The Maritime EPPO climate zone</u></b> Effects on the yield of plants or plant products after application of F7B-39-30 were checked in 13 selectivity trials carried out in 2021 and 2022, in CZ, DE, BE, UK, FR. The following quality parameters of the sugar beet were tested: content of nitrogen[ mmoles], content of potassium [mmoles], content of sodium [mmoles] and content of sugar [%]. F7B-39-30 at the rates 1N and 2N had no negative effect on the quality parameters of sugar beet roots in single and split applications. Only in one DE trial where single application was tested at BBCH 18/19, results showed a statistical decrease in sugar content after the application of F7B-39-30 at a dose rate of 2N in comparison to the untreated. There was no statistical difference in results between application of F7B-39-30 and Betasana SC.</p> <p><b><u>The SEEPPO climate zone</u></b> The quality of plants or plant products after application of F7B-39-30 were checked in 5 selectivity trials carried out in 2021 and 2022, in HU. The following quality parameters of the sugar beet were tested: content of nitrogen[ mmoles], content of potassium [mmoles], content of sodium [mmoles] and content of sugar [%]. F7B-39-30 at the rates 1N and 2N had no negative effect on the quality parameters of sugar beet roots in single and split applications. The number of trials cannot be sufficient to confirm the sugar beet safety. The final decision is in the remit of CMS.</p> <p style="text-align: center;"><u>F7B-39-30 applied in programs</u></p> <p>For the Maritime climate zone 6 trials were presented, for NE-2 trials and for SE 2 trials. The Applicant has presented limited data showing the quality of plants or plant products after application of F7B-39-30 with mixtures of herbicides in the spray program of in 3 and 4 applications. In one HU trial (the SE EPPO climate zone) data with/without addition of F7B-39-30 at 1N dose rate, caused statical lowering the K content when compared to untreated.</p>	

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It is possible that addition of F7B-39-30 to the mixtures (spilt applications: 3 and 4 applications) may not effect negatively on the quality parameters of sugar beet. Nevertheless presented data is insufficient to draw the right conclusions.

#### 3.4.4 Effects on transformation processes (KCP 6.4.4)

There are no formal methods or standardized tests to study the impact of the application of a plant protection product on transformation processes of the sugar beet root. The effects on the quality of the plants and the sugar content of roots were evaluated in conjunction with the performance, and the studies show that there was no negative impact of F7B-39-30 on sugar beetroots and leaves (see results from 3.4.3 effect on the quality of plants).

In addition, no residues from florpyrauxifen-benzyl were present in sugar beet at harvest, therefore there is no likelihood that F7B-39-30 could have any effect on the transformation process.

Also, the latest application timing of F7B-39-30 is relatively early stage (BBCH19) in the development of the crop there is no risk that the active would be translocated to the roots.

Therefore, a consideration of transformation processes is not relevant for the use of F7B-39-30 in beet crops. No further evidence is provided, and no further consideration of this subject is considered necessary.

dRR point 3.4.4	Effects on transformation processes
ZRMS conclusion:  The Applicant presented no data on effects on transformation processes, explaining that no residues from florpyrauxifen-benzyl were present in sugar beet at harvest and there is no likelihood that F7B-39-30 could have any effect on the transformation process. The explanations are acceptable.	

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

The registration of F7B-39-30 is intended to be used only in sugar beet, and fodder beet crops. Sugar beet and fodder beet crops are biennial crops and take two years from germination to seed set. Sugar beet and fodder beet are both harvested in the first year, meaning before the plants produce flowers and seeds. For that reason there is no risk for propagation and hence, no particular information on the impact of propagation is provided in this dossier.

dRR point 3.4.5	Impact on treated plants or plant products to be used for propagation
ZRMS conclusion:  The Applicant presented no data on effects on treated plants or plant products to be used for propagation. There is no knowledge whether detectable residues occur in harvested seed from sugar beet for seed, protected by the product. CMS are invited to take the necessary measures.  On the PL label should be place information that phytotoxicity cannot be excluded. Consult the authorisation holder for information related to impact on seed from sugar beet.	

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

#### 3.5.1 Impact on succeeding crops (KCP 6.5.1)

The impact of F7B-39-30 on succeeding crops will be presented following the EPPO Guidance PP1/207 (2) ‘*Effects on succeeding crops*’, which describe the methods used to examine whether an herbicide causes a negative effect on crops grown as rotational or on replacement crops after a crop treated with that product.

EPPO GD PP1/207 (2) is a guide to the different types of examination that can be carried out, the extent and type of field tests that need to be conducted depending on the basic fate and behaviour in soil of the active substance(s) or final product and on the nature of its biological activity. These properties can be investigated in preliminary laboratory, glasshouse or field trials, and the results will allow to judge, according to the interval between applications of the active substance or final product and planting of any sensitive succeeding crop, whether field trials are required.

#### Studies on fate and behaviour in soil

The persistence and availability of the active substance of F7B-39-30, florpyrauxifen-benzyl, in soil should be examined in a specifically designed set of trials. This persistence can be estimated by calculating the TER (Toxicity Exposure Ratio). Knowing the behaviour of the active(s) in the soil (PEC, Predicted Environment Concentration) and the EC<sub>10</sub>-value (sensitivity of a crop to herbicide) of the succeeding crop, the TER can be calculated. The TER is calculated by dividing the EC<sub>10</sub> value through the PEC value. A TER value <1 indicates a potential risk for a succeeding crop. The risk of damage depends essentially on the disappearance time (DT) of the active(s) and the period between application and sowing of a succeeding crop. This period has a big impact on the PEC value and therefore on the TER value.

#### Material and methods

A greenhouse study was conducted in 2022 by the laboratory “Rheinland-Pfalz (RLP) AgroScience GmbH” in order to determine the EC<sub>10</sub> values of F7B-39-30, containing florpyrauxifen-benzyl<sup>4</sup>.

Reference is made to EPPO standard PP 1/207 which describes the calculations for determining the initial concentration of an active substance or product applied to the soil – PEC initial based on the Soil Modelling Workgroup of FOCUS (FOCUS, 1996). The maximum concentration in soil was calculated assuming a 2.5 cm incorporation depth and soil bulk density of 1.5 g/cm<sup>3</sup>.

#### Results

Doses of F7B-39-30 from 80 mL/ha to 4800 mL/ha were used as the doses to calculate the TER value as well as the maximum dose of the final product F7B-39-30 to determine the EC<sub>10</sub> values of each selected crops.

Florpyrauxifen-benzyl is known to be a foliar herbicide, entering mainly in the plants *via* the leaves rather than *via* the roots and to have a short DT<sub>50</sub> in the soils under aerobic conditions of 2.5-34 days (mean 15 days).<sup>5</sup>

Crops EC<sub>10</sub> values are presented in Table 3.5-1. Results show that in general high EC<sub>10</sub> values. The lowest values are alfalfa, field peas/field beans, and potatoes, meaning that these are sensitive species to F7B-39-30. Cereals shown in general high EC<sub>10</sub> values. None of the tested plant species was affected in seedling emergence.

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<sup>4</sup> Sandra Siemoneit-Gast. Dec. 2022. GF-3206 - Standardized Bioassay for the Determination of EC<sub>10</sub>- (NOEL) and EC<sub>50</sub> values for Herbicides

<sup>5</sup> <https://doi.org/10.1016/B978-0-12-821035-2.00038-3>

Following the recommendation from the EPPO 1/207 to calculate the  $PEC_{actual}$  values of the soil  $DT_{50}$  of florpyrauxifen-benzyl of 15 days as average was selected. This value was taken to calculate the  $PEC_{actual}$  (Błąd! Nie można odnaleźć źródła odwołania.). TER values for the final product F7B-39-30 are presented in Błąd! Nie można odnaleźć źródła odwołania..

**Table 3.5-1: EC10-values of F7B-39-30 ( $\mu\text{g}$  / kg of dry soil).**

Test plant		EC <sub>10</sub> ( $\mu\text{g}$ of F7B-39-30/ kg of dry soil)
Alfalfa	<i>Medicago sativa</i>	20
Sunflower	<i>Helianthus annuus</i>	80
Sugar beet	<i>Beta vulgaris var. altissima</i>	90
Potatoes	<i>Solanum tuberosum</i>	54
Field peas/Field beans	<i>Pisum sativum/Vicia faba</i>	40
Winter Rye	<i>Secale cereale</i>	160
Winter Wheat	<i>Triticum aestivum</i>	110
Triticale	<i>Triticum aestivum</i> × <i>Triticosecale</i>	80
Barley	<i>Hordeum vulgare</i>	160
Oats	<i>Avena sativa</i>	160
Perennial/English rye grass	<i>Lolium perenne</i>	90
Corn	<i>Zea mays</i>	160



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CEU zRMS version**Table 3.5-2: PEC-values calculation of F7B-39-30 based on PEC\*<sub>actual</sub>**

Days after application /CROPS	F7B-39-30 (µg/kg soil)											
	Succeeding crops											
	W wheat	Barley	W rye	WT triticale	Spring oats	Alfalfa	Sugar beet	Potatoes	Rye grass	Field Peas/ Field beans	Corn	Sunflower
0 (initial)	2	2	2	2	2	2	2	2	2	2	2	2
10	1.259	1.259	1.259	1.259	1.259	1.259	1.259	1.259	1.259	1.259	1.259	1.259
20	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757
30 (1month)	0.477	0.477	0.477	0.477	0.477	0.477	0.477	0.477	0.477	0.477	0.477	0.477
50 (1.6 months)	0.189	0.189	0.189	0.189	0.189	0.189	0.189	0.189	0.189	0.189	0.189	0.189
80 (2.6 months)	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045
100 (3.3 months)	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
150 (5 months)	0.0017	0.0017	0.0017	0.0017	0.0017	0.0017	0.0017	0.0017	0.0017	0.0017	0.0017	0.0017
200 (6.6 months)	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085	0.00085

\*PEC (soil depth e.g. 5 cm)

**Table 3.5-3: TER-calculation of F7B-39-30 based on TER\*-values**

	Days after application	F7B-39-30 (µg/kg soil)											
		Succeeding crops											
		W wheat	Barley	W rye	WT triticale	Spring oats	Alfalfa	Sugar beet	Potatoes	Rye grass	Field Peas/ Field beans	Corn	Sunflower
Crop failure interval	0 (initial)	55.0	80.0	55.0	40.0	80.0	10.0	45.0	27.0	45.0	20.0	80.0	80.0
	10	87.4	127.1	87.4	63.5	127.1	15.9	71.5	42.9	71.5	31.8	127.1	127.1
	20	145.3	211.4	145.3	105.7	211.4	26.4	118.9	71.3	118.9	52.8	211.4	211.4
	30 (1month)	230.6	335.4	230.6	167.7	335.4	41.9	188.7	113.2	188.7	83.9	335.4	335.4
	50 (1.6 months)	582.0	846.6	582.0	423.3	846.6	105.8	476.2	285.7	476.2	211.6	846.6	846.6
	80 (2.6 months)	2444.4	3555.6	2444.4	1777.8	3555.6	444.4	2000.0	1200	2000.0	888.9	3555.6	3555.6
	100 (3.3 months)	7857.1	11428.6	7857.1	5714.3	11428.6	1428.6	6428	3857	6428.6	2857.1	11428	11428.6
Following crops	150 (5 months)	64705.9	94117.6	64705.9	47058.8	94117.6	11764	52941	31764	52941.2	23529	94117	94117.6
	200 (6.6 months)	129411	188235	129411	94117.6	188235	23529	105882	63529	105882	47058	188235	188235.3

\*TER (soil depth e.g. 5 cm)

According to these calculations there is no risk for the main succeeding crops concerning F7B-39-30. The product degrades fast in soil as it is shown by the TER values that are above 1 even at 10 days after product applications. Based on these results and following the recommendation from the EPPO guidance 207: *If the TER values are >1 (or the specific national level, if higher), then no further testing is necessary.* No further field studies were therefore conducted.

**Table 3.5-4: Crop Intervals**

Crops	Crops Intervals
Corn	3 weeks

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Field Peas/ Field bean	3 weeks
Triticale	3 weeks
Oats	3 weeks
Sunflower	3 weeks
Rye	3 weeks
Oats	3 weeks
Wheat	3 weeks
Barley	3 weeks
Raygrass	3 weeks
Alfalfa	3 weeks
Sugar beet	3 weeks
Potatoes	3 weeks

Proposed label recommendation for F7B-39-30 for crop failure and following crop planting intervals:

In case of crop failure for any reason: corn, sugar beet, potatoes and sunflower can be sown 3 weeks after application of F7B-39-30 at a maximum doses of 2 g ai/ha. In the winter of the same calendar year all winter cereals and winter oilseed rape can be sown.

In the case of a normal crop rotation the following crops can be planted after application of F7B-39-30: all winter cereals and winter OSR in the same calendar year and spring cereals, spring oil seed rape, potatoes, sugar beet, sunflower, raygrass, alfalfa, field peas/field bean in the following spring.

dRR point 3.5.1	Impact on succeeding crops
<p>ZRMS conclusion:</p> <p>ZRMS agrees with the Applicant's conclusions concerning impact of F7B-39-30 on succeeding crops. CMS are invited to take the national measures concerning impact of F7B-39-30 on succeeding crops.</p>	

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

Studies on the toxicity to non-target terrestrial plants have been carried out with GF-3206 equivalent formulation to F7B-39-30. Data presented in this section with GF-3206 can use as representative for formulation F7B-39-30. Studies to assess the toxicity of GF-3206 to non-target plants have been conducted. The results are summarised in the following tables.

**Table 3.5-5: ER<sub>50</sub>-values (g product/ha) of different test plants**

Species	Test item	Exposure System	Results	Reference
<i>Allium cepa</i> (Onion) <sub>m</sub>	GF-3206	21 d Seedling emergence	<b>ER<sub>50</sub> = 13 g a.s/ha shoot dry weight</b>	Bergfield, A 2015, Corteva Study ID 140396 <sup>6</sup>
<i>Avena sativa</i> (Oat) <sub>m</sub>			ER <sub>50</sub> > 60 g a.s/ha shoot dry weight	
<i>Lolium perenne</i> (Raygrass) <sub>m</sub>			ER <sub>50</sub> > 60 g a.s/ha shoot dry weight	
<i>Zea mays</i> (Corn) <sub>m</sub>			ER <sub>50</sub> > 60 g a.s/ha shoot dry weight	
<i>Beta vulgaris</i> (Sugar beet) <sub>d</sub>			ER <sub>50</sub> > 60 g a.s/ha shoot dry weight	
<i>Brassica napus</i> (Oilseed Rape) <sub>d</sub>			ER <sub>50</sub> = 42 g a.s/ha shoot dry weight	
<i>Cucumis sativus</i> (Cucumber) <sub>d</sub>			ER <sub>50</sub> > 60 g a.s/ha shoot dry weight	
<i>Glycine max</i> (Soybean) <sub>d</sub>			ER <sub>50</sub> = > 60 g a.s/ha shoot dry weight	
<i>Daucus carota</i> (Carrots) <sub>d</sub>			<b>ER<sub>50</sub> = 2.3 g a.s/ha shoot dry weight</b>	
<i>Helianthus annuus</i> (Sunflower) <sub>d</sub>			ER <sub>50</sub> > 60 g a.s/ha shoot dry weight	
<i>Allium cepa</i> (Onion) <sub>m</sub>	GF-3206	21 d Vegetative vigor	ER <sub>50</sub> = 12 g a.s/ha shoot dry weight	Lee, B.: 215, Corteva Study ID 140394 <sup>7</sup>
<i>Lolium perenne</i> (Raygrass) <sub>m</sub>			ER <sub>50</sub> > 60 g a.s/ha shoot dry weight	
<i>Avena sativa</i> (Oat) <sub>m</sub>			ER <sub>50</sub> > 60 g a.s/ha shoot dry weight	
<i>Daucus carota</i> (Carrots) <sub>d</sub>			<b>ER<sub>50</sub> = 0.27 g a.s/ha shoot dry weight</b>	
<i>Zea mays</i> (Corn) <sub>m</sub>			ER <sub>50</sub> = 29 g a.s/ha shoot dry weight	
<i>Beta vulgaris</i> (Sugar beet) <sub>d</sub>			<b>ER<sub>50</sub> = 2.2 g a.s/ha shoot</b>	

<sup>6</sup> Bergfield, A 2015, Corteva Study ID 140396

<sup>7</sup> Lee, B.: 215, Corteva Study ID 140394

Species	Test item	Exposure System	Results	Reference
			<b>dry weight</b>	
<i>Brassica napus</i> (Oilseed Rape) <sub>d</sub>			ER <sub>50</sub> = 0.28 g a.s/ha shoot dry weight	
<i>Cucumis sativus</i> (Cucumber) <sub>d</sub>			<b>ER<sub>50</sub> = 1.7 g a.s/ha</b> shoot dry weight	
<i>Helianthus annuus</i> (Sunflower) <sub>d</sub>			<b>ER<sub>50</sub> = 0.49 g a.s/ha</b> shoot dry weight	
<i>Glycine max</i> (Soybean) <sub>d</sub>			ER <sub>50</sub> = 26 g a.s/ha shoot dry weight	

Based on the ER<sub>50</sub> values the most sensitive crops are carrots (ER<sub>50</sub> = 2.3ga.s/ha) & onions (ER<sub>50</sub> = 13 g a.s/ha) for seedling emergence test and carrot (ER<sub>50</sub> = 0.27g a.s/ha), Sunflower (ER<sub>50</sub> = 0.49 g a.s/ha), cucumber (ER<sub>50</sub> = 1.7g a.s/ha) and sugar beet (ER<sub>50</sub> = 2.2 g a.s/ha) for vegetative vigor test.

#### Risk assessment for non-target terrestrial plants from use of GF-3206 formulation in sugar beet

The risk assessment for plants potentially grown nearby to fields treated with GF-3206 can be considered with potential risk mitigation measures that can be implemented to reduce off-field exposure of nearby sensitive crops. These mitigation measures correspond to use of unsprayed in-field buffer strips of a given width; and/or the usage of drift reducing nozzles. The results of the risk assessment (based on the most sensitive endpoint from each plant species) using typical mitigation measures (varying no-spray buffer zone distances in addition to use of drift-reducing nozzles with reduction by 50 or 75 %) are summarized in the following tables.

**Table 3.5-6: - Calculated TER for GF-3206 on adjacent crops and corresponding buffer zone - Assessment using AF = 1 and no drift reduction technology**

Using AR – 1 and no drift reduction technology

Test species	Most Sensitive Study endpoint		Theoretical drift dose (g f.p./ha, according Ganzelmeier table) reaching the adjacent crops located at		Buffer (m)
			1 m	5 m	
			0.05	0.01	
		ER <sub>50</sub> (g a.s./ha)	Calculated TER on adjacent crops		
<i>Allium cepa</i> (Onion) <sub>m</sub>	Vegetative vigor	12	216.6	1052	-
<i>Avena sativa</i> (Oat) <sub>m</sub>	Vegetative vigor	>60	1083	5263	
<i>Zea mays</i> (Corn) <sub>m</sub>	Vegetative vigor	29	523.4	2543	
<i>Lolium perenne</i> (Raygrass) <sub>m</sub>	Vegetative vigor	>60	1083	5263	
<i>Daucus carota</i> (Carrots) <sub>d</sub>	Vegetative vigor	0.27	4.87	23.6	
<i>Cucumis sativus</i> (Cucumber) <sub>d</sub>	Vegetative vigor	1.7	60.6	149.1	
<i>Brassica napus</i> (Oilseed Rape) <sub>d</sub>	Vegetative vigor	26	4.69.3	2280	-
<i>Glycine max</i> (Soybean) <sub>d</sub>	Vegetative vigor	0.28	5.0	24.56	
<i>Beta vulgaris</i> (Sugar beet) <sub>d</sub>	Vegetative vigor	2.2	39.7	192.9	-
<i>Helianthus annuus</i> (Sunflower) <sub>d</sub>	Vegetative vigor	0.49	8.8	42.9	
<i>Zea mays</i> (Corn) <sub>m</sub>	Seedling emergence	>60	1083	5263	-
<i>Avena sativa</i> (Oat) <sub>m</sub>	Seedling emergence	>60	1083	5263	
<i>Allium cepa</i> (Onion) <sub>m</sub>	Seedling emergence	13	234.6	1140	
<i>Lolium perenne</i> (Raygrass) <sub>m</sub>	Seedling emergence	>60	1083	5263	
<i>Daucus carota</i> (Carrots) <sub>d</sub>	Seedling emergence	2.3	41.5	201.7	

<i>Cucumis sativus</i> (Cucumber) <sub>d</sub>	Seedling emergence	>60	1083	5263	
<i>Brassica napus</i> (Oilseed Rape) <sub>d</sub>	Seedling emergence	42	758.1	3684	
<i>Glycine max</i> (Soybean) <sub>d</sub>	Seedling emergence	>60	1083	5263	
<i>Beta vulgaris</i> (Sugar beet) <sub>d</sub>	Seedling emergence	>60	1083	5263	3
<i>Helianthus annuus</i> (Sunflower) <sub>d</sub>	Seedling emergence	>60	1083	5263	-

TER: toxicity to exposure ratio. TER values shown in **bold** fall below the relevant trigger of 1

### Overall conclusion

Based on the risk assessment provided above, as well as considering the drift mitigation technologies, the proposed mitigation measures for GF-3206 formulation acceptable risk to each of the species tested is shown based on the maximum application rate of 2 g a.s/ha, without any mitigation measurement, as none of the calculated TER values were inferior to 1. Further studies to refine the risk are therefore not required.

dRR point 3.5.2	Impact on other plants including adjacent crops
ZRRMS conclusion:	
Impact on other plants including adjacent crops following use of F7B-39-30 could be considered as low.	

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

The risk to arthropods is presented in Part B Section 9 (Ecotoxicology) and is summarised below. A low risk was identified for the standard indicator arthropod species *Aphidius* and *Typhlodromus* for both in-field and off-field exposure, meaning that there is a low risk to arthropods from the intended use.

#### 3.5.3.1 Toxicity data

Studies on the toxicity to non-target arthropods have been carried out with flupyrauxifen-benzyl, tested as the formulation GF-3206, which has been already indicated to be identical to F7B-39-30. Full details of these studies are provided in the respective EU DAR and related documents.

Effects on non-target arthropods of GF-3206 were evaluated as part of the EU assessment of flupyrauxifen-benzyl.

The selection of studies and endpoints for the risk assessment is in line with the results of the EU review process.

**Table 3.5-7: Endpoints and effect values relevant for the risk assessment for non-target arthropods**

Species	Substance	Exposure System	Results	Reference
<i>Typhlodromus pyri</i> (protonymphs)	GF-3206	Laboratory test glass plates (2D)	LR <sub>50</sub> = 972 mL/ha ER <sub>50</sub> > 1061 mL/ha	EFSA Journal 2018; 16(8):5378
<i>Aphidius rhopalosiphii</i> (adults)	GF-3206	Laboratory test glass plates (2D)	LR <sub>50</sub> = 1347 mL/ha ER <sub>50</sub> > 1500 mL/ha	EFSA Journal 2018; 16(8):5378
<i>Typhlodromus pyri</i> (protonymphs)	GF-3206	Extended laboratory test French bean leaf discs (2D)	LR <sub>50</sub> > 6000 mL/ha ER <sub>50</sub> > 6000 mL/ha	EFSA Journal 2018; 16(8):5378
<i>Chrysoperla carnea</i> (larvae)	GF-3206	Extended laboratory test French bean leaf discs (2D)	LR <sub>50</sub> > 2200 mL/ha ER <sub>50</sub> > 2200 mL/ha	EFSA Journal 2018; 16(8):5378

### Justification for new endpoints

Not relevant.

**Risk assessment**

The evaluation of the risk for non-target arthropods was performed in accordance with the recommendations of the “Guidance Document on Terrestrial Ecotoxicology”, as provided by the Commission Services (SANCO/10329/2002 rev.2 (final), October 17, 2002), and in consideration of the recommendations of the guidance document ESCORT 2.

To achieve a concise risk assessment, the risk envelope approach is applied. Assessment for the use in sugar and fodder beet (use group A) covers the risk for arthropods others than bees for all intended uses.

**Risk assessment for in-field exposure**

The results of the risk assessment for in-field exposure are summarised in the following table.

**Table 3.5-8: First- and higher-tier assessment of the in-field risk for non-target arthropods due to the use of GF-3206 in sugar and fodder beet (Use group A)**

<b>Intended use</b>	Sugar beet and fodder beet (BBCH 10-19)		
<b>Product</b>	GF-3206		
<b>Application rate (mL/ha)</b>	1 × 80		
<b>MAF</b>	1 (Appendix III, ESCORT 2, default MAF for leaf applications)		
<b>Test species</b>	<b>LR<sub>50</sub> (lab.) (mL/ha)</b>	<b>PER<sub>infield</sub> (mL/ha)</b>	<b>HQ<sub>in-field</sub> criterion: HQ ≤ 2</b>
<b>Tier I</b>			
<i>Typhlodromus pyri</i>	972	80	0.08
<i>Aphidius rhopalosiphi</i>	1347		0.06
<b>Test species</b>	<b>Rate with ≤ 50% effect*</b>	<b>PER<sub>infield</sub> (mL/ha)</b>	<b>PER<sub>in-field</sub> below rate with ≤ 50% effect?</b>
<b>Higher-tier</b>			
<i>Typhlodromus pyri</i>	LR <sub>50</sub> and ER <sub>50</sub> > 6000	80	yes
<i>Chrysoperla carnea</i>	LR <sub>50</sub> and ER <sub>50</sub> > 2200		yes

MAF: Multiple application factor; PER: Predicted environmental rate; HQ: Hazard quotient.  
Criteria values shown in bold breach the relevant trigger.

\* If an LR<sub>50</sub> or ER<sub>50</sub> from a relevant extended laboratory test is available, it should be considered in place of the rate with ≤ 50% effect.

**Risk assessment for off-field exposure**

The results of the risk assessment for off-field exposure are summarised in the following table.

**Table 3.5-9: First- and higher-tier assessment of the off-field risk for non-target arthropods due to the use of GF-3206 in sugar and fodder beet (Use group A)**

<b>Intended use</b>	Sugar and fodder beet (BBCH 10-19)				
<b>Product</b>	GF-3206				
<b>Application rate (mL/ha)</b>	1 × 80				
<b>MAF</b>	1 (Appendix III, ESCORT 2, default MAF for leaf applications)				
<b>vdf</b>	5 (2D-study)				
<b>Test species</b>	<b>LR<sub>50</sub> (lab.) (mL/ha)</b>	<b>Drift rate <sup>1</sup></b>	<b>PER<sub>offfield</sub> (mL/ha)</b>	<b>CF</b>	<b>HQ<sub>off-field</sub> criterion: HQ ≤ 2</b>
<b>Tier I</b>					
<i>Typhlodromus pyri</i>	972	2.77% (1 m)	0.443	10	0.005
<i>Aphidius rhopalosiphi</i>	1347				0.003
<b>Test species</b>	<b>Rate with ≤ 50% effect*</b>	<b>Drift rate <sup>1</sup></b>	<b>PER<sub>offfield</sub> (mL/ha)</b>	<b>CF</b>	<b>corr. PER<sub>off-field</sub> below rate with ≤ 50% effect?</b>
<b>Higher-tier</b>					
<i>Typhlodromus pyri</i>	LR <sub>50</sub> and ER <sub>50</sub> > 6000	2.77% (1 m)	0.443	5	yes
<i>Chrysoperla carnea</i>	LR <sub>50</sub> and ER <sub>50</sub> > 2200				yes

MAF: Multiple application factor; vdf: Vegetation distribution factor; (corr.) PER: (corrected) Predicted environmental rate; CF: Correction factor; HQ: Hazard quotient. Criteria values shown in bold breach the relevant trigger.

\* If an  $LR_{50}$  or  $ER_{50}$  from a relevant extended laboratory test is available, it should be considered in place of the rate with  $\leq 50\%$  effect.

<sup>1</sup>: Appendix IV, ESCORT 2 for one application to field crops

### **Additional higher-tier risk assessment**

Not required.

### **Risk mitigation measures**

No risk mitigation needed.

### **Overall conclusions**

An acceptable risk to non-target arthropods is expected from the proposed uses of GF-3206 in sugar and fodder beet, without the need of any risk mitigation

## **3.6 Other/special studies**

### **3.6.1 Rainfastness**

An experiment using simulated rain was conducted in 2016 at Dow AgroSciences Global Headquarters in Indianapolis, Indiana, USA, to answer the key question: What is the minimum time required between an application of GF-3206 and a rainfall event without decreased weed control? As indicated before the formulations GF-3206 and F7B-39-30 are identical on the composition and concentration of florpyrauxifen-benzyl and results are therefore valid for F7B-39-30. The applicant would like also to clarify that this rainfastness study was done with the high dose of 30gai/ha (dose use for rice), which is much higher than the one requested for sugar beet (2gai/ha). Also, the test was done on grass and sedge weed species. These are not the typical broadleaf weeds in sugar beet but can be considered as worst case as the cuticle of these grass and sedge weed species is thicker than those for broadleaf weeds.

The interpretive intent is to determine whether the final efficacy on the grass and sedge weed species ECHCG, CYPDI, SEBEX, AESSE is similar to rainfall events at 0.5, 1, 2, 4 and 6 hours compared to a no rain treatment. If yes, then a rainfastness period of 1 hour can be justified on the label for this formulation. GF-3206 containing florpyrauxifen-benzyl (30 g ai/ha), was evaluated to determine the minimum rainfast interval in greenhouse conditions.

### **Materials and methods**

**Herbicides.** Rainfastness of GF-3206 containing florpyrauxifen-benzyl (30 g ai/ha), was applied at 1.2 L/ha to determine the rainfast interval for the product label.

**Plant Propagation.** A peat-based potting soil, Metro-mix® 360, a registered trademark of Sun Gro Horticulture Canada CM Ltd., was used as the potting media in this experiment. Metro-mix consists of 35 to 45% specially processed coconut coir pith, 10 to 20% horticultural grade vermiculite, 15 to 25% processed ash bark, 20 to 30% choice Canadian sphagnum peat moss and proprietary nutrients and other ingredients. Several ECHCG, CYPDI, SEBEX and AESSE seeds were planted separately in 288 cell trays. One plant was transplanted at seedling stage to 4 inch square pots. Plant material was propagated in greenhouse zone E2, Dow AgroSciences Global Headquarters (Indianapolis, Indiana, USA), and held at 18 to 20°C and 50 to 60% relative humidity. Natural light was supplemented with 1000-watt metal halide overhead lamps with an average illumination of  $500 \mu\text{E m}^{-2} \text{s}^{-1}$  photosynthetic active radiation for 16



consecutive hours each day. Plants were sub-irrigated prior to herbicide application and after herbicide application.

**Herbicide Application.** GF-3206 was applied at a spray volume of 200 L/ha. Application was made to 4 replicates of ECHCG, CYPDI, SEBEX and AESSE at the 3 to 4 leaf growth stage. Herbicides were applied with a track-sprayer (Generation III Research Sprayer manufactured by DeVries Manufacturing in Hollandale, MN, USA) located in building 306, room E1-483, at Dow AgroSciences Global Headquarters in Indianapolis, Indiana, USA. The track sprayer was calibrated to deliver 200 L/ha utilizing an SS8003E even fan spray nozzle at 40 psi (276 kPa) and a speed of 1.9 mph (3.1 km/hr). Appropriate amounts of formulated product were added to spray solutions as calculated by the software package ARM15 (Gylling Data Management Inc.). Herbicide aliquots were diluted with clean Indianapolis (Indiana, USA) tap water to a total volume of 30 millilitres.

**Rain Simulation.** A total of 0.5 inches (12.7 mm) of simulated rain was applied in 20 minutes to ECHCG, CYPDI, SEBEX and AESSE. The simulated rain was applied using a tracksprayer (Generation III Research Sprayer manufactured by DeVries Manufacturing in Hollandale, MN, USA). The track-sprayer was fitted with an 8003E nozzle from Spray Systems Company (North Avenue and Schmale Road P.O. Box 7900 Wheaton, IL 60187). Rainfall was applied through a nozzle that moved in a back-and-forth pattern over the ECHCG, CYPDI, SEBEX and AESSE with a spray pressure of 40 psi (276 kPa) at 1.4 mph (2.25 kph). The amount of water applied was measured, during each rainfall application, with 4 rain gauges placed among the treated plants on the spray table to assure uniformity in rainfall application. The top of the plant canopy was 20 inches (51 cm) from the tip of the nozzle. Simulated rain, consisting of Indianapolis tap water, was applied to 5 sets of treated plants at 0.5, 1, 2, 4, and 6 hours after application (HAA), and compared to a set of treated plants that received no rain. Once all rainfall time points were completed, the plants were randomized on carts and returned to the greenhouse. Treated plants were sub-watered for the duration of the experiment.

**Table 3.6-1. Treatments receiving no rain compared to plants receiving rainfall at 0.5, 1, 2, 4, and 6 hours after application (HAA).**

Herbicide Components	Formulation Number	Rate (L pr /ha)	Rainfall timing
Florpyrauxifen-benzyl	GF-3206*	1.2	NO RAIN
Florpyrauxifen-benzyl	GF-3206	1.2	0.5 HOUR
Florpyrauxifen-benzyl	GF-3206	1.2	1 HOUR
Florpyrauxifen-benzyl	GF-3206	1.2	2 HOUR
Florpyrauxifen-benzyl	GF-3206	1.2	4 HOUR
Florpyrauxifen-benzyl	GF-3206	1.2	6 HOUR
Untreated			

\*Equal to F7B-39-30

**Table 3.6-2. Information on species tested in rainfastness study of GF-3206**

Common name	Scientific name	EPPO code	Growth stage at application
Common barnyardgrass	<i>Echinochloa crus-galli</i>	ECHCG	3-4 leaf (BBCH 13-14)
Small-flower flatsedge	<i>Cyperus difformis</i>	CYPDI	3-4 leaf (BBCH 13-14)
Hemp sesbania	<i>Sesbania exaltata</i>	SEBEX	3-4 leaf (BBCH 13-14)
Honteuse mâle' (jointvetch)	<i>Aeschynomene sensitiva</i>	AESSE	3-4 leaf (BBCH 13-14)

**Experimental Design, Assessments and Analysis.** The experiment was designed as a randomized complete block with four replications per treatment. Percent visual control assessments were made on a scale of 0 to 100% (where 0 was no control and 100 was complete plant death) at 7, 14, and 21 days after



application (DAA). Analysis of variance ( $P=0.05$ ) and Tukey's HSD mean separation test ( $P<0.05$ ) were determined using the software in ARM2015. Data were transformed with Arcsine square root ensure error variance heterogeneity.

## Results and Discussion

### *Echinochloa crus-galli* (ECHCG) control

GF-3206 provided 82, 94 and 84% ECHCG control at 7, 14 and 21 DAA, respectively, when no rain was applied after treatment. Simulated rainfall applied after herbicide treatment did not lower the efficacy of GF-3206 compared to the no rain treatment at 7, 14 and 21 DAA.

**Table 3.6-3. ECHCG Control (%) as influenced by rainfall interval after GF-3206 application (DAA) at 30 g ai/ha of florypyrauxifen-benzyl.**

Treatment	Rain Interval	ECHCG control (%)					
		7 DAA		14 DAA		21 DAA	
		Mean	Level	Mean	Level	Mean	Level
GF-3206	NO RAIN	82	a	94	a	84	a
GF-3206	RAIN 0.5 HAA	83	a	90	a	78	a
GF-3206	RAIN 1 HAA	86	a	94	a	83	a
GF-3206	RAIN 2 HAA	84	a	91	a	80	a
GF-3206	RAIN 4 HAA	89	a	91	a	82	a
GF-3206	RAIN 6 HAA	86	a	93	a	83	a
UNTREATED		0	b	0	b	0	b

Analysis of variance,  $P=.05$ , Tukey's HSD, means within a column followed by the same letter are not significantly different at  $P<0.05$ .

### *Cyperus difformis* (CYPDI) control.

GF-3206 provided 69, 66 and 73% CYPDI control at 7, 14 and 21 DAA, respectively, when no rain was applied after treatment. Simulated rainfall applied after herbicide treatment did not lower the efficacy of GF-3206 compared to the no rain treatment at any of the rainfall intervals at 7, 14 or 21 DAA.

**Table 3.6-4. CYPDI Control (%) as influenced by rainfall interval after GF-3206 application (DAA) at 30 g ai/ha of florypyrauxifen-benzyl.**

Treatment	Rain Interval	CYPDI control (%)					
		7 DAA		14 DAA		21 DAA	
		Mean	Level	Mean	Level	Mean	Level
GF-3206	NO RAIN	69	b	66	b	73	b
GF-3206	RAIN 0.5 HAA	72	ab	88	a	90	a
GF-3206	RAIN 1 HAA	74	ab	86	a	95	a
GF-3206	RAIN 2 HAA	77	ab	86	a	93	a
GF-3206	RAIN 4 HAA	78	ab	91	a	97	a
GF-3206	RAIN 6 HAA	79	a	92	a	98	a
UNTREATED		0	c	0	c	0	c

Analysis of variance,  $P=.05$ , Tukey's HSD, means within a column followed by the same letter are not significantly different at  $P<0.05$ .

### *Sesbania exaltata* (SEBEX) control.

SEBEX control with GF-3206 was less when rainfall was applied at 0.5 and 1 HAA compared to the no rain treatment at 7 DAA. However, by 14 and 21 DAA this lower efficacy was no longer observed and

the simulated rainfall applied after herbicide treatment, regardless the HAA, resulted in the same level of control compared to the no rain treatment.

**Table 3.6-5. SEBEX Control (%) as influenced by rainfall interval after GF-3206 application (DAA) at 30 g ai/ha of florpyrauxifen-benzyl.**

Treatment	Rain Interval	SEBEX control (%)					
		7 DAA		14 DAA		21 DAA	
		Mean	Level	Mean	Level	Mean	Level
GF-3206	NO RAIN	99	a	99	a	100	a
GF-3206	RAIN 0.5 HAA	96	bc	94	a	95	a
GF-3206	RAIN 1 HAA	95	c	94	a	94	a
GF-3206	RAIN 2 HAA	97	abc	97	a	100	a
GF-3206	RAIN 4 HAA	97	abc	99	a	100	a
GF-3206	RAIN 6 HAA	98	ab	96	a	97	a
UNTREATED		0	d	0	b	0	b

Analysis of variance, P=.05, Tukey's HSD, means within a column followed by the same letter are not significantly different at P<0.05

#### ***Aeschynomene sensitiva* (AESSE) control.**

AESSE control was excellent ( $\geq 99\%$ ) with GF-3206. The level of efficacy when rainfall was applied after treatment was similar to the no rain treatment at 7, 14 and 21 DAA.

**Table 3.6-6. AESSE Control (%) as influenced by rainfall interval after GF-3206 application (DAA) at 30 g ai/ha of florpyrauxifen-benzyl.**

Treatment	Rain Interval	AESSE control (%)					
		7 DAA		14 DAA		21 DAA	
		Mean	Level	Mean	Level	Mean	Level
GF-3206	NO RAIN	100	a	100	a	100	a
GF-3206	RAIN 0.5 HAA	99	a	100	a	100	a
GF-3206	RAIN 1 HAA	100	a	100	a	100	a
GF-3206	RAIN 2 HAA	99	a	100	a	100	a
GF-3206	RAIN 4 HAA	100	a	100	a	100	a
GF-3206	RAIN 6 HAA	100	a	100	a	100	a
UNTREATED		0	b	0	b	0	b

Analysis of variance, P=.05, Tukey's HSD, means within a column followed by the same letter are not significantly different at

#### **Conclusions**

GF-3206 provided  $\geq 90\%$  control on ECHCG, SEBEX and AESSE and CYPDI. Control ranged from 73 to 100% when no rain was applied after treatment at 21 DAA (days after application). Simulated rainfall of 12.7 mm applied after herbicide treatment at 0.5, 1, 2, 4, or 6 HAA (hours after application) did not lower the efficacy of this formulation compared to the no rain treatment at 21 DAA. A rainfastness period of 1 hour can be justified on the label for GF-3206.

dRR point 3.6.1	Other/special studies Rainfastness
<p>ZRMS conclusion:</p> <p>The applicant presented a study where rainfastness of the product was tested. The study was done with the higher dose of 30g a.i./ha than dose use for sugar beet (2g a.i./ha). The test was done on grass and sedge weed species. Simulated rainfall of 12,7 mm was applied at 0,5, 1, 2, 4, or 6 hours after application after herbicide treatment. In the study, the simulated rainfall did not lower the efficacy of this formulation compared to the no rain treatment at 21 DAA.</p> <p>In ZRMS opinion, to confirm the rainfastness of the product for the sake of this authorisation (on sugar beet), the lower dose rates should be tested: 2g a.i./ha, 2x 1ga.s./ha, 3 x 0,66 g a.i./ha and 4 x 0,5 g a.i./ha. Lower doses subjected to rainfall may not ensure high efficacy of the product. ZRMS can agree to place information about the product rainfastness period of 1 hour on the PL label conditionally, to the time of post-authorized presenting studies confirming rainfastness of the product with the claimed dose rates for sugar beet.</p> <p>CMS are requested to decide on this point of dossier.</p>	

### 3.6.2 Cleaning application equipment<sup>8</sup>

To support the commercialization of GF-3206, a 25g/L florpyrauxifen-benzyl EC formulation and similar to F7B-39-30, several analytical and bioassay studies were performed to determine effective clean out practices for application equipment. In 2017 application equipment cleaning experiments with triple rinse of water determined the contamination level was estimated to < 2 to 10 ppb. A dose response bioassay on young tomato and red pepper plants showed both were damaged at 70 ppb with new growth disfigured e.g. leaf curling, at > 15 ppb of florpyrauxifen-benzyl.

The aim of evaluating addition of cleaning agents to the triple rinse program was to obtain florpyrauxifen-benzyl levels significantly below the 15 ppb limit and provide a safety factor against damage against all crops. Proprietary spray tank cleaning products are available in many regions or farmers will use readily available household materials. To cover all possibilities, dishwashing liquid and a glyphosate product were included to determine if they could improve over just plain water rinsing.

The sprayer equipment clean out experiment produced a very similar result to the previous 2017 Korean studies that showed simple triple rinsing with water was adequate to clean out GF-3206.

A combination of rinsing with water and including alkaline cleaning agents (hydrated lime, chlorine bleach and laundry detergent) could further decontaminate the equipment to negligible levels.

To give a comprehensive decontamination option to farmers, a label recommendation could include these alkaline cleaning agents and/or a recommendation to avoid using any equipment for subsequent applications onto crops sensitive to florpyrauxifen-benzyl active.

dRR point 3.6.2	Other/special studies Cleaning application equipment
<p>ZRMS conclusion:</p> <p>The Applicant presented study titled: “GF-3206 [Rinskor 25g/L EC] Spray Tank Clean Out Evaluation”. Triple rinsing with water was adequate to clean out GF-3206. A combination of rinsing with water and including alkaline</p>	

<sup>8</sup> Derek Hopkins, U378571; Cheryl Cathie, U361118. GF-3206 [Rinskor 25g/L EC] Spray Tank Clean Out Evaluation

cleaning agents (hydrated lime, chlorine bleach and laundry detergent) could further decontaminate the equipment to negligible levels.

ZRMS agrees with the Applicant that on the label should be place information about use alkaline cleaning agents and/or a recommendation to avoid using any equipment for subsequent applications onto crops sensitive to florpyrauxifen-benzyl active.

### **3.6.3 Justification for recommended water volumes**

The applied water volume in the efficacy and selectivity trials included in this dossier are shown in the corresponding tables regarding application info. The range of these applied water volumes corresponds with the range requested in the GAP (100-300 L/ha) as this range of water volume proved to be adequate to reach the required selectivity and efficacy against several broadleaved weeds in sugar beet after a total 2 g ai/ha of F7B-39-30 applied in one single or 2-4 applications.

### **3.6.4 Justification for recommended nozzle types**

A wide range of nozzle types were used in the efficacy and selectivity trials in this dossier. Details on the nozzles are shown in the corresponding tables regarding application info. Nozzle types were chosen based on country specific regulations (e.g. 50% or 75% drift reduction) and/or being common for farmer's practice.

### **3.6.5 Compatibility studies**

#### **3.6.5.1 Biology Compatibilities studies**

No specific biology compatibility studies have been conducted with F7B-39-30, however a significant number of field trials efficacy and selectivity were conducted with F7B-39-30 in tank mix with some of the most important sugar beet herbicides present today in the European market. Results from those herbicide programs can be reviewed in section 3.2.3 efficacy test, and section 3.4.1 phytotoxicity to host crop and 3.4.2 effect on the yield and 3.4.3 effect of quality.

As a summary, the tank mix of F7B-39-30 with other actives herbicides in sugar beet like metamitron, ethofumesate, phenmediphan, triflurosulfuron methyl and lenacil did not have any negative impact on the efficacy of F7B-39-30 on the control of broadleaf weeds and did not impact either the crop response of the herbicide programs.

#### **3.6.5.2 Physical and chemical compatibility studies**

The physical and chemical compatibility of F7B-39-30 have been done by tests carried out in the Application Technology laboratory at Drusenheim (France)<sup>9</sup>. The test was done with key partners for sugar

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<sup>9</sup> Study ID:230058 (AT-21-032) F7B-39-30: Physical & Chemical compatibility evaluation

beet weed killing program like Dual Gold, Goltix Gold, Centium, Goltix Titan, Betasana, Safari, Venzar, Matrigon/Lontrel, Select/Centurion, Agil , Targa Super, Focus Ultra, Trammat F and Actirob B .

As F7B-39-30 is a formulation very close to GF-3206, except that F7B-39-30 contains a coloring agent 0.0005 % (%w/w) concentration. GF-3206 was used for this study as a surrogate of F7B-39-30 and we expect that physical properties of both formulations are the same as the coloring concentration is too low to interfere with formulations properties.

GF-3206 is a Emulsifiable Concentrate (EC) containing 25 g a.s./L of florypyrauxifen-benzyl as active substance. The setting GAP is 0.02 L/ha in 100 to 300 L/ha as water spray volume.

Two laboratory procedures were conducted to evaluate the physical and chemical compatibility of 25 mixtures containing 0.02 L/ha of GF-3206 tested in 100L of water/ha. The results show that all mixtures were scored as physically compatible by the ASTM methodology (E1518-05) and chemically compatible by the DuPont Corteva Standard Operating Procedure (DP SOP EMAEUC-Study). No significant residue was found by the ASTM methodology and no pH and temperature variation, nor gas generation were observed in time with the DP SOP.

Conclusion: The test outcomes show that F7B-39-30 is compatible with key partners for the European Union market for 100L/ha and above.

GF-3206, 25 g.a.s./L EC, was tested with 14 potential tank mix partners in three and four-way mixture combinations listed in Table 2 at one water volume, 100 L/ha. The product details are given in Table 3.6-7. No agglomerates were observed either in jar or 300 microns screen before rinsing and after rinsing, resulting in physically compatible mixtures in 100 L/ha and above. Summary of ASTM dynamic tank mix compatibility test results is in Table 3.6-8.

Within the time frame of the tests, no significant pH or temperature variation was noticed, and no gas generation was observed which is considered as evidence of no potentially disadvantageous chemical reaction. Data details of DP Corteva SOP test are available in Appendix 2 of study report.

**Table 3.6-7: Product details of tank mix partners with**

Trade Name	Formulation Type	Formulation Concentration a.s.	Sample Rate L or kg cp/ha or % v/v	Substance (Including a.s.)	Quantity of formulation (g, ml)/jar (100)
GF-3206 = F7B-39-30	EC	25.0	0.02	florypyrauxifen-benzyl	0.02
Dual Gold	EC	960	0.25	S-Metolachlor	0.5
Goltix Gold	SC	700	0.5	metramitrone	0.25
Centium	CS	360	0.035	clomazone	0.035
Goltix Titan	SC	565	2	metamitrone (525g/l) + quinmerac (40g/l)	2
Betasana	SC	160	1	phemediphan	1
Safari	WG	500	0.01	triflusulfuron	0.01
Venzar	SC	500	0.25	lenacil	0.25
Matrigon/Lontrel	SL	100	0.25	clopyralid	0.25
Select/Centurion	EC	240	0.8	clethodim	0.8
Agil	EC	100	0.7	propaquizafop	0.7
Targa Super	EC	50	1.2	quizalofop-p-ethyl	1.2
Focus Ultra	EC	100	0.8	cycloxydim	0.8
Tramat F	SC	500	0.25	ethofumasate	0.25
Actirob B	EC	842	0.5	esterified oils seed rape	0.5

GF-3206 and its tank mix partners were tested according to the ASTM (American Society for Testing and Materials) international standard for dynamic tank mix compatibility protocol E-1518-05 (1) to identify tank mix physical incompatibility described in Appendix 1. Each tank-mixture was evaluated for possible effects such as deposit visual quantity either in jar or on 300 microns (50 mesh) and 75-micron (200 mesh) screens before rinsing and after rinsing. Scoring of deposit either on jar walls or in screen is the following:

0= no residue, 1= very few residues, 2= few residues and 3= lot of residues. Based on these assessments the mixture is determined to be physically compatible (scoring of 0) or not (scoring of 3).

Each mixture was in addition tested according to a standardized internal operating procedure (DP SOP EMAEUC-01-001) for chemical compatibility and temperature were measured at initial T0 and T0 + 2 hours for each single component and each mixture. The mixtures were also visually inspected for any signs of gas generation.

**Table 3.6-8: List of mixtures and results**

	Mixtures	Jars	300 mic	Score	Comments
Mixture 1	[Safari + Goltixgold +Tramat F+Betasana+GF-3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 2	[Goltixgold+Venzar+TramatF+Betasana+GF-3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 3	[Centium+Goltixgold+TramatF+Betasana+GF-3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 4	[Goltixgold+TramatF+Betasana+GF-3206+Matrigon+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 5	[Safari+DualGold+TramatF+Betasana+GF3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 6	[DualGold+Venzar+TramatF+Betasana+GF3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 7	[Centium+DualGold+TramatF+Betasana+GF3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 8	[DualGold+TramatF+Betasana+GF3206+Matrigon+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 9	[Goltixgold+TramatF+Betasana+GF-3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 10	[Centium+Goltixgold+Betasana+GF-3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 11	[Goltixgold+Betasana+GF-3206+Matrigon+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 12	[Goltixgold+Venzar+Betasana+GF3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 13	[Safari+Goltixgold+Betasana+GF3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 14	[Safari+Goltixgold+TramatF+GF3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 15	[Goltixgold+TramatF+Venzar+GF-3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 16	[Goltixgold+TramatF+GF-3206+Matrigon+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 17	[Centium+Goltixgold+TramatF+GF-3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 18	[Centium+DualGold+TramatF+GF-3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 19	[Centium+TramatF+Venzar+GF-3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 20	[Centium+Venzar+Betasana+GF-3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 21	[GoltixTitan+TramatF+Betasana+GF-3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 22	[Goltixgold+TramatF+Centurion+GF-3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 23	[Goltixgold+TramatF+Agil+GF-3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 24	[Goltixgold+TramatF+TargaSuper+GF-3206+Actirob B]	0	0	0	Compatible 100L/ha
Mixture 25	[Goltixgold+TramatF+FocusUltra+GF-3206+Actirob B]	0	0	0	Compatible 100L/ha

## Conclusion

F7B-39-30 using its surrogate GF-3206 was found to be physically and chemically compatible with 14 tank mix partners tested in 100 L/ha of Cipac D water. The tank mix mixtures are compatible from ASTM international dynamic test standard operating procedure and DP Corteva SOP test. The test outcomes show that F7B-39-30 is compatible with key partners for the European Union sugar beet market in 100L/ha and above water volumes.

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dRR point 3.6.5.3	Compatibility studies Physical and chemical compatibility studies
ZRMS conclusion:  GF-3206 (a similar formulation to F7B-39-30) was considered to be physically and chemically compatible with 14 tank mix partners tested in 100 L/ha of Cipac D water.	

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

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

Political / Administrative Zone	EPPO Zone	Country	Test Organization	GEP certified (Y/N)	Trial no.	Certibase Certificate link *
CENTRAL	EPOMAR	Belgium	STAPHYT, BE	Y	BE22F7B024-VVD10C	<a href="#">2801_GEP Staphyt Belgium 2021-2025.pdf (gepcertibase.eu)</a>
CENTRAL	EPOMAR	Belgium	STAPHYT, BE	Y	BE22F7B024-VVD11C	<a href="#">2801_GEP Staphyt Belgium 2021-2025.pdf (gepcertibase.eu)</a>
CENTRAL	EPOMAR	Belgium	STAPHYT, BE	Y	EA21F7B040H-DYE012	<a href="#">1d705715f2c</a>
SOUTHERN	EPOMAR	FRANCE	ANTEDIS	Y	FR22F7B022-YLA01C	<a href="#">1d7056ccb82</a>
SOUTHERN	EPOMAR	FRANCE	ANTEDIS	Y	FR22F7B022-YLA03C	<a href="#">1d7056ccb82</a>
SOUTHERN	EPOMAR	FRANCE	ANTEDIS	Y	FR22F7B024-YLA02C	<a href="#">1d7056ccb82</a>
CENTRAL	EPOMAR	GERMANY	Corteva Agriscience Germany GmbH	Y	DE22F7B022-WDI08	<u>Please refer to STR</u>
CENTRAL	EPOMAR	GERMANY	trial-tec GmbH	Y	DE22F7B022-NFR06C	<a href="#">1d70606e78b</a>
CENTRAL	EPOMAR	GERMANY	QUINTUS GmbH	Y	DE22F7B022-NFR07C	<a href="#">1d705715ed8</a>
CENTRAL	EPOMAR	GERMANY	QUINTUS GmbH	Y	DE22F7B022-NFR37C	<a href="#">1d705715ed8</a>
CENTRAL	EPOMAR	GERMANY	Trial-Tec GmbH	Y	DE22F7B023-NFR04C	<a href="#">1d70606e78b</a>
CENTRAL	EPOMAR	GERMANY	Corteva Agriscience Germany GmbH	Y	EA21F7B037H-DPE013	<u>Please refer to STR</u>
CENTRAL	EPOMAR	GERMANY	Trial-Tec GmbH	Y	EA21F7B037H-NFR004	<a href="#">1d70606e78b</a>
CENTRAL	EPOMAR	GERMANY	QUINTUS GmbH	Y	DE22F7B024-NFR04C	<a href="#">1d705715ed8</a>
CENTRAL	EPOMAR	GERMANY	AGRARTEST GmbH	Y	DE22F7B024-NFR05C	<a href="#">link</a>
CENTRAL	EPOMAR	GERMANY	QUINTUS GmbH	Y	DE22F7B025-NFR02C	<a href="#">1d705715ed8</a>
CENTRAL	EPOMAR	GERMANY	AGRARTEST GmbH	Y	EA21F7B040H-NFR002	<a href="#">link</a>
CENTRAL	EPOMAR	NETHERLANDS	Cultus Crop Research BV	Y	EA21F7B039H-DYE011	<a href="#">1d705715d9e</a>
CENTRAL	EPOMAR	NETHERLANDS	Cultus Crop Research BV	Y	NL22F7B022-VVD19C	<a href="#">1d705715d9e</a>
CENTRAL	EPOMAR	NETHERLANDS	Cultus Crop Research BV	Y	NL22F7B023-VVD09C	<a href="#">1d705715d9e</a>



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CENTRAL	EPOMAR	NETHERLANDS	Cultus Crop Research BV	Y	NL22F7B023-VVD10C	<a href="#">1d705715d9e</a>
CENTRAL	EPOMAR	NETHERLANDS	Cultus Crop Research BV	Y	NL22F7B025-VVD05C	<a href="#">1d705715d9e</a>
CENTRAL	EPOMAR	NETHERLANDS	Cultus Crop Research BV	Y	EA21F7B037H-DYE013	<a href="#">1d705715d9e</a>
CENTRAL	EPPONE	POLAND	Field Research Support	Y	PL22F7B022-BTA33C	<a href="#">Please refer to STR</a>
CENTRAL	EPPONE	POLAND	Corteva Agriscience Poland Sp. z o. o.	Y	PL22F7B022-BTA34	<a href="#">1d705715ecd</a>
CENTRAL	EPPONE	POLAND	Corteva Agriscience Poland Sp. z o. o.	Y	EA21F7B039H-DPR015	<a href="#">1d705715ecd</a>
CENTRAL	EPPONE	POLAND	Corteva Agriscience Poland Sp. z o. o.	Y	PL22F7B022-BTA35	<a href="#">1d705715ecd</a>
CENTRAL	EPPONE	POLAND	PerfectBAD	Y	PL22F7B022-BTA38C	<a href="#">1d70606e8c0</a>
CENTRAL	EPPONE	POLAND	Corteva Agriscience Poland Sp. z o. o.	Y	PL22F7B023-BTA17	<a href="#">1d705715ecd</a>
CENTRAL	EPPONE	POLAND	Corteva Agriscience Poland Sp. z o. o.	Y	PL22F7B023-BTA18	<a href="#">1d705715ecd</a>
CENTRAL	EPPONE	POLAND	SGS Polska Sp. z o.o.	Y	PL22F7B023-BTA19C	<a href="#">1d70606e57d</a>
CENTRAL	EPPONE	POLAND	Corteva Agriscience Poland Sp. z o. o.	Y	EA21F7B037H-DPR017	<a href="#">1d705715ecd</a>
CENTRAL	EPPONE	POLAND	Corteva Agriscience Poland Sp. z o. o.	Y	EA21F7B038H-DPR018	<a href="#">1d705715ecd</a>
CENTRAL	EPPONE	POLAND	Corteva Agriscience Poland Sp. z o. o.	Y	EA21F7B040H-DPR016	<a href="#">1d705715ecd</a>
CENTRAL	EPPONE	POLAND	Field Research Support	Y	PL22F7B024-BTA20C	<a href="#">1d705715c09</a>
CENTRAL	EPPONE	POLAND	Corteva Agriscience Poland Sp. z o. o.	Y	PL22F7B024-BTA21	<a href="#">1d705715ecd</a>
CENTRAL	EPPONE	POLAND	Corteva Agriscience Poland Sp. z o. o.	Y	PL22F7B025-BTA09	<a href="#">1d705715ecd</a>
CENTRAL	EPPOSE	HUNGARY	AgroPass Hungaria Kft	Y	HU22F7B022-JPA24C	<a href="#">1d705715dae</a>
CENTRAL	EPPOSE	HUNGARY	NOVENYPATHYKA KFT, HUNGARY	Y	HU22F7B022-JPA26C	<a href="#">1d70606e970</a>
CENTRAL	EPPOSE	HUNGARY	AgroPass Hungaria Kft	Y	HU22F7B023-JPA13C	<a href="#">1d705715dae</a>
CENTRAL	EPPOSE	HUNGARY	DOW AGROSCIENCES HUNGARY KFT., HU	Y	EA21F7B038H-DHP024	<a href="#">1d705716086</a>
CENTRAL	EPPOSE	HUNGARY	AgroPass Hungaria Kft	Y	EA21F7B040H-DHP023	<a href="#">1d705715dae</a>
CENTRAL	EPPOSE	HUNGARY	CPR Europe Kft.	Y	HU22F7B024-JPA14C	<a href="#">1d70571600d</a>
CENTRAL	EPPOSE	HUNGARY	CPR Europe Kft.	Y	HU22F7B024-JPA15C	<a href="#">1d70571600d</a>

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CENTRAL	EPPOSE	HUNGARY	CPR Europe Kft.	Y	HU22F7B024-JPA16C	<a href="#">1d70571600d</a>
CENTRAL	EPPOSE	HUNGARY	DOW AGROSCIENCES HUNGARY KFT., HU	Y	HU22F7B025-JPA07	<a href="#">1d705716086</a>
CENTRAL	EPPOSE	HUNGARY	DOW AGROSCIENCES HUNGARY KFT., HU	Y	HU22F7B060-JPA01	<a href="#">1d705716086</a>
SOUTHERN	EPPOMED	Spain	Agroensayos, Ensayos y Tecnicas Agricolas S.L	Y	ES22F7B047-MCA01C	<a href="#">1d705715faa</a>
SOUTHERN	EPPOMED	Spain	Agroensayos, Ensayos y Tecnicas Agricolas S.L	Y	ES22F7B047-MCA04C	<a href="#">1d705715faa</a>
N/A	EPOMAR	UNITED KINGDOM	Armstrong Agriculture Ltd	Y	GB22F7B022H-EAP15C	<a href="#">1d70606e8d6</a>
N/A	EPOMAR	UNITED KINGDOM	FieldArm Ltd	Y	GB22F7B022H-EAP16C	<a href="#">1d70606e898</a>
N/A	EPOMAR	UNITED KINGDOM	Armstrong Agriculture Ltd	Y	EA21F7B038H-DHI031	<a href="#">1d705715f96</a>
N/A	EPOMAR	UNITED KINGDOM	Armstrong Agriculture Ltd	Y	EA21F7B040H-DHI030	<a href="#">1d705715f96</a>
N/A	EPOMAR	UNITED KINGDOM	Armstrong Agriculture Ltd	Y	GB22F7B024-EAP08C	<a href="#">1d705715f96</a>
N/A	EPOMAR	UNITED KINGDOM	Armstrong Agriculture Ltd	Y	GB22F7B024-EAP09C	<a href="#">1d705715f96</a>
N/A	EPOMAR	UNITED KINGDOM	Green Bank Agriculture	Y	GB22F7B025-EAP04C	<a href="#">1d70606e9de</a>
N/A	EPOMAR	UNITED KINGDOM	Armstrong Agriculture Ltd	Y	EA21F7B038H-DHI031	<a href="#">1d705715f96</a>
CENTRAL	EPOMAR	CZECH REPUBLIC	CZU Prague	Y	CZ22F7B023-JMB11C	<a href="#">1d70606e895</a>
CENTRAL	EPOMAR	CZECH REPUBLIC	SynTech Research Czech S.R.O	Y	CZ22F7B023-JMB12C	<a href="#">1d705715fec</a>
CENTRAL	EPOMAR	CZECH REPUBLIC	ZKUSEBNI STANICE NECHANICE, S.R.O. CZ	Y	CZ22F7B024-JMB13C	<a href="#">1d70606e92c</a>
CENTRAL	EPOMAR	CZECH REPUBLIC	ZKUSEBNI STANICE NECHANICE, S.R.O. CZ	Y	CZ22F7B025-JMB06C	<a href="#">1d70606e92c</a>
CENTRAL	EPOMAR	CZECH REPUBLIC	ZKUSEBNI STANICE NECHANICE, S.R.O. CZ	Y	EA21F7B038H-TQS031	<a href="#">1d705715fec</a>
CENTRAL	EPOMAR	CZECH REPUBLIC	ZKUSEBNI STANICE NECHANICE, S.R.O. CZ	Y	EA21F7B040H-TQS027	<a href="#">1d705715fec</a>
CENTRAL	EPOMAR	CZECH REPUBLIC	CESKA ZEMEDELSKA UNIVERZITA V PRAZE, CZ	Y	EA21F7B039H-TQS026	<a href="#">1d70606e895</a>
CENTRAL	EPOMAR	CZECH REPUBLIC	CESKA ZEMEDELSKA UNIVERZITA V PRAZE, CZ	Y	CZ22F7B022-JMB21C	<a href="#">1d70606e895</a>
CENTRAL	EPOMAR	CZECH REPUBLIC	ZKUSEBNI STANICE NECHANICE, S.R.O. CZ	Y	CZ22F7B022-JMB22C	<a href="#">1d705715fec</a>

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CENTRAL	EPOMAR	CZECH REPUBLIC	SynTech Research Czech S.R.O	Y	CZ22F7B022- JMB23C	<a href="#">1d705715fec</a>
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## Appendix 1 Lists of data considered in support of the evaluation. Internal trials (not published)

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 6.2	Michaela Kolářová	2021	Efficacy (solo applications) of GF-3206 against BLW in sugarbeet compared to reference products across EU 2021. EA21F7B039H-TQS026 CESKA ZEMEDELSKA UNIVERZITA V PRAZE, CZ GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Michaela Kolářová	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet (BEAVA) in Europe CZ22F7B022-JMB21C CESKA ZEMEDELSKA UNIVERZITA V PRAZE, CZ GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Petr Horník	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet (BEAVA) in Europe CZ22F7B022-JMB22C ZKUSEBNI STANICE NECHANICE, S.R.O. CZ GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Alexandre Pey	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet CZ22F7B022-JMB23C SynTech Research Czech S.R.O GEP	N	Corteva Agriscience

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Unpublished		
KCP 6.2	Dietrichs, Wolfgang	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet DE22F7B022-WDI08 Corteva Agriscience GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Johannes Rohr	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet DE22F7B022-NFR06C Trial-Tec GmbH GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Ulrich Ströbele	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet DE22F7B022-NFR07C Quintus GmbH GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Ulrich Ströbele	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet DE22F7B022-NFR37C Quintus GmbH GEP Unpublished	N	Corteva Agriscience
KCP 6.2	E.J.M. Kohrman	2021	Efficacy (solo applications) of GF-3206 against BLW in sugarbeet compared to reference products across EU 2021.	N	Corteva Agriscience

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
			EA21F7B039H-DYE011 Cultus Crop Research BV GEP Unpublished		
KCP 6.2	E.J.M. Kehrman	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet NL22F7B022-VVD19C Cultus Crop Research BV GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Piotr Umiński	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet PL22F7B022-BTA33C Source Field Research Support GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Tomczak, Bartosz	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet PL22F7B022-BTA34 Corteva Agriscience GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Tomczak, Bartosz	2021	Efficacy (solo applications) of GF-3206 against BLW in sugarbeet compared to reference products across EU 2021. EA21F7B039H-DPR015 Corteva Agriscience GEP	N	Corteva Agriscience

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Unpublished		
KCP 6.2	Tomczak, Bartosz	2022	GF-3206 applied solo on the control of broadleaf weeds in sugarbeet PL22F7B022-BTA35 Corteva Agriscience GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Justyna Rezmerska- Piętka	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet PL22F7B022-BTA38C PerfectBAD GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Kukorelli, Gábor	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet HU22F7B022-JPA24C AGROPASS Hungária Kft. GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Labant-Hoffmann Éva	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet HU22F7B022-JPA26C NOVENYPATHYKA KFT, HUNGARY GEP Unpublished	N	Corteva Agriscience
KCP 6.2	LEFRANC Mélanie	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet FR22F7B022-YLA01C	N	Corteva Agriscience

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			ANTEDIS SAS GEP Published/Unpublished		
KCP 6.2	LEFRANC Mélanie	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet FR22F7B022-YLA03C ANTEDIS SAS GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Alexander Armstrong	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet GB22F7B022H-EAP15C Armstrong Agriculture Ltd GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Richard Good	2022	Efficacy of GF-3206 applied solo on the control of broadleaf weeds in sugarbeet GB22F7B022H-EAP16C FieldArm Ltd GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Johannes Rohr	2022	Efficacy of GF-3206 on the control of broadleaf weeds in Programs in sugarbeet (BEAVA) in Europe DE22F7B023-NFR04C Trial-Tec GmbH GEP Unpublished	N	Corteva Agriscience



Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 6.2	Kukorelli, Gábor	2022	Efficacy of GF-3206 on the control of broadleaf weeds in Programs in sugarbeet (BEAVA) in Europe HU22F7B023-JPA13C AGROPASS Hungária Kft. GEP Unpublished	N	Corteva Agriscience
KCP 6.2	E.J.M. Kehrman	2022	Efficacy of GF-3206 on the control of broadleaf weeds in Programs in sugarbeet (BEAVA) in Europe NL22F7B023-VVD09C Cultus Crop Research BV GEP Unpublished	N	Corteva Agriscience
KCP 6.2	E.J.M. Kehrman	2022	Efficacy of GF-3206 on the control of broadleaf weeds in Programs in sugarbeet (BEAVA) in Europe NL22F7B023-VVD10C Cultus Crop Research BV GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Tomczak, Bartosz	2022	Efficacy of GF-3206 on the control of broadleaf weeds in Programs in sugarbeet (BEAVA) in Europe PL22F7B023-BTA17 Corteva Agriscience GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Tomczak, Bartosz	2022	Efficacy of GF-3206 on the control of broadleaf weeds in Programs in sugarbeet (BEAVA) in Europe PL22F7B023-BTA18	N	Corteva Agriscience

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
			Corteva Agriscience GEP Unpublished		
KCP 6.2	Norbert Hamkało	2022	Efficacy of GF-3206 on the control of broadleaf weeds in Programs in sugarbeet (BEAVA) in Europe PL22F7B023-BTA19C SGS Polska SP.Z.O.O. GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Stephan, Andre	2021	Efficacy of GF-3206 (Rinskor) in programs against BLWs on sugar beet. Europe 2021 EA21F7B037H-DPE013 Corteva Agriscience GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Tomczak, Bartosz	2021	Efficacy of GF-3206 (Rinskor) in programs against BLWs on sugar beet. Europe 2021 EA21F7B037H-DPR017 Corteva Agriscience GEP Unpublished	N	Corteva Agriscience
KCP 6.2	E.J.M.Kohrman	2021	Efficacy of GF-3206 (Rinskor) in programs against BLWs on sugar beet. Europe 2021 EA21F7B037H-DYE013 Cultus Crop Research BV GEP Published/Unpublished	N	Corteva Agriscience

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 6.2	Johannes Rohr	2021	Efficacy of GF-3206 (Rinskor) in programs against BLWs on sugar beet. Europe 2021 EA21F7B037H-NFR004 Trial-Tec GmbH GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Michaela Kolářová	2022	Efficacy of GF-3206 (Rinskor) in programs against BLWs on sugar beet. Europe 2021 CZ22F7B023-JMB11C CZU Prague GEP Unpublished	N	Corteva Agriscience
KCP 6.2	Alexandre Pey	2022	Efficacy of GF-3206 (Rinskor) in programs against BLWs on sugar beet. Europe 2021 CZ22F7B023-JMB12C SynTech Research Czech S.R.Oe GEP Unpublished	N	Corteva Agriscience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	F Varret	2022	Evaluation of selectivity and yield of BEAVA following application of Rinskor (GF-3206) applied alone or in sequence - EU 2022 BE22F7B024-VVD10C STAPHYT, BEL GEP- Y Unpublished	N	Corteva AgriScience
	F Varret	2022	Evaluation of selectivity and yield of BEAVA following application of Rinskor (GF-3206) applied alone or in sequence - EU 2022	N	Corteva AgriScience

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 6.4.1 KCP 6.4.2 KCP 6.4.3			BE22F7B024-VVD11C STAPHYT, BEL GEP- Y Unpublished		
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Alexandre Pey	2022	Evaluation of selectivity and yield of BEAVA following application of Rinskor GF-3206) applied alone or in sequence - EU 2022 CZ22F7B024-JMB12C SynTech Research Czech S.R.O GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Petr Hornik	2022	Evaluation of selectivity and yield of BEAVA following application of Rinskor GF-3206) applied alone or in sequence - EU 2022 CZ22F7B024-JMB13C ZKUSEBNI STANICE NECHANICE, S.R.O. CZ GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Petr Hornik	2022	Evaluation of the selectivity of GF-3206 on sugar beet when applied in the most common post emergence herbicide programs in Europe 2022. CZ22F7B025-JMB06C ZKUSEBNI STANICE NECHANICE, S.R.O. CZ GEP- Y Unpublished	N	Corteva AgriScience

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 6.4.1 KCP 6.4.2 KCP 6.4.3	Ulrich Ströbele	2022	Evaluation of selectivity and yield of BEAVA following application of Rinskor GF-3206) applied alone or in sequence - EU 2022 DE22F7B024-NFR04C Quintus GmbH GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Susanne Wönckhaus	2022	Evaluation of selectivity and yield of BEAVA following application of Rinskor (GF-3206) applied alone or in sequence - EU 2022 DE22F7B024-NFR05C AGRARTEST GmbH GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Ulrich Ströbele	2022	Evaluation of the selectivity of GF-3206 on sugar beet when applied in the most common post emergence herbicide programs in Europe 2022. DE22F7B025-NFR02C Quintus GmbH GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Michael Armstrong	2021	Evaluation of the selectivity of GF-3206 on sugar beet when applied in the most common post emergence herbicide programs in Europe 2021 EA21F7B038H-DHI031 Armstrong Agriculture Ltd GEP- Y	N	Corteva AgriScience

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 6.4.1 KCP 6.4.2 KCP 6.4.3	Perenyi, Jozsef	2021	Evaluation of the selectivity of GF-3206 on sugar beet when applied in the most common post emergence herbicide programs in Europe 2021 EA21F7B038H-DHP024 Corteva AgriScience GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Tomczak, Bartosz	2021	Evaluation of the selectivity of GF-3206 on sugar beet when applied in the most common post emergence herbicide programs in Europe 2021 EA21F7B038H-DPR018 Corteva AgriScience GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Petr Hornik	2021	Evaluation of the selectivity of GF-3206 on sugar beet when applied in the most common post emergence herbicide programs in Europe 2021 EA21F7B038H-TQS031 ZKUSEBNI STANICE NECHANICE, S.R.O. CZ GEP- Y Unpublished	N	Corteva AgriScience
	Michael Armstrong	2021	Evaluation of selectivity and yield of BEAVA following application of Rinskor (GF-3206) applied alone or in sequence - EU 2021	N	Corteva AgriScience

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 6.4.1 KCP 6.4.2 KCP 6.4.3			EA21F7B040H-DHI030 Armstrong Agriculture Ltd GEP- Y Unpublished		
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Kukorelli, Gabor	2021	Evaluation of selectivity and yield of BEAVA following application of Rinskor (GF-3206) applied alone or in sequence - EU 2021 EA21F7B040H-DHP023 AGROPASS Hungária Kft. GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Tomczak, Bartosz	2021	Evaluation of selectivity and yield of BEAVA following application of Rinskor (GF-3206) applied alone or in sequence - EU 2021 EA21F7B040H-DPR016 Corteva AgriScience GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	F Varret	2021	Evaluation of selectivity and yield of BEAVA following application of Rinskor (GF-3206) applied alone or in sequence - EU 2021 EA21F7B040H-DYE012 STAPHYT, BEL GEP- Y Unpublished	N	Corteva AgriScience

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 6.4.1 KCP 6.4.2 KCP 6.4.3	Susanne Wönckhaus	2021	Evaluation of selectivity and yield of BEAVA following application of Rinskor (GF-3206) applied alone or in sequence - EU 2021 EA21F7B040H-NFR002 AGRARTEST, DE GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Petr Hornik	2021	Evaluation of selectivity and yield of BEAVA following application of Rinskor (GF-3206) applied alone or in sequence - EU 2021 EA21F7B040H-TQS027 ZKUSEBNI STANICE NECHANICE, S.R.O. CZ GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	LEFRANC Mélanie	2022	Evaluation of selectivity and yield of BEAVA following application of Rinskor GF-3206) applied alone or in sequence - EU 2022 FR22F7B024-YLA02C ANTEDIS SAS GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Alex Armstrong	2022	Evaluation of selectivity and yield of BEAVA following application of Rinskor GF-3206) applied alone or in sequence - EU 2022 GB22F7B024-EAP08C Armstrong Agriculture Ltd GEP- Y	N	Corteva AgriScience



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 6.4.1 KCP 6.4.2 KCP 6.4.3	Alex Armstrong	2022	Evaluation of selectivity and yield of BEAVA following application of Rinskor GF-3206) applied alone or in sequence - EU 2022 GB22F7B024-EAP09C Armstrong Agriculture Ltd GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Peter Martin	2022	Evaluation of the selectivity of GF-3206 on sugar beet when applied in the most common post emergence herbicide programs in Europe 2022. GB22F7B025-EAP04C Green Bank Agriculture GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Péter Iszak	2022	Evaluation of selectivity and yield of BEAVA following application of Rinskor GF-3206) applied alone or in sequence - EU 2022 HU22F7B024-JPA14C CPR Europe Kft. GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1	József Ritecz	2022	Evaluation of selectivity and yield of BEAVA following application of Rinskor GF-3206) applied alone or in sequence - EU 2022 HU22F7B024-JPA15C	N	Corteva AgriScience

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 6.4.2 KCP 6.4.3			CPR Europe Kft. GEP- Y Unpublished		
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Dr. László Hódi	2022	Evaluation of selectivity and yield of BEAVA following application of Rinskor GF-3206) applied alone or in sequence - EU 2022 HU22F7B024-JPA16C CPR Europe Kft. GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Perenyi, Jozsef	2022	Evaluation of the selectivity of GF-3206 on sugar beet when applied in the most common post emergence herbicide programs in Europe 2022. HU22F7B025-JPA07 Corteva AgriScience GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2	Perenyi, Jozsef	2022	Selectivity of GF-3206 in Conviso sugar beet, 2022 HU22F7B060-JPA01 Corteva AgriScience GEP- Y Unpublished	N	Corteva AgriScience
	E.J.M. Kohrman	2022	Evaluation of the selectivity of GF-3206 on sugar beet when applied in the most common post emergence herbicide programs in Europe 2022.	N	Corteva AgriScience

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 6.4.1 KCP 6.4.2 KCP 6.4.3			NL22F7B025-VVD05C Cultus Crop Research BV GEP- Y Unpublished		
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Piotr Umiński	2022	Evaluation of selectivity and yield of BEAVA following application of Rinskor GF-3206) applied alone or in sequence - EU 2022 PL22F7B024-BTA20C Field Research Support GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Tomczak, Bartosz	2022	Evaluation of selectivity and yield of BEAVA following application of Rinskor GF-3206) applied alone or in sequence - EU 2022 PL22F7B024-BTA21 Corteva AgriScience GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1 KCP 6.4.2 KCP 6.4.3	Tomczak, Bartosz	2022	Evaluation of the selectivity of GF-3206 on sugar beet when applied in the most common post emergence herbicide programs in Europe 2022. PL22F7B025-BTA09 Corteva AgriScience GEP- Y Unpublished	N	Corteva AgriScience

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 6.4.1	José Miguel Hernández Gómez	2022	Evaluation of GF-3206 on the control of weeds in Conviso sugarbeet varieties in comparison to Conviso One (foramsulfuron + thien carbazone) Agroensayos, Ensayos y Técnicas Agrícolas S.L. ES22F7B047-MCA01C GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.4.1	José Miguel Hernández Gómez	2022	Evaluation of GF-3206 on the control of weeds in Conviso sugarbeet varieties in comparison to Conviso One (foramsulfuron + thien carbazone) Agroensayos, Ensayos y Técnicas Agrícolas S.L. ES22F7B047-MCA04C GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.5.2	Bergfield A.	2015	GF-3206 (XDE-848 Benzyl, 25 g a.s./L, EC): Effects on the Seedling Emergence and Growth of Non-Target Terrestrial Plants (Tier II) Corteva Study ID 140396 GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.5.2	Lee B.	2015	GF-3206 (XDE-848 Benzyl, 25 g a.s./L, EC): Effects on the Vegetative Vigor of Non-Target Terrestrial Plants (Tier III) Corteva Study ID 140394 GEP- Y Unpublished	N	Corteva AgriScience
KCP 3.6.2	Jeehwan	2017	Rinskor Clean Up issue GEP- Y Unpublished	N	Corteva AgriScience

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KCP 3.6.2	Derek Hopkins & Cheryl Cathie		GF-3206 [Spray Tank Clean Out Evaluation]	N	Corteva AgriScienceta
KCP 3.6.5.2	JP Huby & J Callemeyn	2022	F7B-39-30 Rinskor 25g/L (GF-3206 as surrogate) EC Physical and Chemical Compatibility evaluation Corteva Study ID 230058 GEP- Y Unpublished	N	Corteva AgriScience
KCP 6.5.1	Sandra Siemoneit-Gast	2022	GF-3206 – Standardized Bioassay for the Determination of EC <sub>10</sub> – (NOEL) and EC <sub>50</sub> values for Herbicides and Selected Following Crops in Soil GEP- Y Unpublished	N	Corteva AgriScience
KCP	Veerle Van Damme	2023	F7B-39-30 – Biology Assessment Dossier Corteva Internal report GEP- Y Unpublished	N	Corteva AgriScience

