

# FINAL REGISTRATION REPORT

## Part B

### Section 3

#### Efficacy Data and Information

Concise summary

Product code: **TERBUT 500 SC**

Product name(s): **TERBUT 500 SC/  
TAZOPRYM 500 SC / CORNAO 500 SC**

Chemical active substance:

Terbuthylazine, 500 g/L

Central Zone

Zonal Rapporteur Member State: Poland

#### CORE ASSESSMENT

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

Submission date: 04/2020 updated 02/2021

MS Finalisation date: 19/02/2021 ; 03/2022 08/2022

## Version history

When	What
02/2021	Addition the information on trials submitted (3.1 Efficacy data)
February 2021	ZRMS evaluated the updated dRR by Applicant.
March 2022	Final Registration Report
August 2022	Confidential data were masked or excluded. Information about Commission Implementing Regulation was updated

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

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

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

Comments of zRMS:	Comments of zRMS are presented in commenting boxes at the end of each chapter. The text of dRR was generally not changed or rewritten (small changes in the document are marked by grey colour).
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#### **3.1 Summary and conclusions of zRMS on Section 3: Efficacy (KCP 6)**

##### **Abstract**

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

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use- No. <sup>(e)</sup>	Member state(s)	Crop and/ or situation  (crop destina- tion / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I	Pests or Group of pests con- trolled  (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (day s)	Remarks:  e.g. g safen- er/synergist per ha (f)
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applica- tions (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha  min / max		
Zonal uses (field or outdoor uses, certain types of protected crops)													
1	PL	Maize (post-emergence)	F	<b>Sensitive:</b> <i>Capsella bursa-pastoris</i> <i>Viola arvensis</i> <i>Chenopodium album</i> <i>Amaranthus retroflexus</i> <i>Galium aparine</i> <i>Tripleurospermum inodorum</i> <i>Veronica arvensis</i> <i>Fallopia convolvulus</i> <i>Solanum nigrum</i> , <del><i>Matricaria Chamomilla</i></del> <b>Medium sensitive:</b> <i>Cyanus segetum</i> <i>Stellaria media</i>	Fine spraying	BBCH 12-16	1	-	1 l/ha	500 g as/ha	200- 300 l/ha		Acceptable
				<b>Sensitive:</b> <i>Chenopodium album</i> <i>Viola arvensis</i> <i>Amaranthus retroflexus</i> <i>Galium aparine</i> <i>Tripleurospermum inodorum</i> <i>Capsella bursa-pastoris</i> <i>Veronica arvensis</i> <i>Fallopia convolvulus</i> <i>Solanum nigrum</i> <del><i>Matricaria Chamomilla</i></del> <i>Stellaria media</i> <b>Medium sensitive:</b> <i>Cyanus segetum</i>	Fine spraying	BBCH 12-16	1	-	1 l/ha + 0,2 (adiuwant)	500 g as/ha	200-300 l/ha		Acceptable
2	PL	Maize (pre-emergence)	F	<b>Sensitive:</b> <i>Chenopodium album</i>	Fine spraying	BBCH 00	1	-	1 l/ha	500 g as/ha	200-300 l/ha		Not acceptable

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use- No. <sup>(e)</sup>	Member state(s)	Crop and/ or situation  (crop destina- tion / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I	Pests or Group of pests con- trolled  (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (day s)	Remarks:  e.g. g safen- er/synergist per ha <sup>(f)</sup>
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applica- tions (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>Viola arvensis</i> <i>Amaranthus retroflexus</i> <i>Tripleurospermum inodorum</i> <i>Matricaria Chamomilla</i> Medium sensitive: <i>Stellaria media</i> <i>Cyanus segetum</i>									
				<b>Sensitive:</b> <i>Viola arvensis</i> <i>Amaranthus retroflexus</i> <i>Tripleurospermum inodorum</i> <i>Capsella bursa-pastoris</i> <i>Matricaria Chamomilla</i> <b>Medium sensitive:</b> <i>Fallopia convolvulus</i> <i>Geranium pusillum</i> <i>Galium aparine</i> <i>Cyanus segetum</i> <i>Stellaria media</i> <i>Chenopodium album</i>	Fine spraying	BBCH 00	1	-	1 l/ha + 0,2 l/ha (adiuwant)	500 g as/ha	200- 300 l/ha		Acceptable

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

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

Column 15: zRMS conclusion.

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

## 3.2 Efficacy data (KCP 6)

### Introduction

Applicant applies for authorization for the marketing of plant protection product TERBUT 500 SC pursuant to article 33 of the Regulation of the European Parliament and the Council in a number 1107/2009 of 21 October 2009.

DRR this core assessment. The application shall be in Poland. The applicant points out Poland as a country rapporteur Requested. The formulation of this product is suspension concentrate (SC).

This document describes the acceptable use conditions required for the registration of TERBUT 500 SC containing as a.i terbuthylazine (500 g/L).

Terbuthylazine was included into Annex I of Regulation 1107/2009 (repealing Council Directive 91/414/EEC) on 1st January 2012 (Commission Implementing Regulation 820/2011/EU of 16 August 2011).

Commission Implementing Regulation ~~(EU) 2019/291 of 19 February 2019 amending Implementing Regulation (EU) No 540/2011~~ Commission Implementing Regulation (EU) 2021/824 of 21 May 2021 amending Implementing Regulations (EU) No 540/2011 and (EU) No 820/2011 as regards the extension of the approval periods of the active substances 1-naphthylacetamide, 1-naphthylacetic acid, acrinathrin, azoxystrobin, fluazifop p, fluroxypyr, imazalil, kresoxim-methyl, oxyfluorfen, prochloraz, prohexadione, spiroxamine, tefluthrin and terbuthylazine.

Terbuthylazine belongs to the chemical group of triazine. It is used as a synthetic herbicide against a broad target spectrum of weeds. After uptake mainly via the roots and coleoptile it is rapidly translocated to the chloroplasts of the plant cell. Terbuthylazine is primarily interrupting the electron transport in photosystem II (Hill-reaction) and consequently an inhibitor of photosynthesis.

The Herbicide Resistance Action Committee (HRAC) grouped the mode of action of Terbuthylazine in the international HRAC group C1.

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

### Description of active substances

Terbuthylazine is not a new substance. Terbuthylazine is the ISO common name for N2-tert-butyl-6-chloro-N4-ethyl-1,3,5-triazine-2,4-diamine (IUPAC).

### Mode of action

This document provides information on the effectiveness of TERBUT 500 SC plant protection product containing terbuthylazine as active substance.

The primary mode of action of Terbuthylazine is the inhibition of photosynthesis in the photosystem II (Hill reaction). Terbuthylazine is a triazine selective systemic herbicide absorbed principally through the roots, but also through the foliage, with translocation acropetally in the xylem and accumulation in the apical meristems and leaves. Terbuthylazine binds to the plastoquinone-binding protein in photosystem II, inhibiting electron transport.

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

Active substance	Terbuthylazine
Concentration (Unit: g/kg or g/L...)	500 g/L
Chemical group	triazine

Active substance	Terbuthylazine
Mode of action	inhibition of photosynthesis in the photosystem II
Biological action	post-emergence and pre-emergence herbicide

### Description of the plant protection product

Terbut 500 SC is a suspension concentrate (SC) containing 500 g/L terbuthylazine.

### Description of the target pests

**Table 3.2-2: Glossary of pests mentioned in the dossier.**

EPPO code	Scientific name	Common name*
CAPBP	Capsella bursa-pastoris	Tasznik pospolity
VIOAR	Viola arvensis	Fiołek polny
CHEAL	Chenopodium album	Komosa biała
AMARE	Amaranthus retroflexus	Szarłat szorstki
GALAP	Galium aparine	Przytulia czepna
MATIN	Tripleurospermum inodorum	Maruna nadmorska
VERAR	Veronica arvensis	Przetacznik polny
POLCO	Fallopia convolvulus	Rdestówka powojowata
SOLNI	Solanum nigrum	Psianka czarna
MATCH	Matricaria Chamomilla	Rumianek polny
CENCY	Cyanus segetum	Chaber bławatek
STEME	Stellaria media	Gwiazdnica pospolita
GERPU	Geranium pusillum	Bodziszek drobny

\* optional

Weeds controlled by the plant protection product Terbut 500 SC are: CAPBP, VIOAR, CHEAL, AMARE, GALAP, MATIN, VERAR, POLCO, SOLNI, MATCH, CENCY, STEME and GERPU.

**Table 3.2-3: 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
Maize	PL	-	Capsella bursa-pastoris	-	PL
			Viola arvensis	-	PL
			Chenopodium album	PL	-
			Amaranthus retroflexus	PL	-
			Galium aparine	PL	-
			Tripleurospermum inodorum	-	PL



Crop and/or situation	Crop status		Pests or group of pests controlled	Pest status	
	Major	minor		Major	minor
			Veronica arvensis	-	PL
			Fallopia convolvulus	PL	-
			Solanum nigrum	PL	-
			Matricaria Chamomilla	-	PL
			Cyanus segetum	PL	-
			Stellaria media	-	PL
			Geranium pusillum	PL	-

### Compliance with the Uniform Principles

Assessment was performed according to EPPO guidelines.

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

**Table 3.2-4: Presentation of trials (efficacy trials, preliminary trials...)**

Crop(s) *	Target(s)*	Country	Years	Type of trial**	Number of trials (number of valid trials)	GEP, non-GEP, official***	Comments (any other relevant information)
					Central zone		
Maize (post-emergence)	CHEAL	Poland	2019	MED+E	12	GEP	The study was conducted in Poland under different climate and soil.
	VIOAR	Poland	2019	MED+E	12	GEP	
	AMARE	Poland	2019	MED+E	10	GEP	
	GALAP	Poland	2019	MED+E	7	GEP	
	MATIN	Poland	2019	MED+E	9	GEP	
	CAPBP	Poland	2019	MED+E	7	GEP	
	VERAR	Poland	2019	MED+E	6	GEP	
	POLCO	Poland	2019	MED+E	6	GEP	
	SOLNI	Poland	2019	MED+E	6	GEP	
	MATCH	Poland	2019	MED+E	3	GEP	
	STEME	Poland	2019	MED+E	2	GEP	
	CENCY	Poland	2019	MED+E	2	GEP	
<b>TOTAL</b>	-	-	2019	-	82	-	
Maize (pre-emergence)	CHEAL	PL,CZ,GER	2017,2019	MED+E	13	GEP	The study was conducted in Poland, Czech Republic and
	VIOAR	PL,GER	2017,2019	MED+E	6	GEP	
	AMARE	PL,GER	2017,2019	MED+E	5	GEP	
	GALAP	PL,CZ,GER	2017	MED+E	4	GEP	

Crop(s) *	Target(s)*	Country	Years	Type of trial**	Number of trials (number of valid trials)	GEP, non-GEP, official***	Comments (any other relevant information)
					Central zone		
	MATIN	PL,CZ,GER	2017,2019	MED+E	5	GEP	Germany under similar climat condition and different soil.
	CAPBP	PL,GER	2017	MED+E	3	GEP	
	POLCO	PL,GER	2017	MED+E	5	GEP	
	MATCH	PL	2019	MED+E	2	GEP	
	STEME	PL,GER	2017,2019	MED+E	4	GEP	
	CENCY	PL	2017,2019	MED+E	4	GEP	
	GERPU	PL,GER	2017	MED+E	3	GEP	
<b>TOTAL</b>	-	-	2017,2019	-	54	-	

\* 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.

To show efficacy of Terbut 500 SC applicant submitted trials on maize (post-emergence) which were conducted only in one year (2019). Submitted number of trials is enough to show high efficacy of Terbut 500 SC. Moreover study was conducted in Poland under different climate and soil conditions for different varieties of maize. Due to that situation is that the chemistry of the active ingredient being well understood.

The active substance of Terbut 500 SC- terbuthylazine is registered and have been commonly used in agricultural practice for many years. The effect of the active substance is well known and sufficient, large scale efficacy trials are available to evaluate the effectiveness of Terbut 500 SC. Therefore tests only from one year are acceptable.

**Table 3.2-5: Presentation of reference standards used in trials (efficacy trials, preliminary trials...)**

Crop(s)	Reference standard	Country(ies) where the product is registered <sup>(1)</sup>	Authorization number	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.			
Maize	Tezosar 500 SC	PL	Zezwolenie MRiRW nr R - 146/2018 z dnia 19.09.2018 r.	terbuthylazine	SC	500 g/l	1,0 l/ha	1,0 l/ha	
	Lumax 537,5 SE	PL	Zezwolenie MRiRW nr R - 70/2008 z dnia 24.10.2008 r. ostatnio zmienne decyzją MRiRW nr R - 616/2017d z dnia 01.12.2017 r.	mesotrione S-metolachlor terbuthylazine	SE	37,5 g/l 312,5 g/l 187,5 g/l	3,5-4,0 l/ha	3,5 l/ha	
	Gardo gold 500 SC	PL	Zezwolenie MRiRW nr R - 117/2018 z dnia 21.06.20	Terbuthylazine S-metolachlor	SC	187,5 g/l 312,5 g/l	4 l/ha	4 l/ha	

Crop(s)	Reference standard	Country(ies) where the product is registered <sup>(1)</sup>	Authorization number	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.			
			18 r. Ostatnio zmienne decyzją MRiRW nr R-611/2019d z dnia 27.08.2019 r.						

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

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

(3) dose(s) / dose range authorized on that use in the country.

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

Comments of zRMS:	<p>This document summarizes the information related to the efficacy of the plant protection product – Terbut 500 SC / Tazoprym 500 SC / Cornao 500 SC (product code: Terbut 500 SC).</p> <p>Terbut 500 SC is a suspension concentrate (SC) formulation containing 500 g/l terbuthylazine. For now, this mentioned active substances is on the list of approved active substances. What is important, a large-scale efficacy trials are available to evaluate the effectiveness of products containing this active compound (terbuthylazine).</p> <p>All necessary information's about tested plant protection products, active substances, studied pests, reference products, etc. are correctly presented in this drr by Applicant. In Poland 22 plant protection products terbuthylazine are already registered.</p> <p>The product – Terbut 500 SC containing terbuthylazine by Synthos Agro Sp. z o.o. has not been previously evaluated in any country according to Uniform Principles.</p> <p>Poland is a ZRMs.</p>
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### 3.2.1 Preliminary tests (KCP 6.1)

Preliminary studies have not been conducted because the active substance (terbuthylazine) is known and has long been used in the protection of plants. The effect of the active substances is well known and sufficient large scale efficacy trials are available to evaluate the effectiveness of TERBUT 500 SC. Therefore preliminary tests are not described and not required.

Comments of zRMS:	The active substances of Terbut 500 SC – terbuthylazine is registered and have been commonly used in agricultural practice for many years. Large scale efficacy trials are available to evaluate the effectiveness of products containing this active compound, so preliminary tests were not necessary in this case in our opinion.
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### 3.2.2 Minimum effective dose tests (KCP 6.2)

No results of preliminary screening tests are here. The efficacy of reduced rates of TERBUT 500 SC for weed control (CAPBP, VIOAR, CHEAL, AMARE, GALAP, MATIN, VERAR, POLCO, SOLNI, MATCH, CENCY, STEME and GERPU) in maize (pre-emergence and post-emergence) was investigated in field tests carried out in 2017 and 2019. In the appropriate researches of efficacy were tested several doses and to register was chosen the lowest effective. All researches were conducted according to EPPO standard PP 1/225 'Minimum effective dose'.

### **Maize (post-emergence)/CAPBP**

7 field trials were established in order to determine the minimum effective dose for the control of the maize (post-emergence)/CAPBP. TERBUT 500 SC was tested at 0,8 l/ha to 1,2 l/ha and 1 l/ha of TERBUT 500 SC with 0,2 l/ha Hydron (adjuvant) in maize for the control of CAPBP. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 'Minimum effective dose'.

### **Maize (post-emergence)/VIOAR**

12 field trials were established in order to determine the minimum effective dose for the control of the maize (post-emergence)/VIOAR. TERBUT 500 SC was tested at 0,8 l/ha to 1,2 l/ha and 1 l/ha of TERBUT 500 SC with 0,2 l/ha Hydron (adjuvant) in maize for the control of VIOAR. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 'Minimum effective dose'.

### **Maize (post-emergence)/CHEAL**

12 field trials were established in order to determine the minimum effective dose for the control of the maize (post-emergence)/CHEAL. TERBUT 500 SC was tested at 0,8 l/ha to 1,2 l/ha and 1 l/ha of TERBUT 500 SC with 0,2 l/ha Hydron (adjuvant) in maize for the control of CHEAL. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 'Minimum effective dose'.

### **Maize (post-emergence)/AMARE**

10 field trials were established in order to determine the minimum effective dose for the control of the maize (post-emergence)/AMARE. TERBUT 500 SC was tested at 0,8 l/ha to 1,2 l/ha and 1 l/ha of TERBUT 500 SC with 0,2 l/ha Hydron (adjuvant) in maize for the control of AMARE. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 'Minimum effective dose'.

### **Maize (post-emergence)/GALAP**

7 field trials were established in order to determine the minimum effective dose for the control of the maize (post-emergence)/GALAP. TERBUT 500 SC was tested at 0,8 l/ha to 1,2 l/ha and 1 l/ha of TERBUT 500 SC with 0,2 l/ha Hydron (adjuvant) in maize for the control of GALAP. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 'Minimum effective dose'.

### **Maize (post-emergence)/MATIN**

9 field trials were established in order to determine the minimum effective dose for the control of the maize (post-emergence)/MATIN. TERBUT 500 SC was tested at 0,8 l/ha to 1,2 l/ha and 1 l/ha of TERBUT 500 SC with 0,2 l/ha Hydron (adjuvant) in maize for the control of MATIN. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 'Minimum effective dose'.

### **Maize (post-emergence)/VERAR**

6 field trials were established in order to determine the minimum effective dose for the control of the maize (post-emergence)/VERAR. TERBUT 500 SC was tested at 0,8 l/ha to 1,2 l/ha and 1 l/ha of TERBUT 500 SC with 0,2 l/ha Hydron (adjuvant) in maize for the control of VERAR. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 'Minimum effective dose'.

### **Maize (post-emergence)/POLCO**

6 field trials were established in order to determine the minimum effective dose for the control of the maize (post-emergence)/POLCO. TERBUT 500 SC was tested at 0,8 l/ha to 1,2 l/ha and 1 l/ha of TERBUT 500 SC with 0,2 l/ha **Hydron** (adjuvant) in maize for the control of POLCO. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

### **Maize (post-emergence)/SOLNI**

6 field trials were established in order to determine the minimum effective dose for the control of the maize (post-emergence)/SOLNI. TERBUT 500 SC was tested at 0,8 l/ha to 1,2 l/ha and 1 l/ha of TERBUT 500 SC with 0,2 l/ha **Hydron** (adjuvant) in maize for the control of SOLNI. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

### **Maize (post-emergence)/MATCH**

3 field trials were established in order to determine the minimum effective dose for the control of the maize (post-emergence)/MATCH. TERBUT 500 SC was tested at 0,8 l/ha to 1,2 l/ha and 1 l/ha of TERBUT 500 SC with 0,2 l/ha **Hydron** (adjuvant) in maize for the control of MATCH. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

### **Maize (post-emergence)/CENCY**

2 field trials were established in order to determine the minimum effective dose for the control of the maize (post-emergence)/CENCY. TERBUT 500 SC was tested at 0,8 l/ha to 1,2 l/ha and 1 l/ha of TERBUT 500 SC with 0,2 l/ha **Hydron** (adjuvant) in maize for the control of CENCY. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

### **Maize (post-emergence)/STEME**

2 field trials were established in order to determine the minimum effective dose for the control of the maize (post-emergence)/STEME. TERBUT 500 SC was tested at 0,8 l/ha to 1,2 l/ha and 1 l/ha of TERBUT 500 SC with 0,2 l/ha **Hydron** (adjuvant) in maize for the control of STEME. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

### **Maize (pre-emergence)/CHEAL**

13 field trials were established in order to determine the minimum effective dose for the control of the maize (pre-emergence)/CHEAL. TERBUT 500 SC was tested at 0,8 l/ha with 0,2 l/ha **Hydron** (adjuvant) to 1,5 l/ha with 0,2 l/ha **Hydron** (adjuvant) and 1 l/ha of TERBUT 500 SC in maize for the control of CHEAL. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

### **Maize (pre-emergence)/VIOAR**

6 field trials were established in order to determine the minimum effective dose for the control of the maize (pre-emergence)/VIOAR. TERBUT 500 SC was tested at 0,8 l/ha with 0,2 l/ha **Hydron** (adjuvant) to 1,5 l/ha with 0,2 l/ha **Hydron** (adjuvant) and 1 l/ha of TERBUT 500 SC in maize for the control of VIOAR. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

#### **Maize (pre-emergence)/AMARE**

5 field trials were established in order to determine the minimum effective dose for the control of the maize (pre-emergence)/AMARE. TERBUT 500 SC was tested at 0,8 l/ha with 0,2 l/ ha **Hydron** (adjuvant) to 1,5 l/ha with 0,2 l/ ha **Hydron** (adjuvant) and 1 l/ha of TERBUT 500 SC in maize for the control of AMARE. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

#### **Maize (pre-emergence)/GALAP**

4 field trials were established in order to determine the minimum effective dose for the control of the maize (pre-emergence)/GALAP. TERBUT 500 SC was tested at 0,8 l/ha with 0,2 l/ ha **Hydron** (adjuvant) to 1,5 l/ha with 0,2 l/ ha **Hydron** (adjuvant) in maize for the control of GALAP. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

#### **Maize (pre-emergence)/MATIN**

5 field trials were established in order to determine the minimum effective dose for the control of the maize (pre-emergence)/MATIN. TERBUT 500 SC was tested at 0,8 l/ha with 0,2 l/ ha **Hydron** (adjuvant) to 1,5 l/ha with 0,2 l/ ha **Hydron** (adjuvant) and 1 l/ha of TERBUT 500 SC in maize for the control of MATIN. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

#### **Maize (pre-emergence)/CAPBP**

3 field trials were established in order to determine the minimum effective dose for the control of the maize (pre-emergence)/CAPBP. TERBUT 500 SC was tested at 0,8 l/ha with 0,2 l/ ha **Hydron** (adjuvant) to 1,5 l/ha with 0,2 l/ ha **Hydron** (adjuvant) in maize for the control of CAPBP. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

#### **Maize (pre-emergence)/POLCO**

5 field trials were established in order to determine the minimum effective dose for the control of the maize (pre-emergence)/POLCO. TERBUT 500 SC was tested at 0,8 l/ha with 0,2 l/ ha **Hydron** (adjuvant) to 1,5 l/ha with 0,2 l/ ha **Hydron** (adjuvant) in maize for the control of POLCO. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

#### **Maize (pre-emergence)/MATCH**

2 field trials were established in order to determine the minimum effective dose for the control of the maize (pre-emergence)/MATCH. TERBUT 500 SC was tested at 0,8 l/ha with 0,2 l/ ha **Hydron** (adjuvant) to 1,5 l/ha with 0,2 l/ ha **Hydron** (adjuvant) and 1 l/ha of TERBUT 500 SC in maize for the control of MATCH. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

#### **Maize (pre-emergence)/STEME**

4 field trials were established in order to determine the minimum effective dose for the control of the maize (pre-emergence)/STEME. TERBUT 500 SC was tested at 0,8 l/ha with 0,2 l/ ha **Hydron** (adjuvant) to 1,5 l/ha with 0,2 l/ ha **Hydron** (adjuvant) and 1 l/ha of TERBUT 500 SC in maize for the control of STEME. The rates reflect the proposed label rate and ~~60% and 80%~~ and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.



### Maize (pre-emergence)/CENCY

4 field trials were established in order to determine the minimum effective dose for the control of the maize (pre-emergence)/CENCY. TERBUT 500 SC was tested at 0,8 l/ha with 0,2 l/ ha Hydron (adjuvant) to 1,5 l/ha with 0,2 l/ ha Hydron (adjuvant) and 1 l/ha of TERBUT 500 SC in maize for the control of CENCY. The rates reflect the proposed label rate and 60% and 80% and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 'Minimum effective dose'.

### Maize (pre-emergence)/GERPU

3 field trials were established in order to determine the minimum effective dose for the control of the maize (pre-emergence)/GERPU. TERBUT 500 SC was tested at 0,8 l/ha with 0,2 l/ ha Hydron (adjuvant) to 1,5 l/ha with 0,2 l/ ha Hydron (adjuvant) in maize for the control of GERPU. The rates reflect the proposed label rate and 60% and 80% and 120% of the full recommended rate of TERBUT 500 SC, in accordance with the EPPO standard PP 1/225 'Minimum effective dose'.

Comments of zRMS:	<p>The applicant has proposed doses of Terbut 500 SC / Tazoprym 500 SC / Cornao 500 SC (product code: Terbut 500 SC) that reflect those of currently-authorised terbuthylazine products across the EU. In order to provide information to establish the minimum effective dose, some of the trials conducted to demonstrate efficacy should include at least two lower dose(s) than recommended dose. In the appropriate researches of efficacy were tested differ doses and to register was chosen the lowest effective, which is in accordance to EPPO 1/225 (2).</p> <p>During field tests Applicant used different doses of herbicide Terbut 500 SC / Tazoprym 500 SC / Cornao 500 SC (product code: Terbut 500 SC) containing terbuthylazine (500 g/l). So, in the appropriate researches of efficacy were tested differ doses and to register was chosen the lowest effective, which is in accordance to EPPO 1/225 (2).</p> <p><u>Terbut 500 SC was studied at following doses:</u></p> <ul style="list-style-type: none"> <li>• pre-emergence use (BBCH 00-00): solo – 1,0 l/ha Terbut 500 SC (N dose) and with adjuvant: 0,8 l/ha Terbut 500 SC+0,2 l/ha adjuvant (0,8N); 1,0 l/ha Terbut 500 SC + 0,2 l/ha adjuvant (N); 1,2 l/ha Terbut 500 SC +0,2 l/ha adjuvant (1,2N) and 1,5 l/ha Terbut 500 SC + 0,2 l/ha adjuvant (1,5N).</li> <li>• post-emergence use (BBCH 12-16): solo at three different doses: 0,8 l/ha (0,8N); 1,0 l/ha (N); 1,2 l/ha (1,2N) and with adjuvant at one dose: 1,0 l/ha Terbut 500 SC + 0,2 l/ha adjuvant (N).</li> </ul> <p>Based on results achieved on studied weeds in the 26 maize trials, it can be concluded that to consistently control frequently occurring weeds in maize, Terbut 500 SC / Tazoprym 500 SC / Cornao 500 SC should be applied:</p> <ul style="list-style-type: none"> <li>• early post-emergence (BBCH 12-16) solo at dose 1,0 l/ha and with adjuvant at dose 1,0 l/ha Terbut 500 SC+0,2 l/ha adjuvant.</li> <li>• pre-emergence (BBCH 00-00) – solo at dose 1,0 l/ha and with adjuvant at dose 1,0 l/ha Terbut 500 SC + 0,2 l/ha adjuvant.</li> </ul>
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### 3.2.3 Efficacy tests (KCP 6.2)

The applicant submitted 26 efficacy trials (in total) showing the results in research into product efficacy carried out in 2017 and 2019 in maize (post-emergence and pre-emergence).

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

Trials were randomized block design and conducted in different regions in Poland, Germany and Czech Republic. All these countries are comparable in terms of climate conditions.

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

PP 1/152(4) Design and analysis of efficacy evaluation trials  
 PP 1/181(4) Conduct and reporting of efficacy evaluation trials including good experimental practice  
 PP 1/135(4) Phytotoxicity assessment  
 PP 1/225(2) Minimum effective dose  
 PP 1/50(3) Weeds in maize

**Table 3.2-6: Details on trial methodology**

TRIAL: SGS/2017/145/PL01

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	15 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	SY Symbolic
	Sowing period	16.05.2017
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 00, BBCH 12-14
	Timing Pest stage at application (1)	CHEAL (BBCH 12-14) STEME (BBCH 12-13) GALAP (BBCH 12-14) AMARE (BBCH 11-14) GERPU (BBCH 12-14)
	Number of applications Intervals between applications	1
	Spray volumes	300 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	8 DAT, 14 DAT, 21 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Sandy clay, pH 6,1
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Wąsy/ prov. mazowieckie (Poland)

The tested product showed no problems when preparing the spray solution and during the application.  
 From the data collected in this trial it is possible to give a reply to the key questions:  
 Terbut 500 SC was effective in 15,0-100,0% against CHEAL; 86,3-100% ANARE; 99,0-100,0% STEME; 97,0-100,0% GALAP and 94,8-100,0% against GERPU (last assessment).  
 No differences observed between test product and reference against CHEAL, ANARE, STEME after application B and GALAP, GERAPU after application A and B.  
 No phytotoxicity symptoms recorded.  
 No effects on non-target organisms were observed during this trial.



TRIAL: SGS/2017/145/PL02

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	15 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	Falcone
	Sowing period	11.05.2017
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 00, BBCH 11-12
	Timing Pest stage at application (1)	CHEAL (BBCH 12-14) POLPE (BBCH 11-14) VIOAR (BBCH 12-13) POLCO (BBCH 12-14)
	Number of applications Intervals between applications	1
	Spray volumes	300 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	12 DAT, 16 DAT, 26 DAT, 40 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Clay, pH 6,2
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Piskorzówek/ prov. dolnośląskie (Poland)

The tested product showed no problems when preparing the spray solution and during the application.

From the data collected in this trial it is possible to give a reply to the key questions:

Terbut 500 SC was effective in 27,5-99,0-100,0% against CHEAL; 85,0-100% VIOAR; 0,0-96,3% POLPE; 0,0-100,0% against POLCO (last assessment).

No differences observed between test product and reference against CHEAL and VIOAR after application B.

No phytotoxicity symptoms recorded.

No effects on non-target organisms were observed during this trial.

TRIAL: SGS/2017/145/PL03

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	15 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize

<b>Application</b>	Varieties per crop	Konkurent
	Sowing period	06.05.2017
	Crop stage (BBCH)* at application	BBCH 00, BBCH 13-14
	Timing Pest stage at application (1)	ANTAR (BBCH 19-31) CENCY (BBCH 19-31) CHEAL (BBCH 19-31) GASPA (BBCH 19-29) CAPBP (BBCH 19-31) ECHCG (BBCH 22-25) POLCO (BBCH 29-31)
	Number of applications Intervals between applications	1
<b>Assessment</b>	Spray volumes	200 l/ha
	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
<b>Other relevant information</b>	Assessment dates	20 DAT, 27 DAT, 41 DAT, 55 DAT
	e.g. Soil type, pH (in case of soil active substance ...)	Loamy sand, pH 4,3
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Dąbrowka / prov. kujawsko-pomorskie (Poland)

The tested product showed no problems when preparing the spray solution and during the application.  
 From the data collected in this trial it is possible to give a reply to the key questions:  
 Terbut 500 SC was effective in 0,0-100,0% against ANTAR; 0,0-100% CENCY; 100,0% against: CHEAL, GASPA, CAPBP, POLCO and 0,0-30,0% against ECHCG.  
 No differences observed between test product and reference against CHEAL, GASPA, CAPBP, POLCO after application A and B.  
 No phytotoxicity symptoms recorded.  
 No effects on non-target organisms were observed during this trial.

TRIAL:SGS/2017/145/PL04

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	15 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	Kosmal
	Sowing period	26.04.2017
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 00, BBCH 14-15
	Timing	CHEAL (BBCH 19-22)

	Pest stage at application (1)	POLCO (BBCH 13-19) VIOAR (BBCH 12-14) ECHCG (BBCH 21-23) MATIN (BBCH 14-15) CENCY (BBCH 13-15) SETPF (BBCH 21-23)
	Number of applications Intervals between applications	1
	Spray volumes	200 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	24 DAT, 36 DAT, 47 DAT, 58 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Sandy slit, pH 6,9
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Białozewin / prov. kujawsko-pomorskie (Poland)

The tested product showed no problems when preparing the spray solution and during the application.

From the data collected in this trial it is possible to give a reply to the key questions:

Terbut 500 SC was effective in 23,8-90,8% against POLCO; 2,5-89,8% CENCY; 92,3-99,0% CHEAL; 12,5-99,0 VIOAR; 0,0-94,5% MATCH; 0,0-99,0% ECHCG and 2.5-11,3% against SETPF.

No differences observed between test product (all rates) and reference against VIOAR after application A and B.

No phytotoxicity symptoms recorded.

No effects on non-target organisms were observed during this trial.

TRIAL:SGS/2017/145/PL05

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	18 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	San
	Sowing period	02.05.2017
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 00, BBCH 13-15
	Timing Pest stage at application (1)	CHEAL (BBCH 12-13) VIOAR (BBCH 13-14) POLCO (BBCH 13-14) CENCY (BBCH 13-14) LYCAR (BBCH 12-13)
	Number of applications	1

	Intervals between applications	
	Spray volumes	300 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 22 DAT, 36 DAT, 49 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Sand loam, pH 6,7
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Toboła / prov. kujawsko-pomorskie (Poland)

The tested product showed no problems when preparing the spray solution and during the application.

From the data collected in this trial it is possible to give a reply to the key questions:

Terbut 500 SC was effective in 15,0-100,0% against POLCO; 86,3-100,0% VIOAR; 99,0-100,0% CHEAL, 95,8-100,0% CENCY, 93,5-100,0% against LYCAR.

No differences observed between test product and reference against CENCY; LYCAR after application A and B; POLCO; VIOAR and CHEAL after application B.

No phytotoxicity symptoms recorded.

No effects on non-target organisms were observed during this trial.

TRIAL:SGS/2017/145/PL06

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	15 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	Prollog
	Sowing period	16.05.2017
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 00, BBCH 11-13
	Timing Pest stage at application (1)	CHEAL (BBCH 10-14) VIOAR (BBCH 10-14) GALAP (BBCH 12-14) MATIN (BBCH 10-12) AMARE (BBCH 10-14) GERPU (BBCH 10-14)
	Number of applications Intervals between applications	1
	Spray volumes	200 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	7 DAT, 11 DAT, 25 DAT, 36 DAT

<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Sandy clay, pH 6,0
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Pruszków / prov. mazowieckie (Poland)

The tested product showed no problems when preparing the spray solution and during the application.

From the data collected in this trial it is possible to give a reply to the key questions:

Terbut 500 SC was effective in 0,0-100,0% against CHEAL; 70,0-100,0% VIOAR; 70,0-100,0% GALAP; 70,0-100,0% MATIN; 70-100,0% against AMARE and 65,0-100,0% against GERPU (last assessment).

No differences observed between test product (alldoses) and reference against CHEAL, GALAP, MATIN, AMARE after application A.

No phytotoxicity symptoms recorded.

No effects on non-target organisms were observed during this trial.

TRIAL:SGS2017H001CZ01

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	30 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	ES PALAZZO
	Sowing period	18.05.2017
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 00- 01, BBCH 11-13
	Timing Pest stage at application (1)	ECHCG (BBCH 11-14) MATIN (BBCH 12-16) CHEAL (BBCH 12-18) GALAP (BBCH 12-16) CHEPO (BBCH 12-16)
	Number of applications Intervals between applications	1
	Spray volumes	200 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	13 DAT, 28 DAT, 42 DAT, 61 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Clay loam, pH 6,32
	e.g. Natural / artificial inoculation...	natural
	e.g. Field /	Field, Sumperk - Hon c.5 / prov. Olomoucky kraj (Czech Republic)

	Greenhouse...	
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The tested product showed no problems when preparing the spray solution and during the application.  
 From the data collected in this trial it is possible to give a reply to the key questions:  
 Terbut 500 SC was effective in 46,3-97,5% against ECHCG; 71,3-100,0% MATIN; 8,8-100,0% CHEAL;  
 47,5-90,0% GALAP; 60,0-99,8% CHEPO (last assessment).  
 No differences observed between test product (all rates) and reference against ECHCG, MATIN,  
 CHEAL, GALAP, CHEPO after application A.  
 No phytotoxicity symptoms recorded.  
 No effects on non-target organisms were observed during this trial.

TRIAL:SGS2017H001GER01

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	21 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	P7524
	Sowing period	04.05.2017
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 03- 07, BBCH 11-13
	Timing Pest stage at application (1)	CHEAL (BBCH 12-14) POLLA (BBCH 11-14) CAPBP (BBCH 12-14) STEME (BBCH 11-12) GERPU (BBCH 11-12) POLCO (BBCH 12-14)
	Number of applications Intervals between applications	1
	Spray volumes	200 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	15 DAT, 29 DAT, 43 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Sandy loam, pH 5,4
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Medelby / prov. Schleswig Holstein (Germany)

The tested product showed no problems when preparing the spray solution and during the application.  
 From the data collected in this trial it is possible to give a reply to the key questions:  
 Terbut 500 SC was effective in 46,3-96,0% against CHEAL; 38,8-98,5% POLLA; 99,0% CAPBP; 22,5-99,0% STEME; 25,0-99,0% against GERPU; 20,0-98,8 POLCO; 41,3-98 against TTTTT (last assessment).

No differences observed between test product (all rates) and reference against CAPBP after application A and B. No differences observed also between test product(1,5 l/ha) and reference against CHEAL; POL-LA; STEME; GERPU; POLCO and TTTTTT- application B.

No phytotoxicity symptoms recorded.

No effects on non-target organisms were observed during this trial.

TRIAL:SGS2017H001GER02

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	15 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	Zoey
	Sowing period	09.05.2017
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 00, BBCH 12-15
	Timing Pest stage at application (1)	CHEAL (BBCH 12-16) SOLNI (BBCH 12-16) CAPBP (BBCH 12-16) MATCH (BBCH 12-16)
	Number of applications Intervals between applications	1
	Spray volumes	200 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	16 DAT, 28 DAT, 42 DAT, 55 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Sandy loam, pH 7,1
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Storbeck / prov. Brandenburg (Germany)

The tested product showed no problems when preparing the spray solution and during the application.

From the data collected in this trial it is possible to give a reply to the key questions:

Terbut 500 SC was effective in 100,0% against CHEAL, SOLNI, CAPBP, MATCH.

No differences observed between test product (all rates) and reference against CHEAL, SOLNI, CAPBP, MATCH after application A and B.

No phytotoxicity symptoms recorded.

No effects on non-target organisms were observed during this trial.

TRIAL:SGS2017H001GER03

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)

<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	15 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	Amagrana
	Sowing period	03.05.2017
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 00, BBCH 12-13
	Timing Pest stage at application (1)	CHEAL (BBCH 12-13) STEME (BBCH 12-14) POLCO (BBCH 12-14) GERDI (BBCH 12-13) ECHCG (BBCH 12-13) POAAN (BBCH 12-13)
	Number of applications Intervals between applications	1
	Spray volumes	200 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	13 DAT, 17 DAT, 31 DAT, 43 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Fine sand, pH 5,8
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Beverbruch / prov. Niedersachsen (Germany)

The tested product showed no problems when preparing the spray solution and during the application.

From the data collected in this trial it is possible to give a reply to the key questions:

Terbut 500 SC was effective in 76,3-100,0% against CHEAL; 81,3-100,0% STEME; 20,0-100,0% POLCO; 75,0-100,0% GERDI; 20,0-82,8% ECHCG; 20,0-82,5 PAAN; 48,8-90,0 TTTT.

No differences observed between test product (1,5 l/ha) and reference against STEME and POLCO after application B. No differences observed also between test product (1,5 l/ha and 1,2 l/ha) and reference against CHEAL and GERDI -application B.

No phytotoxicity symptoms recorded.

No effects on non-target organisms were observed during this trial.

TRIAL:SGS2017H001GER04

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	21 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize



<b>Application</b>	Varieties per crop	LG 30225
	Sowing period	10.05.2017
	Crop stage (BBCH)* at application	BBCH 03-06, BBCH 11-13
	Timing Pest stage at application (1)	CHEAL (BBCH 12-14) POLAV (BBCH 12-14) CAPBP (BBCH 11-12) POLCO (BBCH 12-14) VIOAR (BBCH 11-14)
	Number of applications Intervals between applications	1
<b>Assessment</b>	Spray volumes	200 l/ha
	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
<b>Other relevant information</b>	Assessment dates	13 DAT, 27 DAT, 41 DAT
	e.g. Soil type, pH (in case of soil active substance ...)	Sandy loam, pH 6,1
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Fährdorf / prov. Schleswig Holstein (Germany)

The tested product showed no problems when preparing the spray solution and during the application.  
 From the data collected in this trial it is possible to give a reply to the key questions:  
 Terbut 500 SC was effective in 51,3-97,0% against CHEAL; 40,0-99,0% VIOAR; 40,0-99,0% POLAV; 90,0-99,0% CAPBP; 0,0-99,0% POLCO; 45,0-98,5 against TTTT (last assessment).  
 No differences observed between test product (doses 1,5 l/ha, 1,2 l/ha, 1,0 l/ha) and reference against VIOAR, POLAV after application B. No differences observed also between test product (all rates) and reference against CAPBP and POLCO after-application B.  
 No phytotoxicity symptoms recorded.  
 No effects on non-target organisms were observed during this trial.

TRIAL:SGS2017H001GER05

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	15 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	DKC3409
	Sowing period	01.05.2017
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 00-09, BBCH 12-13
	Timing Pest stage at	CHEAL (BBCH 11-16) STEME (BBCH 11-21)

	application (1)	ATXPA (BBCH 11-16) ECHCG (BBCH 09-12) SOLNI (BBCH 10-14)
	Number of applications Intervals between applications	1
	Spray volumes	200 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	7 DAT, 11 DAT, 25 DAT, 36 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Humanic sand, pH 5,3
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Lohne / prov. Niedersachsen (Germany)

The tested product showed no problems when preparing the spray solution and during the application.

From the data collected in this trial it is possible to give a reply to the key questions:

Terbut 500 SC was effective in 0,0-100,0% against CHEAL; 70,0-100,0% VIOAR, 70,0-100,0% GALAP, 70,0-100,0% MATIN; 70,0-100,0% AMARE; 65,0-100,0% GERPU.

No differences observed between test product (all rates) and reference against CHEAL, GALAP, MATIN, AMARE and VIOAR (only test product in dose 1,5 l/h) after application A. No differences also observed between test product (doses 1,5 l/ha and 1,2 l/ha) and reference against VIOAR; GALAP; MATIN; AMARE after application B.

No phytotoxicity symptoms recorded.

No effects on non-target organisms were observed during this trial.

TRIAL:AH/19/K/14/Ce/04

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	18 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	maize
	Varieties per crop	Rosomak
	Sowing period	26.04.2019
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 16
	Timing Pest stage at application (1)	CHEAL (BBCH 16) VIOAR (BBCH 15) AMARE (BBCH 16) GALAP (BBCH 15) MATIN (BBCH 16) CAPBP (BBCH 15) VERAR (BBCH 15)
	Number of	1

	applications Intervals between applications	
	Spray volumes	200 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 35 DAT, 55 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Loamy sand, pH 6,5
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Cerekwica/ prov. wielkopolskie (Poland)

Terbut 500 SC was comparable with standard.

The addition of an adjuvant to the spray liquid improved the effectiveness of the herbicide applied at a dose of 1 l/ha.

Herbicide Terbut 500 SC applied at a dose of 1.2 l/ha and 1 l/ha together with the adjuvant contributed to 100% weed control CHEAL, VIOAR, AMARE, GALAP, MATIN, CAPBP, VERAR.

Herbicide Terbut 500 SC applied at a dose of 1 l/ha without adjuvant had similar efficacy to the comparative herbicide.

Herbicide Terbut 500 SC used at the lowest dose had an efficiency greater than 80% relative to all weeds.

Terbut 500 SC effectively control wide spectrum of weeds.

There have been no phytotoxicity symptoms observed in all treatments.

TRIAL:AH/19/K/14/Dziem/03

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	18 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	AS 21.E
	Sowing period	03.05.2019
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 13
	Timing Pest stage at application (1)	CHEAL (BBCH 13) VIOAR (BBCH 12) POLCO (BBCH 12) AMARE (BBCH 13) GALAP (BBCH 13) MATIN (BBCH 12) CAPBP (BBCH 12) SOLNI (BBCH 13) VERAR (BBCH 12)
	Number of applications Intervals between	1

	applications	
	Spray volumes	200 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 44DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Loamy sand, pH 6,8
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Dziembowo/ prov, wielkopolskie (Poland)

Terbut 500 SC was comparable with standard.

Terbut 500 SC effectively control wide spectrum of weeds.

Herbicide Terbut 500 SC applied at a dose of 1.2 l / ha and 1 l / ha together with the adjuvant contributed to 100% weed control CHEAL, VIOAR, POLCO, AMARE, GALAP, MATIN, CAPBP, SOLNI, VERAR. Herbicide Terbut 500 SC applied at a dose of 1 L / ha without adjuvant had similar efficacy to the comparative herbicide.

Herbicide Terbut 500 SC used at the lowest dose had an efficiency greater than 85% relative to all weeds. There have been no phytotoxicity symptoms observed in all treatments.

TRIAL:AH/19/K/14/Gr/01

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	18 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	Kwins
	Sowing period	24.04.2019
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 13
	Timing Pest stage at application (1)	CHEAL (BBCH 14) VIOAR (BBCH 13) POLCO (BBCH 12) AMARE (BBCH 14) GALAP (BBCH 12) MATIN (BBCH 13) CAPBP (BBCH 12) VERAR (BBCH 12)
	Number of applications Intervals between applications	1
	Spray volumes	200 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)

	Assessment dates	14 DAT, 56 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Loamy clay, pH 6,2
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Gorzyń/ prov, wielkopolskie (Poland)

Terbut 500 SC was comparable with standard.

Herbicide Terbut 500 SC used in doses of 0.8 l/ha, 1 l/ha and 1.2 l/ha showed efficacy above 85% in combating CHEAL, VIOAR, POLCO, AMARE, GALAP, MATIN, CAPBP, VERAR, as well as the comparative herbicide .

Herbicide Terbut 500 SC had the best efficiency at a dose of 1.2 l / ha in relation to all weeds.

The addition of an adjuvant to the spray solution improved the effectiveness of the herbicide applied at a dose of 1 l/ha.

Terbut 500 SC effectively control wide spectrum of weeds.

There have been no phytotoxicity symptoms observed in all treatments.

TRIAL:AH/19/K/14/Nw/01

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	18 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	Farmmagic
	Sowing period	30.04.2019
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 00, BBCH 14
	Timing Pest stage at application (1)	STEME (BBCH 00, BBCH 14) AMARE (BBCH 00, BBCH 15) CHEAL (BBCH 00, BBCH 15) MATIN (BBCH 00, BBCH 14) MATCH (BBCH 00, BBCH 14)
	Number of applications Intervals between applications	1
	Spray volumes	200 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	15 DAT, 38 DAT, 73 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Loamy sand, pH 6,1
	e.g. Natural / artificial inoculation...	natural

	e.g. Field / Greenhouse...	Field, Kruchowo/ prov. wielkopolskie (Poland)
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Terbut 500 SC was comparable with standard.

Terbut 500 SC effectively control wide spectrum of weeds.

Herbicide Terbut 500 SC applied in soil at doses of 1 l/ha with adjuvant and 1,2 l/ha with adjuvant contributed to 100% control of STEME, AMARE, CHEAL, MATIN and MATCH, as did the comparative herbicide Lumax 537.5 SE. The lower dose and application of the herbicide without adjuvant contributed to controlling weeds at a minimum level of 95%.

Herbicide Terbut 500 SC applied postemergence had the highest effectiveness at a dose of 1,2 l/ha. At this dose, it had better efficiency than Tezosar 500 SC compared to STEME, AMARE, MATIN and MATCH.

There have been no phytotoxicity symptoms observed in all treatments.

TRIAL:AH/19/K/14/Nw/05

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	18 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	Farmfancy
	Sowing period	20.04.2019
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 13
	Timing Pest stage at application (1)	CHEAL (BBCH 13) VIOAR (BBCH 12) POLCO (BBCH 12) AMARE (BBCH 13) GALAP (BBCH 12) MATIN (BBCH 12) CAPBP (BBCH 14) VERAR (BBCH 12)
	Number of applications Intervals between applications	1
	Spray volumes	200 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	13 DAT, 37 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Loamy sand, pH 5,9
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Niewolno/ prov. wielkopolskie (Poland)

Terbut 500 SC was comparable with standard.

Herbicide Terbut 500 SC had the best efficiency at a dose of 1,2 l/ha in relation to all weeds.

3.The addition of an adjuvant to the spray liquid improved the effectiveness of the herbicide applied at a dose of 1 l/ha.

Terbut 500 SC effectively control wide spectrum of weeds.

Herbicide Terbut 500 SC used at the lowest dose had an efficiency greater than 80% relative to all weeds.

There have been no phytotoxicity symptoms observed in all treatments.

TRIAL:AH/19/K/14/Ra/02

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	18 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	P8150
	Sowing period	14.05.2019
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 14
	Timing Pest stage at application (1)	CHEAL (BBCH 15) VIOAR (BBCH 14) AMARE (BBCH 15) GALAP (BBCH 14) MATIN (BBCH 14) CAPBP (BBCH 14) VERAR (BBCH 15)
	Number of applications Intervals between applications	1
	Spray volumes	200 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	13 DAT, 37 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Loamy sand, pH 6,7
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Rataje/ prov. wielkopolskie (Poland)

Terbut 500 SC was comparable with standard.

Terbut 500 SC effectively control wide spectrum of weeds.

Herbicide Terbut 500 SC applied at a dose of 1,2 l/ha and 1 l/ha together with the adjuvant contributed to 100% weed control CHEAL, VIOAR, AMARE, GALAP, MATIN, CAPBP, VERAR.

Herbicide Terbut 500 SC applied at a dose of 1 l/ha without adjuvant had similar efficacy to the comparative herbicide.

Herbicide Terbut 500 SC used at the lowest dose had an efficiency greater than 80% relative to all weeds.

There have been no phytotoxicity symptoms observed in all treatments.

TRIAL: Terbut 500 SC- PL06

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	21 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	Mas 21e
	Sowing period	28.05.2019
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 00, BBCH 12-16
	Timing Pest stage at application (1)	MATCH (BBCH 14-16) STEME (BBCH 11-14) AMARE (BBCH 10-13) CENCY (BBCH 11-14) MATIN (BBCH 11-14) VIOAR (BBCH 11-14)
	Number of applications Intervals between applications	1
	Spray volumes	300 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	16 DAT, 28 DAT, 44 DAT, 73 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Sandy loam, pH 6,1
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Podlejski / prov. warmiński- mazurskie (Poland)

A field trial on maize was performed in Poland in 2019 year. The objective of this trial was to determine the level of control of TERBUT 500 SC used solo and in a mixture with the adjuvant. A comparative product was used Tezosar 500 SC.

One experimental trial of maize was selected in Podlejski (warmiński mazurskie). A randomized complete block design was done with 4 replications per treatment. The elemental plot area was 15 m<sup>2</sup> (3m x 5m). The application of test product and references product carried out on 01.06.2019 and 17.06.2019 using backpack sprayer with a boom length of 3 meters facing on right side marked code SRPL-BOOM001 post emergence at BBCH 12-16 of the crop.

No negative symptoms were found during mixing and sprayings of any of the product formulations. The effectiveness of weed control were evaluated visually by comparing the state of individual weed species on plots after application by herbicides and untreated plots. In addition, during 56DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assess-



ment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>. Phytotoxicity assessments of tested preparations were done by a visual estimation of an intensity of chlorosis, necrosis, leave curling, reduction in turgor of plants etc. found on overall areas of treated plots and by comparison of each treated plot with untreated plot. Assessments were done directly on plantation. Results were shown using 0-100 scale, where: 0 – no phytotoxicity, 100 – total plant destruction.

All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in maize variety Delitop.

Before the application of the product observations of weeds density were carried out (in 4 places on the surface of 0.25 m<sup>2</sup> on each control plot.) A visual evaluation of the weed control efficacy was performed. Tested product applied solo at doses 1,0 l/ha and 1,2 l/ha showed fully efficacy against most important weeds: AMARE, STEME, CENCY, VIOAR, MATCH and MATIN. Dose 1,0 l/ha with adiuwant have better efficacy than 1,0 l/ha solo.

The effectiveness of weed control were evaluated visually by comparing the state of individual weed species on plots after application by herbicides and untreated plots. In addition, during 56DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assessment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>.

All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in maize variety Mas 21e.

#### TRIAL:Terbut 500 SC- PL07

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	18 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	Mas 27L
	Sowing period	30.04.2019
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 12-16
	Timing Pest stage at application (1)	CHEAL (BBCH 13-15) VIOAR (BBCH 12-16) POLCO (BBCH 13-16) GALAP (BBCH 13-15) CAPBP (BBCH 13-16)
	Number of applications Intervals between applications	1
	Spray volumes	300 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 28 DAT, 56 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Sandy loam, pH 6,0
	e.g. Natural / artificial	natural

	innoculation...	
	e.g. Field / Greenhouse...	Field, Perusinowo / prov. wielkopolskie (Poland)

A field trial on maize was performed in Poland in 2019 year. The objective of this trial was to determine the level of control of TERBUT 500 SC used solo and in a mixture with the adjuvant. A comparative product was used Tezosar 500 SC.

One experimental trial of maize was selected in Prusinowo (wielkopolskie). A randomized complete block design was done with 4 replications per treatment. The elemental plot area was 15 m<sup>2</sup> (3m x 5m). The application of test product and references product carried out on 28.05.2019 using backpack sprayer with a boom length of 3 meters facing on right side marked code SRPL-BOOM001 post emergence at BBCH 12-16 of the crop.

No negative symptoms were found during mixing and sprayings of any of the product formulations. The effectiveness of weed control were evaluated visually by comparing the state of individual weed species on plots after application by herbicides and untreated plots. In addition, during 56DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assessment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>. Phytotoxicity assessments of tested preparations were done by a visual estimation of an intensity of chlorosis, necrosis, leave curling, reduction in turgor of plants etc. found on overall areas of treated plots and by comparison of each treated plot with untreated plot. Assessments were done directly on plantation. Results were shown using 0-100 scale, where: 0 – no phytotoxicity, 100 – total plant destruction.

All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in maize variety Mas 27L.

Before the application of the product observations of weeds density were carried out (in 4 places on the surface of 0.25 m<sup>2</sup> on each control plot.) A visual evaluation of the weed control efficacy was performed. Tested product applied solo at doses 1,0 l/ha and 1,2 l/ha showed fully efficacy against most important weeds: CHEAL, VIOAR, POLCO, GALAP and CAPBP. Dose 1,0 l/ha with adjuvant have better efficacy than 1,0 l/ha solo.

The effectiveness of weed control were evaluated visually by comparing the state of individual weed species on plots after application by herbicides and untreated plots. In addition, during 56DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assessment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>.

All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in maize variety Mas 27L.

#### TRIAL: Terbut 500 SC- PL08

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	15 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	Glejt
	Sowing period	06.05.2019
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 12-16

	Timing Pest stage at application (1)	CHEAL (BBCH 10-12) POLCO (BBCH 11-12) AMARE (BBCH 10-12) SOLNI (BBCH 11-13) GERPU (BBCH 12-13) GASPA (BBCH 12)
	Number of applications Intervals between applications	1
	Spray volumes	300 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 28 DAT, 56 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Loamy sand, pH 6,6
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Izdebno / prov. kujawsko- pomorskie (Poland)

A field trial on maize was performed in Poland in 2019 year. The objective of this trial was to determine the level of control of TERBUT 500 SC used solo and in a mixture with the adjuvant. A comparative product was used Tezosar 500 SC.

One experimental trial of maize was selected in Izdebno (kujawsko - pomorskie). A randomized complete block design was done with 4 replications per treatment. The elemental plot area was 15 m<sup>2</sup> (3m x 5m). The application of test product and references product carried out on 29.05.2019 using backpack sprayer with a boom length of 3 meters facing on right side marked code SRPL-BOOM001 post emergence at BBCH 12-16 of the crop.

No negative symptoms were found during mixing and sprayings of any of the product formulations. The effectiveness of weed control were evaluated visually by comparing the state of individual weed species on plots after application by herbicides and untreated plots. In addition, during 56DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assessment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>. Phytotoxicity assessments of tested preparations were done by a visual estimation of an intensity of chlorosis, necrosis, leave curling, reduction in turgor of plants etc. found on overall areas of treated plots and by comparison of each treated plot with untreated plot. Assessments were done directly on plantation. Results were shown using 0-100 scale, where: 0 – no phytotoxicity, 100 – total plant destruction. All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in maize variety Glejt.

Before the application of the product, observations of weeds density were carried out (in 4 places on the surface of 0.25 m<sup>2</sup> on each control plot.) A visual evaluation of the weed control efficacy was performed. Tested product applied solo at doses 1,0 l/ha and 1,2 l/ha showed fully efficacy against most important weeds: CHEAL, POLCO, AMARE, SOLNI, GERPU and GASPA, but doses with adiuwant have better efficacy.

The effectiveness of weed control were evaluated visually by comparing the state of individual weed species on plots after application by herbicides and untreated plots. In addition, during 56 DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assessment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>.

All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in maize variety Glejt.

TRIAL: Terbut 500 SC- PL09

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	15 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	Mas 17. G
	Sowing period	29.04.2019
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 12-16
	Timing Pest stage at application (1)	CHEAL (BBCH 12-14) VIOAR (BBCH 13-15) GALAP (BBCH 11-13) MATIN (BBCH 15-17) VERAR (BBCH 14-16)
	Number of applications Intervals between applications	1
	Spray volumes	300 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 28 DAT, 56 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Sandy clay loam, pH 6,6
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Żędowo / prov. kujawsko-pomorskie (Poland)

A field trial on maize was performed in Poland in 2019 year. The objective of this trial was to determine the level of control of TERBUT 500 SC used solo and in a mixture with the adjuvant. A comparative product was used Tezosar 500 SC.

One experimental trial of maize was selected in Żędowo (kujawsko - pomorskie). A randomized complete block design was done with 4 replications per treatment. The elemental plot area was 15 m<sup>2</sup> (3m x 5m). The application of test product and references product carried out on 14.06.2019 using backpack sprayer with a boom length of 3 meters facing on right side marked code SRPL-BOOM001 post emergence at BBCH 12-16 of the crop.

No negative symptoms were found during mixing and sprayings of any of the product formulations. The effectiveness of weed control were evaluated visually by comparing the state of individual weed spe-

cies on plots after application by herbicides and untreated plots. In addition, during 56DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assessment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>. Phytotoxicity assessments of tested preparations were done by a visual estimation of an intensity of chlorosis, necrosis, leave curling, reduction in turgor of plants etc. found on overall areas of treated plots and by comparison of each treated plot with untreated plot. Assessments were done directly on plantation. Results were shown using 0-100 scale, where: 0 – no phytotoxicity, 100 – total plant destruction.

All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in maize variety Mas 17g.

Before the application of the product observations of weeds density were carried out (in 4 places on the surface of 0.25 m<sup>2</sup> on each control plot.) A visual evaluation of the weed control efficacy was performed. Tested product applied solo at dose 1,0 l/ha and 1,2 l/ha showed fully efficacy against most important weeds: CHEAL, VIOAR, GALAP, MATIN and VERAR. Dose with adjuvant has better efficacy. No negative symptoms were found during mixing and sprayings of any of the product formulations.

The effectiveness of weed control were evaluated visually by comparing the state of individual weed species on plots after application by herbicides and untreated plots. In addition, during 56 DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assessment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>.

All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in maize variety Mas 17g.

#### TRIAL: Terbut 500 SC- PL10

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	15 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	Pioneer
	Sowing period	15.05.2019
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 12-16
	Timing Pest stage at application (1)	POLCO (BBCH 12-16) SOLNI (BBCH 14-21) AMARE (BBCH 12-31) VIOAR (BBCH 12-21) CAPBP (BBCH 12-18)
	Number of applications Intervals between applications	1
	Spray volumes	300 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 28 DAT, 56 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Sandy clay, pH 5,9

e.g. Natural / artificial inoculation...	natural
e.g. Field / Greenhouse...	Field, Łąki / prov. lubelskie (Poland)

A field trial on maize was performed in Poland in 2019 year. The objective of this trial was to determine the level of control of TERBUT 500 SC used solo and in a mixture with the adjuvant. A comparative product was used Tezosar 500 SC.

One experimental trial of maize was selected in Laki (lubelskie). A randomized complete block design was done with 4 replications per treatment. The elemental plot area was 15 m<sup>2</sup> (3m x 5m). The application of test product and references product carried out on 12.06.2019 using backpack sprayer with a boom length of 3 meters facing on right side marked code SRPL-BOOM001 post emergence at BBCH 12-16 of the crop.

No negative symptoms were found during mixing and sprayings of any of the product formulations. The effectiveness of weed control were evaluated visually by comparing the state of individual weed species on plots after application by herbicides and untreated plots. In addition, during 56DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assessment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>. Phytotoxicity assessments of tested preparations were done by a visual estimation of an intensity of chlorosis, necrosis, leave curling, reduction in turgor of plants etc. found on overall areas of treated plots and by comparison of each treated plot with untreated plot. Assessments were done directly on plantation. Results were shown using 0-100 scale, where: 0 – no phytotoxicity, 100 – total plant destruction. All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in maize variety Pioneer.

Before the application of the product, observations of weeds density were carried out (in 4 places on the surface of 0.25 m<sup>2</sup> on each control plot.) A visual evaluation of the weed control efficacy was performed. Tested product applied solo 1,0 l/ha and 1,2 l/ha showed fully efficacy against most important weeds: POLCO, SOLNI, AMARE, VIOAR and CAPBP. Dose with adjuvant has better efficacy. No negative symptoms were found during mixing and sprayings of any of the product formulations. The effectiveness of weed control were evaluated visually by comparing the state of individual weed species on plots after application by herbicides and untreated plots. In addition, during 56 DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assessment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>.

All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in maize variety Pioneer.

#### TRIAL:Terbut 500 SC- PL11

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	15 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	San
	Sowing period	06.05.2019
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 12-16



	Timing Pest stage at application (1)	CHEAL (BBCH 10-11) VIOAR (BBCH 9-11) AMARE (BBCH 10-11) SOLNI (BBCH 14-21)
	Number of applications Intervals between applications	1
	Spray volumes	300 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 28 DAT, 56 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Clayey sand, pH 6,2
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Feliksów/ prov. mazowieckie (Poland)

A field trial on maize was performed in Poland in 2019 year. The objective of this trial was to determine the level of control of TERBUT 500 SC used solo and in a mixture with the adjuvant. A comparative product was used Tezosar 500 SC.

One experimental trial of maize was selected in Jankowice Wielkie (opolskie). A randomized complete block design was done with 4 replications per treatment. The elemental plot area was 15 m<sup>2</sup> (3m x 5m). The application of test product and references product carried out on 27.05.2019 using backpack sprayer with a boom length of 3 meters facing on right side marked code SRPL-BOOM001 post emergence at BBCH 12-16 of the crop.

No negative symptoms were found during mixing and sprayings of any of the product formulations. The effectiveness of weed control were evaluated visually by comparing the state of individual weed species on plots after application by herbicides and untreated plots. In addition, during 56DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assessment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>. Phytotoxicity assessments of tested preparations were done by a visual estimation of an intensity of chlorosis, necrosis, leave curling, reduction in turgor of plants etc. found on overall areas of treated plots and by comparison of each treated plot with untreated plot. Assessments were done directly on plantation. Results were shown using 0-100 scale, where: 0 – no phytotoxicity, 100 – total plant destruction. All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in maize variety San.

Before the application of the product, observations of weeds density were carried out (in 4 places on the surface of 0.25 m<sup>2</sup> on each control plot.) A visual evaluation of the weed control efficacy was performed. Tested product applied solo 1,0 l/ha and 1,2 l/ha showed fully efficacy against most important weeds: CHEAL, VIOAR, AMARE and SOLNI. Dose with adiuwant has better efficacy.

No negative symptoms were found during mixing and sprayings of any of the product formulations. The effectiveness of weed control were evaluated visually by comparing the state of individual weed species on plots after application by herbicides and untreated plots. In addition, during 56 DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assessment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>. All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in

maize variety San.

TRIAL:Terbut 500 SC- PL12

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	15 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	Talisman
	Sowing period	23.04.2019
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 12-16
	Timing Pest stage at application (1)	CHEAL (BBCH 12-16) VIOAR (BBCH 14-18) MATIN (BBCH 14-18) SOLNI (BBCH 15)
	Number of applications Intervals between applications	1
	Spray volumes	300 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 28 DAT, 56 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Loamy sand , pH 6,8
	e.g. Natural / artificial inoculation...	natural
	e.g. Field / Greenhouse...	Field, Jankowice Wielkie / prov. opolskie (Poland)

A field trial on maize was performed in Poland in 2019 year. The objective of this trial was to determine the level of control of TERBUT 500 SC used solo and in a mixture with the adjuvant. A comparative product was used Tezosar 500 SC.

One experimental trial of maize was selected in Jankowice Wielkie (opolskie). A randomized complete block design was done with 4 replications per treatment. The elemental plot area was 15 m<sup>2</sup> (3m x 5m). The application of test product and references product carried out on 27.05.2019 using backpack sprayer with a boom length of 3 meters facing on right side marked code SRPL-BOOM001 post emergence at BBCH 12-16 of the crop.

No negative symptoms were found during mixing and sprayings of any of the product formulations. The effectiveness of weed control were evaluated visually by comparing the state of individual weed species on plots after application by herbicides and untreated plots. In addition, during 56DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assessment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>. Phytotoxicity assessments of tested preparations were done by a visual estimation of an intensity of chlorosis, necrosis,



leave curling, reduction in turgor of plants etc. found on overall areas of treated plots and by comparison of each treated plot with untreated plot. Assessments were done directly on plantation. Results were shown using 0-100 scale, where: 0 – no phytotoxicity, 100 – total plant destruction.

All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in maize variety Talisman.

Before the application of the product observations of weeds density were carried out (in 4 places on the surface of 0.25 m<sup>2</sup> on each control plot.) A visual evaluation of the weed control efficacy was performed. Tested product applied solo 1,0 l/ha and 1,2 l/ha showed fully efficacy against most important weeds: CHEAL, VIOAR, MATIN and SOLNI. Dose with adjuvant has better efficacy.

No negative symptoms were found during mixing and sprayings of any of the product formulations.

The effectiveness of weed control were evaluated visually by comparing the state of individual weed species on plots after application by herbicides and untreated plots. In addition, during 56 DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assessment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>.

All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in maize variety Talisman.

#### TRIAL: Terbut 500 SC- PL13

<b>Guidelines</b>	General guidelines	EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4)
	Specific guidelines	EPPO PP 1/50 (3)
<b>Experimental design</b>	Plot design	Randomized Complete Block (RCB)
	Plot size	21 m <sup>2</sup>
	Number of replications	4
<b>Crop</b>	Trials per crop	Maize
	Varieties per crop	Delitop
	Sowing period	29.04.2019
<b>Application</b>	Crop stage (BBCH)* at application	BBCH 12-16
	Timing Pest stage at application (1)	CHEAL (BBCH 12-14) STEME (BBCH 15-16) MATCH (BBCH 15-16) VIOAR (BBCH 12-14) SOLNI (BBCH 16-17) CENCY (BBCH 15-16)
	Number of applications Intervals between applications	1
	Spray volumes	300 l/ha
<b>Assessment</b>	Assessment types	number of weeds/m <sup>2</sup> , the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 28 DAT, 56 DAT
<b>Other relevant information</b>	e.g. Soil type, pH (in case of soil active substance ...)	Clay loam, pH 6,7
	e.g. Natural / artificial inoculation...	natural

	e.g. Field / Greenhouse...	Field, Napachanie / prov. wielkopolskie (Poland)
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A field trial on maize was performed in Poland in 2019 year. The objective of this trial was to determine the level of control of TERBUT 500 SC used solo and in a mixture with the adjuvant. A comparative product was used Tezosar 500 SC.

One experimental trial of maize was selected in Napachanie (wielkopolskie). A randomized complete block design was done with 4 replications per treatment. The elemental plot area was 15 m<sup>2</sup> (3m x 5m). The application of test product and references product carried out on 29.05.2019 using backpack sprayer with a boom length of 3 meters facing on right side marked code SRPL-BOOM001 post emergence at BBCH 12-16 of the crop.

No negative symptoms were found during mixing and sprayings of any of the product formulations. The effectiveness of weed control were evaluated visually by comparing the state of individual weed species on plots after application by herbicides and untreated plots. In addition, during 56DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assessment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>. Phytotoxicity assessments of tested preparations were done by a visual estimation of an intensity of chlorosis, necrosis, leave curling, reduction in turgor of plants etc. found on overall areas of treated plots and by comparison of each treated plot with untreated plot. Assessments were done directly on plantation. Results were shown using 0-100 scale, where: 0 – no phytotoxicity, 100 – total plant destruction.

All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in maize variety Delitop.

Before the application of the product, observations of weeds density were carried out (in 4 places on the surface of 0.25 m<sup>2</sup> on each control plot.) A visual evaluation of the weed control efficacy was performed. Tested product applied solo at doses 1,0 l/ha and 1,2 l/ha showed fully efficacy against most important weeds: CHEAL, STEME, MATCH, VIOAR, SOLNI and CENCY. Dose 1,0 l/ha with adjuvant have better efficacy than 1,0 l/ha solo.

The effectiveness of weed control were evaluated visually by comparing the state of individual weed species on plots after application by herbicides and untreated plots. In addition, during 56DAA were panicles or ear counted for monocot weeds. The results are shown as a percentage of destruction. At each assessment also determined the number of weeds, also before application on the surface of 1m<sup>2</sup>.

All tested objects did not show phytotoxic symptoms; therefore it can be concluded that TERBUT 500 SC solo and in mixture and reference products are fully selective when applying foliar treatments in maize variety Delitop.

## Maize (post-emergence)/CAPBP

**Table 3.2-7: Efficacy of Terbut 500 SC in all trials (CAPBP)**

product name	Terbut 500 SC				Tezosar 500 SC (reference standard)			
number of trial	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT
AH/19/K/14/Ce/04	0,8 l/ha	78,8	90	-	1 l/ha	80	92,5	-
	1 l/ha	85	96,3	-				
	1,2 l/ha	88,8	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	90	100	-				
AH/19/K/14/Dziem/03	0,8 l/ha	87,5	100	-	1 l/ha	83,8	95	-
	1 l/ha	88,8	100	-				
	1,2 l/ha	90	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	88,8	100	-				

AH/19/K/14/Gr/01	0,8 l/ha	82,5	95	-	1 l/ha	85	96,3	-
	1 l/ha	83,8	95	-				
	1,2 l/ha	88,8	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	88,8	100	-				
AH/19/K/14/Nw/05	0,8 l/ha	72,5	83,8	-	1 l/ha	81,3	92,5	-
	1 l/ha	87,5	98,8	-				
	1,2 l/ha	90	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	88,8	100	-				
AH/19/K/14/Ra/02	0,8 l/ha	78,8	90	-	1 l/ha	88,8	98,8	-
	1 l/ha	88,8	100	-				
	1,2 l/ha	90	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	90	100	-				
Terbut 500 SC- PL07	0,8 l/ha	80	90	91,25	1 l/ha	86,25	99	100
	1 l/ha	85	99	100				
	1,2 l/ha	86,25	99	100				
	1 l/ha + 0,2 l/ha (adjuvant)	87,5	99	100				
Terbut 500 SC- PL10	0,8 l/ha	73,75	87,5	95	1 l/ha	77,5	95	100
	1 l/ha	76,25	88,75	100				
	1,2 l/ha	82,5	95	100				
	1 l/ha + 0,2 l/ha (adjuvant)	83,75	96,25	100				

A total of 7 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of CAPBP in maize (post-emergence). Trials were conducted in different regions in Poland. Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha, 1 L/ha, 1,2 L/ha and 1 L/ha with 0,2 L/ ha Hydron (adjuvant). As a standard were used Tezosar 500 SC at dose 1 L/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-11a and No. 3.2-11b).

**Table 3.2-8a: Average efficacy of TERBUT 500 SC (CAPBP).**

Average efficacy							
Terbut 500 SC				Tezosar 500 SC			
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT
0,8 l/ha	79,12	90,90	93,13	1 l/ha	83,24	95,59	100,00
1 l/ha	85,02	96,84	100,00				
1,2 l/ha	88,05	99,14	100,00				
1 l/ha + 0,2 l/ha (adjuvant)	88,24	99,32	100,00				

**Table 3.2-9b: Summary of average efficacy 14-56 DAT of TERBUT 500 SC (CAPBP).**

Average efficacy			
0,8 l/ha	1 l/ha	1,2 l/ha	1 l/ha + 0,2 l/ha (adjuvant)
87,72	93,95	95,73	95,85

### Summary and conclusion (CAPBP- post-emergence)

TERBUT 500 SC at dose 1 L/ha significantly reduced occurrence of CAPBP in maize (post-emergence). At dose 1 L/ha average efficacy 14-56 DAT reached 93,95 %. There was no significant different between Terbut 500 SC and standard herbicide (Tezosar 500 SC). To significantly reduce CAPBP recommended dose of Terbut 500 SC is 1 L/ha.

### Maize (post-emergence)/VIOAR

**Table 3.2-12: Efficacy of Terbut 500 SC in all trials (VIOAR)**

product name	Terbut 500 SC					Tezosar 500 SC				
number of trial	dose	Efficacy 14 DAT	Efficacy 35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14 DAT	Efficacy 35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
AH/19/K/14/Ce/04	0,8 l/ha	72,5	83,8	-	-	1 l/ha	82,5	95	-	-
	1 l/ha	83,8	95	-	-					
	1,2 l/ha	88,8	100	-	-					
	1 l/ha + 0,2 l/ha (adjuvant)	90	100	-	-					
AH/19/K/14/Dziem/03	0,8 l/ha	83,8	95	-	-	1 l/ha	86,3	97,5	-	-
	1 l/ha	83,8	95	-	-					
	1,2 l/ha	90	100	-	-					
	1 l/ha + 0,2 l/ha (adjuvant)	88,8	100	-	-					
AH/19/K/14/Gr/01	0,8 l/ha	81,3	92,5	-	-	1 l/ha	81,3	92,5	-	-
	1 l/ha	81,3	92,5	-	-					
	1,2 l/ha	88,8	100	-	-					
	1 l/ha + 0,2 l/ha (adjuvant)	83,8	95	-	-					
AH/19/K/14/Nw/05	0,8 l/ha	76,3	87,5	-	-	1 l/ha	78,8	91,3	-	-
	1 l/ha	83,8	95	-	-					
	1,2 l/ha	90	100	-	-					
	1 l/ha + 0,2 l/ha (adjuvant)	86,3	97,5	-	-					
AH/19/K/14/Ra/02	0,8 l/ha	80	90	-	-	1 l/ha	88,8	97,5	-	-
	1 l/ha	88,8	97,5	-	-					
	1,2 l/ha	90	100	-	-					
	1 l/ha + 0,2 l/ha (adjuvant)	90	100	-	-					
Terbut 500 SC- PL06	0,8 l/ha	-	55	86,3	92,5	1 l/ha	-	60	93,8	98,8
	1 l/ha	-	58,8	88,8	97,5					
	1,2 l/ha	-	60	92,5	98,8					
	1 l/ha + 0,2 l/ha (adjuvant)	-	62,5	93,8	98,8					
Terbut 500 SC- PL07	0,8 l/ha	72,5	86,5	85	-	1 l/ha	82,5	98,78	100	-
	1 l/ha	80	97,37	98	-					
	1,2 l/ha	82,5	98,54	100	-					
	1 l/ha + 0,2 l/ha (adjuvant)	83,75	99	100	-					
Terbut 500 SC- PL09	0,8 l/ha	57,5	77,5	83,74	-	1 l/ha	83,75	95	100	-
	1 l/ha	67,5	82,5	88,74	-					
	1,2 l/ha	71,25	88,75	95	-					
	1 l/ha + 0,2 l/ha (adjuvant)	77,5	87,5	99	-					
Terbut 500 SC- PL10	0,8 l/ha	71,25	80	83,75	-	1 l/ha	76,25	87,5	97,5	-
	1 l/ha	78,75	86,25	90	-					
	1,2 l/ha	83,75	91,25	93,75	-					
	1 l/ha + 0,2 l/ha (adjuvant)	86,25	93,75	100	-					
Terbut 500 SC- PL11	0,8 l/ha	80	93,8	93,8	-	1 l/ha	82,5	92,5	92,5	-
	1 l/ha	81,3	95	95	-					
	1,2 l/ha	82,5	93,8	93,8	-					
	1 l/ha + 0,2 l/ha (adjuvant)	82,5	92,5	92,5	-					
Terbut 500 SC- PL12	0,8 l/ha	98,8	100	100	-	1	100	98,8	100	-

	1 l/ha	98,8	100	100	-	l/ha				
	1,2 l/ha	98,8	100	100	-					
	1 l/ha + 0,2 l/ha (adjuvant)	100	100	100	-					
Terbut 500 SC- PL13	0,8 l/ha	60	80	81,25	-	1 l/ha	83,75	95	99	-
	1 l/ha	67,5	85	87,5	-					
	1,2 l/ha	68,75	88,74	90	-					
	1 l/ha + 0,2 l/ha (adjuvant)	77,5	93,74	95	-					

A total of 12 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of VIOAR in maize (post-emergence). Trials were conducted in different regions in Poland. Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha, 1 L/ha, 1,2 L/ha and 1 L/ha with 0,2 L/ ha Hydron (adjuvant). As a standard were used Tezosar 500 SC at dose 1 L/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-12a and No. 3.2-12b).

**Table 3.2-12a: Average efficacy of TERBUT 500 SC (VIOAR).**

Average efficacy									
Terbut 500 SC					Tezosar 500 SC				
dose	Efficacy 14 DAT	Efficacy 35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14 DAT	Efficacy 35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
0,8 l/ha	75,81	85,13	87,69	92,5	1 l/ha	84,22	91,78	97,54	98,8
1 l/ha	81,40	89,99	92,58	97,5					
1,2 l/ha	85,01	93,42	95,01	98,8					
1 l/ha + 0,2 l/ha (adjuvant)	86,04	93,46	97,19	98,8					

**Table 3.2-12b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (VIOAR).**

Average efficacy			
0,8 l/ha	1 l/ha	1,2 l/ha	1 l/ha + 0,2 l/ha (adjuvant)
85,28	90,37	93,06	93,87

### Summary and conclusion (VIOAR- post-emergence)

TERBUT 500 SC at dose 1 L/ha significantly reduced occurrence of VIOAR in maize (post-emergence). At dose 1 L/ha average efficacy 14-73 DAT reached 90,37 %. There was no significant different between Terbut 500 SC and standard herbicide (Tezosar 500 SC). To significantly reduce VIOAR recommended dose of Terbut 500 SC is 1 L/ha.

### Maize (post-emergence)/CHEAL

**Table 3.2-13: Efficacy of Terbut 500 SC in all trials (CHEAL)**

product name	Terbut 500 SC				Tezosar 500 SC			
number of trial	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-73 DAT
AH/19/K/14/Ce/04	0,8 l/ha	78,8	91,3	-	1 l/ha	80	95	-

	1 l/ha	83,8	93,8	-				
	1,2 l/ha	88,8	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	87,5	100	-				
	0,8 l/ha	78,8	92,5	-				
AH/19/K/14/Dziem/03	1 l/ha	83,8	97,5	-	1 l/ha	81,3	97,5	-
	1,2 l/ha	90	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	86,3	100	-				
	0,8 l/ha	78,8	90	-				
AH/19/K/14/Gr/01	1 l/ha	83,8	95	-	1 l/ha	81,3	92,5	-
	1,2 l/ha	88,8	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	86,3	97,5	-				
	0,8 l/ha	-	78,8	90				
AH/19/K/14/Nw/01	1 l/ha	-	83,8	93,8	1 l/ha	-	83,8	95
	1,2 l/ha	-	90	100				
	1 l/ha + 0,2 l/ha (adjuvant)	-	86,3	88,5				
	0,8 l/ha	78,8	82,5	-				
AH/19/K/14/Nw/05	1 l/ha	83,8	93,8	-	1 l/ha	80	88,8	-
	1,2 l/ha	90	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	86,3	97,5	-				
	0,8 l/ha	80	87,5	-				
AH/19/K/14/Ra/02	1 l/ha	86,3	100	-	1 l/ha	82,5	100	-
	1,2 l/ha	90	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	87,5	100	-				
	0,8 l/ha	62,5	77,5	80				
Terbut 500 SC- PL07	1 l/ha	67,5	81,25	82,5	1 l/ha	75	92,5	94,75
	1,2 l/ha	75	89,25	91,75				
	1 l/ha + 0,2 l/ha (adjuvant)	77,5	96	98				
	0,8 l/ha	65	80	78,75				
Terbut 500 SC- PL08	1 l/ha	82,5	97	97,5	1 l/ha	80	87,5	86,25
	1,2 l/ha	83,75	99	100				
	1 l/ha + 0,2 l/ha (adjuvant)	86,25	99	100				
	0,8 l/ha	48,75	71,25	78,75				
Terbut 500 SC- PL09	1 l/ha	62,5	76,25	81,25	1 l/ha	82,5	95	100
	1,2 l/ha	67,5	82,5	87,5				
	1 l/ha + 0,2 l/ha (adjuvant)	71,25	82,5	99				
	0,8 l/ha	82,5	91,3	91,3				
Terbut 500 SC- PL11	1 l/ha	83,8	95	95	1 l/ha	83,8	95	95
	1,2 l/ha	80	95	95				
	1 l/ha + 0,2 l/ha (adjuvant)	85	95	95				
	0,8 l/ha	87,5	60	87,1				
Terbut 500 SC- PL12	1 l/ha	95	81,3	93,7	1 l/ha	86,3	91,3	99,7
	1,2 l/ha	92,5	80	97,6				
	1 l/ha + 0,2 l/ha (adjuvant)	95	77,5	99				
	0,8 l/ha	60	70	75				
Terbut 500 SC- PL13	1 l/ha	65	75	80	1 l/ha	82,48	95	100
	1,2 l/ha	67,48	80	90				
	1 l/ha + 0,2 l/ha (adjuvant)	70	90	99				
	0,8 l/ha	60	70	75				

A total of 12 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of CHEAL in maize (post-emergence). Trials were conducted in different regions in Poland. Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha, 1 L/ha, 1,2 L/ha and 1 L/ha with 0,2 L/ ha Hydron (adjuvant). As a standard were used Tezosar 500 SC at dose 1 L/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-13a and No. 3.2-13b).

**Table 3.2-13a: Average efficacy of TERBUT 500 SC (CHEAL).**

Average efficacy							
Terbut 500 SC				Tezosar 500 SC			
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-73 DAT
0,8 l/ha	72,86	81,05	82,99	1 l/ha	81,38	92,83	95,81
1 l/ha	79,80	89,14	89,11				
1,2 l/ha	83,08	92,98	94,55				
1 l/ha + 0,2 l/ha	83,54	93,44	96,93				

(adjuvant)							
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**Table 3.2-13b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (CHEAL).**

Average efficacy			
0,8 l/ha	1 l/ha	1,2 l/ha	1 l/ha + 0,2 l/ha (adjuvant)
78,97	86,02	90,20	91,30

### Summary and conclusion (CHEAL- post-emergence)

TERBUT 500 SC at dose 1 L/ha significantly reduced occurrence of CHEAL in maize (post-emergence). At dose 1 L/ha average efficacy 14-73 DAT reached 86,02 %. There was no significant difference between Terbut 500 SC and standard herbicide (Tezosar 500 SC). To significantly reduce CHEAL recommended dose of Terbut 500 SC is 1 L/ha.

### Maize (post-emergence)/AMARE

**Table 3.2-14: Efficacy of Terbut 500 SC in all trials (AMARE)**

product name	Terbut 500 SC					Tezosar 500 SC				
number of trial	dose	Efficacy 14 DAT	Efficacy 35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14 DAT	Efficacy 35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
AH/19/K/14/Ce/04	0,8 l/ha	77,5	88,8	-	-	1 l/ha	83,8	92,5	-	-
	1 l/ha	82,5	93,8	-	-					
	1,2 l/ha	88,8	100	-	-					
	1 l/ha + 0,2 l/ha (adjuvant)	90	100	-	-					
AH/19/K/14/Dziem/03	0,8 l/ha	78,8	90	-	-	1 l/ha	86,3	97,5	-	-
	1 l/ha	86,3	97,5	-	-					
	1,2 l/ha	90	100	-	-					
	1 l/ha + 0,2 l/ha (adjuvant)	88,8	100	-	-					
AH/19/K/14/Gr/01	0,8 l/ha	80	91,3	-	-	1 l/ha	80	91,3	-	-
	1 l/ha	82,5	93,8	-	-					
	1,2 l/ha	87,5	98,8	-	-					
	1 l/ha + 0,2 l/ha (adjuvant)	86,3	97,5	-	-					
AH/19/K/14/Nw/01	0,8 l/ha	-	76,3	-	87,5	1 l/ha	-	82,5	-	95
	1 l/ha	-	83,8	-	93,8					
	1,2 l/ha	-	90	-	100					
	1 l/ha + 0,2 l/ha (adjuvant)	-	86,3	-	97,5					
AH/19/K/14/Nw/05	0,8 l/ha	77,5	88,8	-	-	1 l/ha	81,3	92,5	-	-
	1 l/ha	83,8	95	-	-					
	1,2 l/ha	90	100	-	-					
	1 l/ha + 0,2 l/ha (adjuvant)	86,3	97,5	-	-					
AH/19/K/14/Ra/02	0,8 l/ha	78,8	86,3	-	-	1 l/ha	88,8	97,5	-	-
	1 l/ha	88,8	97,5	-	-					
	1,2 l/ha	90	100	-	-					
	1 l/ha + 0,2 l/ha (adjuvant)	90	100	-	-					
Terbut 500 SC- PL06	0,8 l/ha	-	53,8	77,5	82,5	1 l/ha	-	67,5	87,5	96,3
	1 l/ha	-	61,3	82,5	93,8					
	1,2 l/ha	-	62,5	82,5	97,5					
	1 l/ha + 0,2 l/ha (adjuvant)	-	63,8	87,5	97,5					
Terbut 500 SC- PL08	0,8 l/ha	82,5	85	86,25	-	1 l/ha	86,25	99	100	-
	1 l/ha	88,75	99	100	-					
	1,2 l/ha	90	99	100	-					



	1 l/ha + 0,2 l/ha (adjuvant)	88,75	99	100	-					
Terbut 500 SC- PL10	0,8 l/ha	45	68,75	73,75	-	1 l/ha	81,25	86,25	88,75	-
	1 l/ha	68,75	80	81,25	-					
	1,2 l/ha	77,5	87,5	90	-					
	1 l/ha + 0,2 l/ha (adjuvant)	78,75	90	92,5	-					
Terbut 500 SC- PL11	0,8 l/ha	83,8	93,8	93,8	-	1 l/ha	83,8	93,8	93,8	-
	1 l/ha	81,3	93,8	93,8	-					
	1,2 l/ha	87,5	93,8	93,8	-					
	1 l/ha + 0,2 l/ha (adjuvant)	82,5	92,5	92,5	-					

A total of 10 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of AMARE in maize (post-emergence). Trials were conducted in different regions in Poland. Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha, 1 L/ha, 1,2 L/ha and 1 L/ha with 0,2 L/ ha Hydron (adjuvant). As a standard were used Tezosar 500 SC at dose 1 L/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-14a and No. 3.2-14b).

**Table 3.2-14a: Average efficacy of TERBUT 500 SC (AMARE).**

Average efficacy									
Terbut 500 SC					Tezosar 500 SC				
dose	Efficacy 14 DAT	Efficacy 35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14 DAT	Efficacy 35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
0,8 l/ha	75,49	82,29	82,83	85	1 l/ha	83,94	90,04	92,51	95,65
1 l/ha	82,84	89,55	89,39	93,8					
1,2 l/ha	87,66	93,16	91,58	98,75					
1 l/ha + 0,2 l/ha (adjuvant)	86,43	92,66	93,13	97,5					

**Table 3.2-14b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (AMARE).**

Average efficacy			
0,8 l/ha	1 l/ha	1,2 l/ha	1 l/ha + 0,2 l/ha (adjuvant)
81,40	88,89	92,79	92,43

### Summary and conclusion (AMARE- post-emergence)

TERBUT 500 SC at dose 1 L/ha significantly reduced occurrence of AMARE in maize (post-emergence). At dose 1 L/ha average efficacy 14-73 DAT reached 88,89 %. There was no significant different between Terbut 500 SC and standard herbicide (Tezosar 500 SC). To significantly reduce AMARE recommended dose of Terbut 500 SC is 1 L/ha.

### Maize (post-emergence)/GALAP

**Table 3.2-15: Efficacy of Terbut 500 SC in all trials (GALAP)**

product name	Terbut 500 SC				Tezosar 500 SC			
number of trial	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT
AH/19/K/14/Ce/04	0,8 l/ha	77,5	88,8	-	1 l/ha	80	92,5	-
	1 l/ha	82,5	93,8	-				
	1,2 l/ha	88,8	100	-				



	1 l/ha + 0,2 l/ha (adjuvant)	90	100	-				
AH/19/K/14/Dziem/03	0,8 l/ha	78,8	90	-	1 l/ha	83,8	95	-
	1 l/ha	86,3	97,5	-				
	1,2 l/ha	90	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	88,8	100	-				
AH/19/K/14/Gr/01	0,8 l/ha	77,5	90	-	1 l/ha	81,3	91,3	-
	1 l/ha	86,3	97,5	-				
	1,2 l/ha	88,8	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	86,3	97,5	-				
AH/19/K/14/Nw/05	0,8 l/ha	78,8	90	-	1 l/ha	80	92,5	-
	1 l/ha	83,8	95	-				
	1,2 l/ha	90	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	86,3	97,5	-				
AH/19/K/14/Ra/02	0,8 l/ha	78,8	85	-	1 l/ha	87,5	96,3	-
	1 l/ha	88,8	97,5	-				
	1,2 l/ha	90	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	90	100	-				
Terbut 500 SC- PL07	0,8 l/ha	72,5	83,75	82,57	1 l/ha	85	99	99,44
	1 l/ha	77,5	87,5	90				
	1,2 l/ha	85	99	99,75				
	1 l/ha + 0,2 l/ha (adjuvant)	87,5	99	99,94				
Terbut 500 SC- PL09	0,8 l/ha	53,75	77,5	82,5	1 l/ha	78,75	95	100
	1 l/ha	61,25	83,75	88,75				
	1,2 l/ha	67,5	88,75	95				
	1 l/ha + 0,2 l/ha (adjuvant)	72	92,5	99				

A total of 7 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of GALAP in maize (post-emergence). Trials were conducted in different regions in Poland. Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha, 1 L/ha, 1,2 L/ha and 1 L/ha with 0,2 L/ ha Hydron (adjuvant). As a standard were used Tezosar 500 SC at dose 1 L/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-15a and No. 3.2-15b).

**Table 3.2-15a: Average efficacy of TERBUT 500 SC (GALAP).**

Average efficacy							
Terbut 500 SC				Tezosar 500 SC			
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT
0,8 l/ha	73,95	86,44	82,54	1 l/ha	82,34	94,51	99,72
1 l/ha	80,92	93,22	89,38				
1,2 l/ha	85,73	98,25	97,38				
1 l/ha + 0,2 l/ha (adjuvant)	85,84	98,07	99,47				

**Table 3.2-15b: Summary of average efficacy 14-56 DAT of TERBUT 500 SC (GALAP).**

Average efficacy			
0,8 l/ha	1 l/ha	1,2 l/ha	1 l/ha + 0,2 l/ha (adjuvant)
80,97	87,84	93,78	94,46

### Summary and conclusion (GALAP- post-emergence)

TERBUT 500 SC at dose 1 L/ha significantly reduced occurrence of GALAP in maize (post-emergence). At dose 1 L/ha average efficacy 14-56 DAT reached 87,84 %. There was no significant different between Terbut 500 SC and standard herbicide (Tezosar 500 SC). To significantly reduce GALAP recommended dose of Terbut 500 SC is 1 L/ha.

**Maize (post-emergence)/MATIN**

**Table 3.2-16: Efficacy of Terbut 500 SC in all trials (MATIN)**

product name	Terbut 500 SC					Tezosar 500 SC				
number of trial	dose	Efficacy 14 DAT	Efficacy 35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14 DAT	Efficacy 35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
AH/19/K/14/Ce/04	0,8 l/ha	78,8	90	-	-	1 l/ha	82,5	95	-	-
	1 l/ha	82,5	93,8	-	-					
	1,2 l/ha	88,8	100	-	-					
	1 l/ha + 0,2 l/ha (adjuvant)	90	100	-	-					
AH/19/K/14/Dziem/03	0,8 l/ha	85	97,5	-	-	1 l/ha	86,3	97,5	-	-
	1 l/ha	86,3	97,5	-	-					
	1,2 l/ha	90	100	-	-					
	1 l/ha + 0,2 l/ha (adjuvant)	88,8	100	-	-					
AH/19/K/14/Gr/01	0,8 l/ha	78,8	90	-	-	1 l/ha	81,3	92,5	-	-
	1 l/ha	82,5	93,8	-	-					
	1,2 l/ha	86,3	97,5	-	-					
	1 l/ha + 0,2 l/ha (adjuvant)	83,8	95	-	-					
AH/19/K/14/Nw/01	0,8 l/ha	-	76,3	-	87,5	1 l/ha	-	80	-	91,3
	1 l/ha	-	83,8	-	93,8					
	1,2 l/ha	-	90	-	100					
	1 l/ha + 0,2 l/ha (adjuvant)	-	86,3	-	97,5					
AH/19/K/14/Nw/05	0,8 l/ha	80	91,3	-	-	1 l/ha	80	92,5	-	-
	1 l/ha	83,8	95	-	-					
	1,2 l/ha	90	100	-	-					
	1 l/ha + 0,2 l/ha (adjuvant)	88,8	100	-	-					
AH/19/K/14/Ra/02	0,8 l/ha	75	82,5	-	-	1 l/ha	88,8	97,5	-	-
	1 l/ha	88,8	97,5	-	-					
	1,2 l/ha	90	100	-	-					
	1 l/ha + 0,2 l/ha (adjuvant)	90	100	-	-					
Terbut 500 SC- PL06	0,8 l/ha	-	52,5	77,5	81,3	1 l/ha	-	62,5	92,5	98,8
	1 l/ha	-	56,3	87,5	95					
	1,2 l/ha	-	60	87,5	97,5					
	1 l/ha + 0,2 l/ha (adjuvant)	-	62,5	91,3	97,5					
Terbut 500 SC- PL09	0,8 l/ha	61,25	81,24	87,5	-	1 l/ha	82,5	95	100	-
	1 l/ha	62,5	85	91,25	-					
	1,2 l/ha	67,5	90	95	-					
	1 l/ha + 0,2 l/ha (adjuvant)	82,5	93,74	99	-					
Terbut 500 SC- PL12	0,8 l/ha	96,3	100	100	-	1 l/ha	98,8	98,8	100	-
	1 l/ha	97,5	100	100	-					
	1,2 l/ha	98,8	100	100	-					
	1 l/ha + 0,2 l/ha (adjuvant)	98,8	100	100	-					

A total of 9 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of MATIN in maize (post-emergence). Trials were conducted in different regions in Poland. Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha, 1 L/ha, 1,2 L/ha and 1 L/ha with 0,2 L/ ha Hydron (adjuvant). As a standard were used Tezosar 500 SC at dose 1 L/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-16a and No. 3.2-16b).

**Table 3.2-16a: Average efficacy of TERBUT 500 SC (MATIN).**

Average efficacy									
Terbut 500 SC					Tezosar 500 SC				
dose	Efficacy 14 DAT	Efficacy 35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14 DAT	Efficacy 35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
0,8 l/ha	79,31	84,86	88,33	84,4	1 l/ha	85,74	90,14	97,50	95,05
1 l/ha	83,41	88,15	92,92	94,4					
1,2 l/ha	87,34	92,19	94,17	98,75					
1 l/ha + 0,2 l/ha (adjuvant)	88,96	92,19	96,77	97,5					

**Table 3.2-16b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (MATIN).**

Average efficacy			
0,8 l/ha	1 l/ha	1,2 l/ha	1 l/ha + 0,2 l/ha (adjuvant)
84,22	89,72	93,11	93,85

### Summary and conclusion (MATIN- post-emergence)

TERBUT 500 SC at dose 1 L/ha significantly reduced occurrence of MATIN in maize (post-emergence). At dose 1 L/ha average efficacy 14-73 DAT reached 89,72 %. There was no significant difference between Terbut 500 SC and standard herbicide (Tezosar 500 SC). To significantly reduce MATIN recommended dose of Terbut 500 SC is 1 L/ha.

### Maize (post-emergence)/VERAR

**Table 3.2-17: Efficacy of Terbut 500 SC in all trials (VERAR)**

product name	Terbut 500 SC				Tezosar 500 SC			
number of trial	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT
AH/19/K/14/Ce/04	0,8 l/ha	76,3	88,8	-	1 l/ha	81,3	95	-
	1 l/ha	83,8	95	-				
	1,2 l/ha	88,8	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	90	100	-				
AH/19/K/14/Dziem/03	0,8 l/ha	80	91,3	-	1 l/ha	86,3	97,5	-
	1 l/ha	85	96,3	-				
	1,2 l/ha	90	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	88,8	100	-				
AH/19/K/14/Gr/01	0,8 l/ha	75	86,3	-	1 l/ha	77,5	88,8	-
	1 l/ha	80	90	-				
	1,2 l/ha	81,3	92,5	-				
	1 l/ha + 0,2 l/ha (adjuvant)	80	90	-				
AH/19/K/14/Nw/05	0,8 l/ha	77,5	88,8	-	1 l/ha	80	92,5	-
	1 l/ha	86,3	97,5	-				
	1,2 l/ha	90	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	86,3	97,5	-				
AH/19/K/14/Ra/02	0,8 l/ha	78,8	87,5	-	1 l/ha	88,8	97,5	-
	1 l/ha	88,8	97,5	-				
	1,2 l/ha	90	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	90	100	-				
Terbut 500 SC- PL09	0,8 l/ha	57,5	77,5	81,24	1 l/ha	81,25	95	100
	1 l/ha	62,5	83,75	88,74				
	1,2 l/ha	68,75	87,5	93,74				
	1 l/ha + 0,2 l/ha (adjuvant)	77,5	93,75	99				

A total of 6 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of VERAR in maize (post-emergence). Trials were conducted in different regions in Poland. Trials were made of

randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha, 1 L/ha, 1,2 L/ha and 1 L/ha with 0,2 L/ ha Hydron (adjuvant). As a standard were used Tezosar 500 SC at dose 1 L/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-17a and No. 3.2-17b).

**Table 3.2-17a: Average efficacy of TERBUT 500 SC (VERAR).**

Average efficacy							
Terbut 500 SC				Tezosar 500 SC			
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT
0,8 l/ha	73,26	86,70	81,24	1 l/ha	82,53	94,38	100,00
1 l/ha	79,52	93,34	88,74				
1,2 l/ha	83,77	96,67	93,74				
1 l/ha + 0,2 l/ha (adjuvant)	84,52	96,88	99				

**Table 3.2-17b: Summary of average efficacy 14-56 DAT of TERBUT 500 SC (VERAR).**

Average efficacy			
0,8 l/ha	1 l/ha	1,2 l/ha	1 l/ha + 0,2 l/ha (adjuvant)
80,40	87,20	91,39	93,47

### Summary and conclusion (VERAR- post-emergence)

TERBUT 500 SC at dose 1 L/ha significantly reduced occurrence of VERAR in maize (post-emergence). At dose 1 L/ha average efficacy 14-56 DAT reached 87,2 %. There was no significant different between Terbut 500 SC and standard herbicide (Tezosar 500 SC). To significantly reduce VERAR recommended dose of Terbut 500 SC is 1 L/ha.

### Maize (post-emergence)/POLCO

**Table 3.2-18: Efficacy of Terbut 500 SC in all trials (POLCO)**

product name	Terbut 500 SC				Tezosar 500 SC			
number of trial	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT
AH/19/K/14/Dziem/03	0,8 l/ha	73,8	85	-	1 l/ha	86,3	97,5	-
	1 l/ha	86,3	97,5	-				
	1,2 l/ha	90	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	88,8	100	-				
AH/19/K/14/Gr/01	0,8 l/ha	77,5	90	-	1 l/ha	81,3	91,3	-
	1 l/ha	78,8	88,8	-				
	1,2 l/ha	81,3	91,3	-				
	1 l/ha + 0,2 l/ha (adjuvant)	77,5	88,8	-				
AH/19/K/14/Nw/05	0,8 l/ha	76,3	87,5	-	1 l/ha	77,5	88,8	-
	1 l/ha	83,8	95	-				
	1,2 l/ha	90	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	86,3	97,5	-				
Terbut 500 SC- PL07	0,8 l/ha	70	85	83,75	1 l/ha	86,25	99	100
	1 l/ha	81,25	94,75	97				
	1,2 l/ha	86,25	99	100				
	1 l/ha + 0,2 l/ha (adjuvant)	87,5	99	100				
Terbut 500 SC- PL08	0,8 l/ha	78,75	83,75	82,5	1 l/ha	87,5	99	100
	1 l/ha	83,75	98	97				
	1,2 l/ha	85	99	100				

	1 l/ha + 0,2 l/ha (adjuvant)	85	99	100				
Terbut 500 SC- PL10	0,8 l/ha	65	77,5	78,75	1 l/ha	80	85	87,5
	1 l/ha	66,25	78,75	81,25				
	1,2 l/ha	76,25	87,5	90				
	1 l/ha + 0,2 l/ha (adjuvant)	76,25	87,5	91,25				

A total of 6 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of POLCO in maize (post-emergence). Trials were conducted in different regions in Poland. Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha, 1 L/ha, 1,2 L/ha and 1 L/ha with 0,2 L/ ha Hydron (adjuvant). As a standard were used Tezosar 500 SC at dose 1 L/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-18a and No. 3.2-18b).

**Table 3.2-18a: Average efficacy of TERBUT 500 SC (POLCO).**

Average efficacy							
Terbut 500 SC				Tezosar 500 SC			
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT
0,8 l/ha	73,56	84,79	81,67	1 l/ha	83,14	93,43	95,83
1 l/ha	80,03	92,13	91,75				
1,2 l/ha	84,80	96,13	96,67				
1 l/ha + 0,2 l/ha (adjuvant)	83,56	95,30	97,08				

**Table 3.2-18b: Summary of average efficacy 14-56 DAT of TERBUT 500 SC (POLCO).**

Average efficacy			
0,8 l/ha	1 l/ha	1,2 l/ha	1 l/ha + 0,2 l/ha (adjuvant)
80,01	87,97	92,53	91,98

### Summary and conclusion (POLCO- post-emergence)

TERBUT 500 SC at dose 1 L/ha significantly reduced occurrence of POLCO in maize (post-emergence). At dose 1 L/ha average efficacy 14-56 DAT reached 87,97 %. There was no significant different between Terbut 500 SC and standard herbicide (Tezosar 500 SC). To significantly reduce POLCO recommended dose of Terbut 500 SC is 1 L/ha.

### Maize (post-emergence)/SOLNI

**Table 3.2-19: Efficacy of Terbut 500 SC in all trials (SOLNI)**

product name	Terbut 500 SC				Tezosar 500 SC			
number of trial	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT
AH/19/K/14/Dziem/03	0,8 l/ha	78,8	90	-	1 l/ha	86,3	97,5	-
	1 l/ha	86,3	97,5	-				
	1,2 l/ha	90	100	-				
	1 l/ha + 0,2 l/ha (adjuvant)	88,8	100	-				
Terbut 500 SC- PL08	0,8 l/ha	68,75	78,75	78,91	1 l/ha	86,25	99	100
	1 l/ha	78,75	92,5	92,7				
	1,2 l/ha	83,75	96	99,75				
	1 l/ha + 0,2 l/ha (adjuvant)	86,25	99	100				
Terbut 500 SC- PL10	0,8 l/ha	66,25	77,5	81,25	1 l/ha	78,75	81,25	85
	1 l/ha	77,5	83,75	86,25				
	1,2 l/ha	78,75	85	88,75				

	1 l/ha + 0,2 l/ha (adjuvant)	82,5	88,75	91,25				
Terbut 500 SC- PL11	0,8 l/ha	83,8	91,3	91,3	1 l/ha	81,3	93,8	93,8
	1 l/ha	83,8	92,5	92,5				
	1,2 l/ha	83,8	93,8	93,8				
	1 l/ha + 0,2 l/ha (adjuvant)	83,8	91,3	91,3				
Terbut 500 SC- PL12	0,8 l/ha	72,5	73,8	78,8	1 l/ha	96,3	93,8	97,5
	1 l/ha	95	95	98,8				
	1,2 l/ha	97,5	98,8	100				
	1 l/ha + 0,2 l/ha (adjuvant)	98,8	98,8	100				
Terbut 500 SC- PL13	0,8 l/ha	50	75	82,5	1 l/ha	81,3	82	99
	1 l/ha	60	80	85				
	1,2 l/ha	63,76	85	91,25				
	1 l/ha + 0,2 l/ha (adjuvant)	68,77	85	95				

A total of 6 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of SOLNI in maize (post-emergence). Trials were conducted in different regions in Poland. Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha, 1 L/ha, 1,2 L/ha and 1 L/ha with 0,2 L/ ha Hydron (adjuvant). As a standard were used Tezosar 500 SC at dose 1 L/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-19a and No. 3.2-19b).

**Table 3.2-19a: Average efficacy of TERBUT 500 SC (SOLNI).**

Average efficacy							
Terbut 500 SC				Tezosar 500 SC			
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT
0,8 l/ha	70,02	81,06	82,55	1 l/ha	85,03	91,23	95,06
1 l/ha	80,23	90,21	91,05				
1,2 l/ha	82,93	93,10	94,71				
1 l/ha + 0,2 l/ha (adjuvant)	84,82	93,81	95,51				

**Table 3.2-19b: Summary of average efficacy 14-56 DAT of TERBUT 500 SC (SOLNI).**

Average efficacy			
0,8 l/ha	1 l/ha	1,2 l/ha	1 l/ha + 0,2 l/ha (adjuvant)
77,88	87,16	90,25	91,38

### Summary and conclusion (SOLNI- post-emergence)

TERBUT 500 SC at dose 1 L/ha significantly reduced occurrence of SOLNI in maize (post-emergence). At dose 1 L/ha average efficacy 14-56 DAT reached 87,16 %. There was no significant different between Terbut 500 SC and standard herbicide (Tezosar 500 SC). To significantly reduce SOLNI recommended dose of Terbut 500 SC is 1 L/ha.

### Maize (post-emergence)/MATCH

**Table 3.2-20: Efficacy of Terbut 500 SC in all trials (MATCH)**

product name	Terbut 500 SC	Tezosar 500 SC
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number of trial	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
AH/19/K/14/NW/01	0,8 l/ha	-	77,5	-	88,8	1 l/ha	-	83,8	-	95
	1 l/ha	-	83,8	-	93,8					
	1,2 l/ha	-	90	-	100					
	1 l/ha + 0,2 l/ha (adjuvant)	-	86,3	-	96,3					
Terbut 500 SC-PL06	0,8 l/ha	-	57,5	80,5	78	1 l/ha	-	61,3	87,5	97,8
	1 l/ha	-	60	86,5	93,8					
	1,2 l/ha	-	65	88	99,3					
	1 l/ha + 0,2 l/ha (adjuvant)	-	60	86,3	96,5					
Terbut 500 SC-PL13	0,8 l/ha	69	80	87,5	-	1 l/ha	82,5	95	100	-
	1 l/ha	84,17	85	90	-					
	1,2 l/ha	89,25	90	95	-					
	1 l/ha + 0,2 l/ha (adjuvant)	86,87	93,75	99	-					

A total of 3 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of MATCH in maize (post-emergence). Trials were conducted in different regions in Poland. Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha, 1 L/ha, 1,2 L/ha and 1 L/ha with 0,2 L/ha Hydron (adjuvant). As a standard were used Tezosar 500 SC at dose 1 L/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-20a and No. 3.2-20b).

**Table 3.2-20a: Average efficacy of TERBUT 500 SC (MATCH).**

Average efficacy									
Terbut 500 SC					Tezosar 500 SC				
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
0,8 l/ha	69	71,67	84,00	83,4	1 l/ha	82,50	80,03	93,75	96,4
1 l/ha	84,17	76,27	88,25	93,8					
1,2 l/ha	89,25	81,67	91,50	99,65					
1 l/ha + 0,2 l/ha (adjuvant)	86,87	80,02	92,65	96,4					

**Table 3.2-20b: Summary of average efficacy 14-56 DAT of TERBUT 500 SC (MATCH).**

Average efficacy			
0,8 l/ha	1 l/ha	1,2 l/ha	1 l/ha + 0,2 l/ha (adjuvant)
77,02	85,62	90,52	88,98

### Summary and conclusion (MATCH- post-emergence)

TERBUT 500 SC at dose 1 L/ha significantly reduced occurrence of MATCH in maize (post-emergence). At dose 1 L/ha average efficacy 14-56 DAT reached 85,62 %. There was no significant different between Terbut 500 SC and standard herbicide (Tezosar 500 SC). To significantly reduce MATCH recommended dose of Terbut 500 SC is 1 L/ha.

### Maize (post-emergence)/CENCY



**Table 3.2-21: Efficacy of Terbut 500 SC in all trials (CENCY)**

product name	Terbut 500 SC					Tezosar 500 SC				
number of trial	dose	Efficacy 14- 16 DAT	Efficacy 28 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14- 16 DAT	Efficacy 28 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
Terbut 500 SC- PL06	0,8 l/ha	-	42,5	62,5	75	1 l/ha	-	57,5	80	85
	1 l/ha	-	47,5	68,8	80					
	1,2 l/ha	-	58,8	77,5	82,5					
	1 l/ha + 0,2 l/ha (adjuvant)	-	56,3	78,8	86,3					
Terbut 500 SC- PL13	0,8 l/ha	55	80	87,5	-	1 l/ha	80	95	100	-
	1 l/ha	60	85	90	-					
	1,2 l/ha	67,53	90	95	-					
	1 l/ha + 0,2 l/ha (adjuvant)	72,54	92,5	99	-					

A total of 2 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of CENCY in maize (post-emergence). Trials were conducted in different regions in Poland. Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha, 1 L/ha, 1,2 L/ha and 1 L/ha with 0,2 L/ ha Hydron (adjuvant). As a standard were used Tezosar 500 SC at dose 1 L/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-21a and No. 3.2-21b).

**Table 3.2-21a: Average efficacy of TERBUT 500 SC (CENCY).**

Average efficacy									
Terbut 500 SC					Tezosar 500 SC				
dose	Efficacy 14- 16 DAT	Efficacy 28 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14- 16 DAT	Efficacy 28 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
0,8 l/ha	55	61,25	75,00	75	1 l/ha	80,00	76,25	90,00	85
1 l/ha	60	66,25	79,40	80					
1,2 l/ha	67,53	74,40	86,25	82,5					
1 l/ha + 0,2 l/ha (adjuvant)	72,54	74,40	88,90	86,3					

**Table 3.2-21b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (CENCY).**

Average efficacy			
0,8 l/ha	1 l/ha	1,2 l/ha	1 l/ha + 0,2 l/ha (adjuvant)
66,56	71,41	77,67	80,54

### Summary and conclusion (CENCY- post-emergence)

TERBUT 500 SC at dose 1 L/ha reduced occurrence of CENCY in maize (post-emergence). At dose 1 L/ha average efficacy 14-73 DAT reached 71,41 %. There was no significant different between Terbut 500 SC and standard herbicide (Tezosar 500 SC). To reduce CENCY recommended dose of Terbut 500 SC is 1 L/ha.

### Maize (post-emergence)/STEME

**Table 3.2-22: Efficacy of Terbut 500 SC in all trials (STEME)**

product name	Terbut 500 SC					Tezosar 500 SC				
number of trial	dose	Efficacy 14- 16 DAT	Efficacy 28 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14- 16 DAT	Efficacy 28 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT

Terbut 500 SC-PL06	0,8 l/ha	-	52,5	78,8	87,5	1 l/ha	-	66,3	88,8	98,8
	1 l/ha	-	57,5	83,8	97,5					
	1,2 l/ha	-	60	85	98,8					
	1 l/ha + 0,2 l/ha (adjuvant)	-	62,5	87,5	98,8					
Terbut 500 SC-PL13	0,8 l/ha	60	80	87,5	-	1 l/ha	82,5	95	100	-
	1 l/ha	61,25	85	90	-					
	1,2 l/ha	66,25	90	95	-					
	1 l/ha + 0,2 l/ha (adjuvant)	82,5	93,75	99	-					

A total of 2 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of STEME in maize (post-emergence). Trials were conducted in different regions in Poland. Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha, 1 L/ha, 1,2 L/ha and 1 L/ha with 0,2 L/ ha Hydron (adjuvant). As a standard were used Tezosar 500 SC at dose 1 L/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-22a and No. 3.2-22b).

**Table 3.2-22a: Average efficacy of TERBUT 500 SC (STEME).**

Average efficacy									
Terbut 500 SC					Tezosar 500 SC				
dose	Efficacy 14- 16 DAT	Efficacy 28 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT	dose	Efficacy 14- 16 DAT	Efficacy 28 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
0,8 l/ha	60	66,25	83,15	87,5	1 l/ha	82,50	80,65	94,40	98,8
1 l/ha	61,25	71,25	86,90	97,5					
1,2 l/ha	66,25	75,00	90,00	98,8					
1 l/ha + 0,2 l/ha (adjuvant)	82,5	78,13	93,25	98,8					

**Table 3.2-22b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (STEME).**

Average efficacy			
0,8 l/ha	1 l/ha	1,2 l/ha	1 l/ha + 0,2 l/ha (adjuvant)
74,23	79,23	82,51	88,17

### Summary and conclusion (STEME- post-emergence)

TERBUT 500 SC at dose 1 L/ha reduced occurrence of STEME in maize (post-emergence). At dose 1 L/ha average efficacy 14-73 DAT reached 79,23 %. At dose 1 l/ha + 0,2 l/ha Hydron (adjuvant) average efficacy 14-73 DAT reached 88,17 %. There was no significant different between Terbut 500 SC and standard herbicide (Tezosar 500 SC). To reduce STEME (medium sensitive) recommended dose of Terbut 500 SC is 1 L/ha. To significantly reduce STEME (sensitive) recommended dose of Terbut 500 SC is 1l/ha + 0,2 l/ha Hydron (adjuvant).

**Table 3.2-23: Summary of efficacy 14-73 DAT of TERBUT 500 SC in maize (post-emergence).**

Weed Species	Efficacy of Terbut 500 SC assessed 14-73 DAA					Comments - weed classification according to EPPO scale of efficacy
	No. of trials where weed occurred	0,8 l/ha	1 l/ha	1,2 l/ha	1 l/ha + 0,2 l/a (adiuwant)	

						cy *
CHEAL	12	78,97	86,02	90,20	91,30	
VIOAR	12	85,28	90,37	93,06	93,87	
AMARE	10	81,40	88,89	92,79	92,43	
GALAP	7	80,97	87,84	93,78	94,46	
MATIN	9	84,22	89,72	93,11	93,85	
CAPBP	7	87,72	93,95	95,73	95,85	
VERAR	6	80,4	87,20	91,39	93,47	
POLCO	6	80,01	87,97	92,53	91,98	
SOLNI	6	77,88	87,16	90,25	91,38	
MATCH	3	77,02	85,62	90,52	88,98	
STEME	2	74,23	79,23	82,51	88,17	
CENCY	2	66,56	71,41	77,67	80,54	

> 85%	effective
70-85%	medium effective
60-70%	medium resistant
<60 %	resistant

### Summary and conclusion: maize (post-emergence)

Terbut 500 SC at dose 1L/ha significantly reduced occurrence of CHEAL, VIOAR, AMARE, GALAP, MATIN, CAPBP, VERAR, POLCO, SOLNI and MATCH in maize (post- emergence). Terbut 500 SC was medium effective to reduce STEME and CENCY at dose 1L/ha. To significantly reduce occurrence of STEME recommended dose is 1L/ha + 0,2 l/ha Hydron (adjuvant). There was no significant different between Terbut 500 SC and standard herbicide (Tezosar 500 SC).

### Maize (pre-emergence)/CHEAL

**Table 3.2-24: Efficacy of Terbut 500 SC in all trials (CHEAL)**

product name	Terbut 500 SC					Lumax 537,5 SE				
number of trial	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
SGS/2017/145/PL 01 (300 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	93,8	47,5	47,5	15	3,5 l/ha	100	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	99	50	50	20					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	100	60	60	62,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	100	76,3	76,3	76,3					
SGS/2017/145/PL 02 (300 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	88,8	47,5	27,5	27,5	3,5 l/ha	88,8	100	71,3	85
	1 l/ha + 0,2 l/ha (adjuvant)	78,8	50	27,5	27,5					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	87,5	60	27,5	37,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	90	76,3	40	62,5					
SGS/2017/145/PL 03 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	82,5	91,3	85	100	3,5 l/ha	100	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	90	92,5	93,8	100					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	87,5	91,3	92,5	100					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	100	100	98,8	100					
SGS/2017/145/PL 04 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	87	99	95,5	99	3,5 l/ha	90	99	99	99
	1 l/ha + 0,2 l/ha (adjuvant)	92,5	99	93,5	96,8					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	90	99	86,3	92,3					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	96,8	99	98,8	96,8					
SGS/2017/145/PL 05 (300 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	96	100	99	99	3,5 l/ha	100	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	100	100	99	99					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	100	100	99,5	99,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	100	100	99,5	99,5					
SGS/2017/145/PL 06 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	93,8	98,8	100	100	3,5 l/ha	100	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	99	100	100	100					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	100	98,8	98,8	100					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	100	100	100	100					
SGS2017H001C Z01 (200l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	58,8	-	61,3	62,5	Gardo gold 500 SC				
	1 l/ha + 0,2 l/ha (adjuvant)	80	-	80	82,5					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	88,8	-	91,3	92,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	98,3	-	99	99,5					
						4 l/ha	99,3	-	99,8	100

SGS201 7H001G ER01 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	46,3	-	58,8	46,3	4 l/ha	62,5	-	95,3	93
	1 l/ha + 0,2 l/ha (adjuvant)	60	-	60	62,5					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	73,8	-	63,8	70					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	82,5	-	86,3	83,8					
SGS201 7H001G ER02 (200l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	60	75	100	100	4 l/ha	85	85	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	64	75	100	100					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	80	80	100	100					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	85	85	100	100					
SGS201 7H001G ER03 (200l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	-	90	40	76,3	4 l/ha	-	93,8	47,5	50
	1 l/ha + 0,2 l/ha (adjuvant)	-	92,5	47,5	90					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	92,5	83,8	92,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	-	95	85	100					
SGS201 7H001G ER04 (200l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	99	-	57,5	51,3	4 l/ha	99	-	95,3	95,3
	1 l/ha + 0,2 l/ha (adjuvant)	99	-	60	55					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	99	-	65	62,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	99	-	86,3	87,5					
SGS201 7H001G ER05 (200l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	93,8	98,8	100	100	4 l/ha	100	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	99	100	100	100					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	100	98,8	98,8	100					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	100	100	100	100					
AH/19/K /14/Nw/ 01	0,8 l/ha+0,2 l/ha (adjuvant)	92,5	95	-	96,3	Lumax 537,5 SE				
	1 l/ha + 0,2 l/ha (adjuvant)	100	100	-	100	3,5 l/ha	100	100	-	100
	1,2 l/ha+ 0,2 l/ha (adjuvant)	100	100	-	100					
	1 l/ha	97,5	97,5	-	97,5					

A total of 13 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of CHEAL in maize (pre-emergence). Trials were conducted in different countries (Poland, Czech Republic, Germany). Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 1 L/ha, 0,8 L/ha with 0,2 L/ ha **Hydron** (adjuvant), 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant), 1,2 L/ha with 0,2 L/ ha **Hydron** (adjuvant) and 1,5 L/ha with 0,2 L/ ha **Hydron** (adjuvant). As a standards were used Lumax 537,5 SE at dose 3,5 l/ha and Gardo Gold 500 SC at dose 4 l/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-24a and No. 3.2-24b).

**Table 3.2-24a: Average efficacy of TERBUT 500 SC (CHEAL).**

Average efficacy									
Terbut 500 SC					Lumax 537,5 SE				
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT
0,8 l/ha+0,2 l/ha (adju- vant)	82,69	84,29	72,68	74,86	3,5 l/ha	96,97	99,86	95,05	97,71
1 l/ha + 0,2 l/ha (adju- vant)	88,44	85,90	75,94	79,48					
1,2 l/ha+ 0,2 l/ha (adju- vant)	92,22	88,04	80,61	85,33	Gardo gold 500 SC				
1,5 l/ha+ 0,2 l/ha (adju- vant)	95,60	94,41	89,17	92,16	4 l/ha	89,16	92,93	89,65	89,72
1 l/ha	97,5	97,5	-	97,5					

**Table 3.2-24b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (CHEAL).**

Average efficacy				
0,8 l/ha+0,2 l/ha (adjuvant)	1 l/ha + 0,2 l/ha (adjuvant)	1,2 l/ha+ 0,2 l/ha (adjuvant)	1,5 l/ha+ 0,2 l/ha (adjuvant)	1 l/ha
78,63	82,44	86,55	92,83	97,50

### Summary and conclusion (CHEAL- pre-emergence)

TERBUT 500 SC at dose 1 L/ha reduced occurrence of CHEAL in maize (pre-emergence). At dose 1

L/ha average efficacy 14-73 DAT reached 97,5 %. There was no significant different between Terbut 500 SC and standard herbicides (Lumax 537,3 SE, Gardo Gold 500 SC). To significantly reduce CHEAL recommended dose of Terbut 500 SC is 1 L/ha.

## Maize (pre-emergence)/VIOAR

**Table 3.2-25: Efficacy of Terbut 500 SC in all trials (VIOAR)**

product name	Terbut 500 SC					Lumax 537,5 SE				
	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
SGS/2017/145/P L02 (300 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	80	99	45	85	3,5 l/ha	82,5	100	82,5	100
	1 l/ha + 0,2 l/ha (adjuvant)	76,3	99	36,3	95					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	77,5	99,5	37,5	100					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	86,3	99,5	47,5	100					
SGS/2017/145/P L04 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	55	71,3	10	12,5	3,5 l/ha	92,3	89,3	98,8	99
	1 l/ha + 0,2 l/ha (adjuvant)	90	96,8	50	72,5					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	88,8	95	80	72,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	94,5	96,8	91,8	96,5					
SGS/2017/145/P L05 (300 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	93,8	94,5	88,8	86,3	3,5 l/ha	100	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	99	99	90	87,5					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	100	99,3	99,3	99,3					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	100	99,8	98,3	98,3					
SGS/2017/145/P L06 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)		88,8	67,5	70	3,5 l/ha	-	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)		88,8	95	85					
	1,2 l/ha+ 0,2 l/ha (adjuvant)		100	93,8	87,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)		98,8	97,5	100					
SGS2017H001G ER05 (200l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	-	88,8	67,5	70	3,5 l/ha	-	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	-	88,8	95	85					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	100	93,8	87,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	-	98,8	97,5	100					
Terbut 500 SC- PL06	0,8 l/ha+0,2 l/ha (adjuvant)	67,5	83,8	82,5	91,3	3,5 l/ha	100	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	80	97,5	96,3	98,8					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	82,5	100	100	100					
	1 l/ha	78,8	93,8	95	97,5					

A total of 6 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of VIOAR in maize (pre-emergence). Trials were conducted in different countries (Poland, Germany). Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 1 L/ha, 0,8 L/ha with 0,2 L/ ha Hydron (adjuvant), 1 L/ha with 0,2 L/ ha Hydron (adjuvant), 1,2 L/ha with 0,2 L/ ha Hydron (adjuvant) and 1,5 L/ha with 0,2 L/ ha

**Hydron** (adjuvant). As a standard were used Lumax 537,5 SE at dose 3,5 l/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-25a and No. 3.2-25b).

**Table 3.2-25a: Average efficacy of TERBUT 500 SC (VIOAR).**

Average efficacy									
Terbut 500 SC					Lumax 537,5 SE				
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT
0,8 l/ha+0,2 l/ha (adjuvant)	74,08	87,70	60,22	69,18	3,5 l/ha	93,70	98,22	96,88	99,83
1 l/ha + 0,2 l/ha (adjuvant)	86,33	94,98	77,10	87,30					
1,2 l/ha+ 0,2 l/ha (adjuvant)	87,20	98,97	84,07	91,13					
1,5 l/ha+ 0,2 l/ha (adjuvant)	93,60	98,74	86,52	98,96					
1 l/ha	78,8	93,8	95	97,5					

**Table 3.2-25b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (VIOAR).**

Average efficacy				
0,8 l/ha+0,2 l/ha (adjuvant)	1 l/ha + 0,2 l/ha (adjuvant)	1,2 l/ha+ 0,2 l/ha (adjuvant)	1,5 l/ha+ 0,2 l/ha (adjuvant)	1 l/ha
72,79	86,43	90,34	94,46	91,28

### Summary and conclusion (VIOAR- pre-emergence)

TERBUT 500 SC at dose 1 L/ha reduced occurrence of VIOAR in maize (pre-emergence). At dose 1 L/ha average efficacy 14-73 DAT reached 91,28 %. There was no significant different between Terbut 500 SC and standard herbicide (Lumax 537,3 SE). To significantly reduce VIOAR recommended dose of Terbut 500 SC is 1 L/ha.

### Maize (pre-emergence)/AMARE

**Table 3.2-26: Efficacy of Terbut 500 SC in all trials (AMARE)**

product name	Terbut 500 SC					Lumax 537,5 SE				
number of trial	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT
SGS/2017/145/ PL01 (300 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	-	88,8	88,8	86,3	3,5 l/ha	-	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	-	90	90	87,5					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	99,3	99,3	99,3					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	-	98,3	98,3	98,3					
SGS/2017/145/ PL06 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	96	100	60	100	3,5 l/ha	100	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	100	100	70	100					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	100	100	80	100					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	100	100	100	100					
SGS2017H001 GER05	0,8 l/ha+0,2 l/ha (adjuvant)	96	100	60	100	3,5 l/ha	100	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	100	100	70	100					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	100	100	80	100					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	100	100	100	100					

AH/19/K/14/Gr /01	0,8 l/ha+0,2 l/ha (adjuvant)	92,5	96,3	-	97,5	3,5 l/ha	100	-	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	100	100	-	100					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	100	100	-	100					
	1 l/ha	97,5	97,5	-	97,5					
Terbut 500 SC- PL06	0,8 l/ha+0,2 l/ha (adjuvant)	73,8	83,8	82,5	87,5	3,5 l/ha	100	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	82,5	91,3	88,8	93,8					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	90	93,8	97,5	98,8					
	1 l/ha	77,5	88,8	92,5	92,5					

A total of 5 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of AMARE in maize (pre-emergence). Trials were conducted in different countries (Poland, Germany). Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 1 L/ha, 0,8 L/ha with 0,2 L/ ha Hydron (adjuvant), 1 L/ha with 0,2 L/ ha Hydron (adjuvant), 1,2 L/ha with 0,2 L/ ha Hydron (adjuvant) and 1,5 L/ha with 0,2 L/ ha Hydron (adjuvant). As a standard were used Lumax 537,5 SE at dose 3,5 l/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-26a and No. 3.2-26b).

**Table 3.2-26a: Average efficacy of TERBUT 500 SC (AMARE).**

Average efficacy									
Terbut 500 SC					Lumax 537,5 SE				
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT
0,8 l/ha+0,2 l/ha (adjuvant)	89,58	93,78	72,83	94,26	3,5 l/ha	100	100	100	100
1 l/ha + 0,2 l/ha (adjuvant)	95,63	96,26	79,70	96,26					
1,2 l/ha+ 0,2 l/ha (adjuvant)	97,50	98,62	89,20	99,62					
1,5 l/ha+ 0,2 l/ha (adjuvant)	100,00	99,43	99,43	99,43					
1 l/ha	87,5	93,15	92,5	95					

**Table 3.2-26b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (AMARE).**

Average efficacy				
0,8 l/ha+0,2 l/ha (adjuvant)	1 l/ha + 0,2 l/ha (adjuvant)	1,2 l/ha+ 0,2 l/ha (adjuvant)	1,5 l/ha+ 0,2 l/ha (adjuvant)	1 l/ha
87,61	91,96	96,24	99,58	92,04

### Summary and conclusion (AMARE- pre-emergence)

TERBUT 500 SC at dose 1 L/ha reduced occurrence of AMARE in maize (pre-emergence). At dose 1 L/ha average efficacy 14-73 DAT reached 92,04 %. There was no significant different between Terbut 500 SC and standard herbicide (Lumax 537,3 SE). To significantly reduce AMARE recommended dose of Terbut 500 SC is 1 L/ha.

### Maize (pre-emergence)/GALAP

**Table 3.2-27: Efficacy of Terbut 500 SC in all trials (GALAP)**

Product name		Terbut 500 SC				Lumax 537,5 SE				
number of trial	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT



SGS/2017/145/ PL01 (300 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	-	97	97	95,8	3,5 l/ha	-	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	-	97	97	97					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	99,5	99,5	99,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	-	99,8	99,8	99,8					
SGS/2017/145/ PL06 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	-	91,3	80	100	3,5 l/ha	-	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	-	92,5	93,8	100					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	91,3	92,5	100					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	-	100	98,8	100					
Gardo gold 500 SC										
SGS2017H001 CZ01	0,8 l/ha+0,2 l/ha (adjuvant)	46,3	-	48,8	50	4 l/ha	88,8	-	90	90
	1 l/ha + 0,2 l/ha (adjuvant)	58,8	-	62,5	63,8					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	68,8	-	71,3	72,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	85	-	86,3	87,5					
SGS2017H001 GER05	0,8 l/ha+0,2 l/ha (adjuvant)	-	91,3	80	100	Lumax 537,5 SE				
	1 l/ha + 0,2 l/ha (adjuvant)	-	92,5	93,8	100	3,5 l/ha	-	100	100	100
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	91,3	92,5	100					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	-	100	98,8	100					

A total of 4 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of GALAP in maize (pre-emergence). Trials were conducted in different countries (Poland, Czech Republic, Germany). Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha with 0,2 L/ ha Hydron (adjuvant), 1 L/ha with 0,2 L/ ha Hydron (adjuvant), 1,2 L/ha with 0,2 L/ ha Hydron (adjuvant) and 1,5 L/ha with 0,2 L/ ha Hydron (adjuvant). As a standards were used Lumax 537,5 SE at dose 3,5 l/ha and Gardo Gold 500 SC at dose 4 l/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-27a and No. 3.2-27b).

**Table 3.2-27a: Average efficacy of TERBUT 500 SC (GALAP).**

Terbut 500 SC					Lumax 537,5 SE				
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT
0,8 l/ha+0,2 l/ha (adjuvant)	46,3	93,20	76,45	86,45	3,5 l/ha	-	100	100	100
1 l/ha + 0,2 l/ha (adjuvant)	58,8	94,00	86,78	90,20					
1,2 l/ha+ 0,2 l/ha (adjuvant)	68,8	94,03	88,95	93,00	Gardo gold 500 SC				
1,5 l/ha+ 0,2 l/ha (adjuvant)	85	99,93	95,93	96,83	4 l/ha	88,8	-	90	90

**Table 3.2-27b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (GALAP).**

Average efficacy			
0,8 l/ha+0,2 l/ha (adjuvant)	1 l/ha + 0,2 l/ha (adjuvant)	1,2 l/ha+ 0,2 l/ha (adjuvant)	1,5 l/ha+ 0,2 l/ha (adjuvant)
75,60	82,44	86,20	94,42

### Summary and conclusion (GALAP- pre-emergence)

TERBUT 500 SC at dose 1 L/ha with 0,2 L/ha **Hydron** (adjuvant) reduced occurrence of GALAP in maize (pre-emergence). At dose 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant) average efficacy 14-73 DAT reached 82,44 %. There was no significant different between Terbut 500 SC and standard herbicides (Lumax 537,3 SE and Gardo Gold 500 SC). To reduce GALAP recommended dose of Terbut 500 SC is 1 L/ha + 0,2 L/ha adjuvant.

### Maize (pre-emergence)/MATIN

**Table 3.2-28: Efficacy of Terbut 500 SC in all trials (MATIN)**

product name	Terbut 500 SC					Lumax 537,5 SE				
number of trial	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT
SGS/2017/145/ PL06 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	-	100	97,5	100	3,5 l/ha	-	100	100	100
	3 l/ha + 0,2 l/ha (adju- vant)	-	97,5	100	100					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	100	100	100					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	-	100	100	100					
SGS2017H001 CZ01 (200l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	67,5	-	71,3	71,3	Gardo gold 500 SC				
	3 l/ha + 0,2 l/ha (adju- vant)	80	-	82,5	83,8	4 l/ha	100	-	100	100
	1,2 l/ha+ 0,2 l/ha (adjuvant)	95	-	96,5	97					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	99,5	-	100	100					
SGS2017H001 GER05 (200l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	-	100	97,5	100	Lumax 537,5 SE				
	3 l/ha + 0,2 l/ha (adju- vant)	-	97,5	100	100	3,5 l/ha	-	100	100	100
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	100	100	100					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	-	100	100	100					
AH/19/K/14/N w/01	0,8 l/ha+0,2 l/ha (adjuvant)	92,5	95	-	95	3,5 l/ha				
	1 l/ha + 0,2 l/ha (adju- vant)	100	100	-	100					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	100	100	-	100					
	1 l/ha	97,5	97,5	-	97,5					
Terbut 500 SC- PL06	0,8 l/ha+0,2 l/ha (adjuvant)	87,5	87,5	87,5	88,8	3,5 l/ha	100	100	100	100
	1 l/ha + 0,2 l/ha (adju- vant)	92,5	96,3	95	93,8					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	96,3	98,8	98,8	98,8					
	1 l/ha	88,8	95	92,5	93,8					

A total of 5 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of MATIN in maize (pre-emergence). Trials were conducted in different countries (Poland, Czech Republic, Germany). Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 1 L/ha, 0,8 L/ha with 0,2 L/ ha **Hydron** (adjuvant), 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant), 1,2 L/ha with 0,2 L/ ha **Hydron** (adjuvant) and 1,5 L/ha with 0,2 L/ ha **Hydron** (adjuvant). As a standards were used Lumax 537,5 SE at dose 3,5 l/ha and Gardo Gold 500 SC at dose 4 l/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment

No. 3.2-28a and No. 3.2-28b).

**Table 3.2-28a: Average efficacy of TERBUT 500 SC (MATIN).**

Average efficacy									
Terbut 500 SC					Lumax 537,5 SE				
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT
0,8 l/ha+0,2 l/ha (adjuvant)	82,50	95,63	88,45	91,02	3,5 l/ha	100	100	100	100
1 l/ha + 0,2 l/ha (adjuvant)	90,83	97,83	94,38	95,52					
1,2 l/ha+ 0,2 l/ha (adjuvant)	97,10	99,70	98,83	99,16	Gardo gold 500 SC				
1,5 l/ha+ 0,2 l/ha (adjuvant)	99,50	100,00	100,00	100,00	4 l/ha	100	-	100	100
1 l/ha	93,15	96,25	92,5	95,65					

**Table 3.2-28b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (MATIN).**

Average efficacy				
0,8 l/ha+0,2 l/ha (adjuvant)	1 l/ha + 0,2 l/ha (adjuvant)	1,2 l/ha+ 0,2 l/ha (adjuvant)	1,5 l/ha+ 0,2 l/ha (adjuvant)	1 l/ha
89,40	94,64	98,70	99,88	94,39

### Summary and conclusion (MATIN- pre-emergence)

TERBUT 500 SC at dose 1 L/ha significantly reduced occurrence of MATIN in maize (pre-emergence). At dose 1 L/ha average efficacy 14-73 DAT reached 94,39 %. There was no significant different between Terbut 500 SC and standard herbicides (Lumax 537,3 SE and Gardo Gold 500 SC). To significantly reduce MATIN recommended dose of Terbut 500 SC is 1 L/ha.

### Maize (pre-emergence)/CAPBP

**Table 3.2-29: Efficacy of Terbut 500 SC in all trials (CAPBP)**

product name	Terbut 500 SC					Lumax 537,5 SE				
number of trial	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT
SGS/2017/145/PL03 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	100	100	100	100	3,5 l/ha	100	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	100	100	100	100					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	100	100	100	100					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	100	100	100	100					
SGS2017H001GER01 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	99	-	99	99	Gardo gold 500 SC				
	1 l/ha + 0,2 l/ha (adjuvant)	99	-	99	99	4 l/ha	99	-	99	99
	1,2 l/ha+ 0,2 l/ha (adjuvant)	99	-	99	99					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	99	-	99	99					
SGS2017H001GER02 (200l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	85	85	100	100	4 l/ha	90	90	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	85	85	100	100					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	85	85	100	100					

	1,5 l/ha+ 0,2 l/ha (adjuvant)	90	90	100	100					
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A total of 3 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of CAPBP in maize (pre-emergence). Trials were conducted in different countries (Poland, Germany). Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha with 0,2 L/ ha Hydron (adjuvant), 1 L/ha with 0,2 L/ ha Hydron (adjuvant), 1,2 L/ha with 0,2 L/ Hydron (adjuvant) and 1,5 L/ha with 0,2 L/ ha Hydron (adjuvant). As a standards were used Lumax 537,5 SE at dose 3,5 l/ha and Gardo Gold 500 SC at dose 4 l/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-29a and No. 3.2-29b).

**Table 3.2-29a: Average efficacy of TERBUT 500 SC (CAPBP).**

Average efficacy									
Terbut 500 SC					Lumax 537,5 SE				
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT
0,8 l/ha+0,2 l/ha (adjuvant)	94,67	92,50	99,67	99,67	3,5 l/ha	100	100	100	100
1 l/ha + 0,2 l/ha (adjuvant)	94,67	92,50	99,67	99,67					
1,2 l/ha+ 0,2 l/ha (adjuvant)	94,67	92,50	99,67	99,67					
1.5 l/ha+ 0.2 l/ha (adjuvant)	96.33	95.00	99.67	99.67	4 l/ha	94.5	90	99.5	99.5

**Table 3.2-29b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (CAPBP).**

Average efficacy			
0,8 l/ha+0,2 l/ha (adjuvant)	1 l/ha + 0,2 l/ha (adjuvant)	1,2 l/ha+ 0,2 l/ha (adjuvant)	1,5 l/ha+ 0,2 l/ha (adjuvant)
96,63	96,63	96,63	97,67

### Summary and conclusion (CAPBP- pre-emergence)

TERBUT 500 SC at dose 1 L/ha with 0,2 L/ha Hydron (adjuvant) significantly reduced occurrence of CAPBP in maize (pre-emergence). At dose 1 L/ha with 0,2 L/ha Hydron (adjuvant) average efficacy 14-73 DAT reached 96,63 %. There was no significant different between Terbut 500 SC and standard herbicides (Lumax 537,3 SE and Gardo Gold 500 SC). To significantly reduce CAPBP recommended dose of Terbut 500 SC is 1 L/ha with 0,2 L/ha Hydron (adjuvant).

### Maize (pre-emergence)/POLCO

**Table 3.2-30: Efficacy of Terbut 500 SC in all trials (POLCO)**

product name	Terbut 500 SC					Lumax 537,5 SE				
number of trial	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
SGS/2017/145/P L02 (300 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	-	97	-	72,5	3,5 l/ha	-	100	95	97,5
	3 l/ha + 0,2 l/ha (adjuvant)	-	97	-	87,5					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	99,5	-	95					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	-	99,8	-	100					
SGS/2017/145/P L03 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	82,5	86,3	95	100	3,5 l/ha	100	100	100	100
	3 l/ha + 0,2 l/ha (adjuvant)	90	91,3	95	100					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	97,5	97,5	96,3	100					

	1,5 l/ha+ 0,2 l/ha (adjuvant)	97,5	98,8	100	100					
SGS/2017/145/P L04 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	21,3	3,8	27,5	20	3,5 l/ha	89,8	93	89,8	71,3
	3 l/ha + 0,2 l/ha (adjuvant)	55	68,8	42,5	45					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	56,3	63,8	27,5	30					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	93,8	95,5	90,3	88					
SGS/2017/145/P L05 (300 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	93,5	86,3	47,5	15	3,5 l/ha	100	100	100	100
	3 l/ha + 0,2 l/ha (adjuvant)	96,8	93,8	50	20					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	95,8	95,8	60	62,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	99,5	99,5	76,3	76,3					
SGS2017H001G ER03 (200l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	-	90	40	20	Gardo gold 500 SC				
	3 l/ha + 0,2 l/ha (adjuvant)	-	92,5	47,5	21,3	4 l/ha	-	93,8	47,5	50
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	92,5	55	22,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	-	95	83,8	30					

A total of 5 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of POLCO in maize (pre-emergence). Trials were conducted in different countries (Poland, Germany). Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha with 0,2 L/ ha **Hydron** (adjuvant), 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant), 1,2 L/ha with 0,2 L/ ha **Hydron** (adjuvant) and 1,5 L/ha with 0,2 L/ ha **Hydron** (adjuvant). As a standards were used Lumax 537,5 SE at dose 3,5 l/ha and Gardo Gold 500 SC at dose 4 l/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-30a and No. 3.2-30b).

**Table 3.2-30a: Average efficacy of TERBUT 500 SC (POLCO).**

Average efficacy									
Terbut 500 SC					Lumax 537,5 SE				
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT
0,8 l/ha+0,2 l/ha (adju- vant)	65,77	72,68	52,50	45,50	3,5 l/ha	96,6	98,25	96,2	92,2
3 l/ha + 0,2 l/ha (adju- vant)	80,60	88,68	58,75	54,76					
1,2 l/ha+ 0,2 l/ha (adju- vant)	83,20	89,82	59,70	62,00	Gardo gold 500 SC				
1,5 l/ha+ 0,2 l/ha (adju- vant)	96,93	97,72	87,60	78,86	4 l/ha	-	93,8	47,5	50

**Table 3.2-30b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (POLCO).**

Average efficacy			
0,8 l/ha+0,2 l/ha (adjuvant)	1 l/ha + 0,2 l/ha (adjuvant)	1,2 l/ha+ 0,2 l/ha (adjuvant)	1,5 l/ha+ 0,2 l/ha (adjuvant)
59,11	70,70	73,68	90,28

### Summary and conclusion (POLCO- pre-emergence)

TERBUT 500 SC at dose 1 L/ha with 0,2 L/ha **Hydron** (adjuvant) reduced occurrence of POLCO in maize (pre-emergence). At dose 1 L/ha with 0,2 L/ha **Hydron** (adjuvant) average efficacy 14-73 DAT reached 70,70 %. There was no significant different between Terbut 500 SC and standard herbicides (Lumax 537,3 SE and Gardo Gold 500 SC). To reduce POLCO recommended dose of Terbut 500 SC is 1 L/ha with 0,2 L/ha **Hydron** (adjuvant).

## Maize (pre-emergence)/MATCH

**Table 3.2-31: Efficacy of Terbut 500 SC in all trials (MATCH)**

product name	Terbut 500 SC					Lumax 537,5 SE				
	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
AH/19/K/14/NW/01	0,8 l/ha+0,2 l/ha (adjuvant)	92,5	93,8	-	96,3	3,5 l/ha	100	100	-	100
	1 l/ha + 0,2 l/ha (adjuvant)	100	100	-	100					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	100	100	-	100					
	1 l/ha	95	95	-	95					
Terbut 500 SC-PL06	0,8 l/ha+0,2 l/ha (adjuvant)	-	85	88,8	88,8	3,5 l/ha	-	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	-	88,8	92,5	98					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	92,5	98	100					
	1 l/ha	-	90	93	96,8					

A total of 2 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of MATCH in maize (pre-emergence). Trials were conducted in different regions in Poland. Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 1 L/ha, 0,8 L/ha with 0,2 L/ ha Hydron (adjuvant), 1 L/ha with 0,2 L/ ha Hydron (adjuvant) and 1,2 L/ha with 0,2 L/ ha Hydron (adjuvant). As a standards was used Lumax 537,5 SE at dose 3,5 l/ ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-31a and No. 3.2-31b).

**Table 3.2-31a: Average efficacy of TERBUT 500 SC (MATCH).**

Average efficacy									
Terbut 500 SC					Lumax 537,5 SE				
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
0,8 l/ha+0,2 l/ha (adjuvant)	92,5	89,40	88,8	92,55	3,5 l/ha	100	100	100	100
1 l/ha + 0,2 l/ha (adjuvant)	100	94,40	92,5	99,00					
1,2 l/ha+ 0,2 l/ha (adjuvant)	100	96,25	98	100,00					
1 l/ha	95	92,50	93	95,90					

**Table 3.2-31b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (MATCH).**

Average efficacy			
0,8 l/ha+0,2 l/ha (adjuvant)	1 l/ha + 0,2 l/ha (adjuvant)	1,2 l/ha+ 0,2 l/ha (adjuvant)	1 l/ha
90,81	96,48	98,56	94,10

## Summary and conclusion (MATCH- pre-emergence)

TERBUT 500 SC at dose 1 L/ha significantly reduced occurrence of POLCO in maize (pre-emergence). At dose 1 L/ha average efficacy 14-73 DAT reached 94,1 %. There was no significant different between Terbut 500 SC and standard herbicide (Lumax 537,3 SE). To significantly reduce POLCO recommended dose of Terbut 500 SC is 1 L/ha.

## Maize (pre-emergence)/STEME

**Table 3.2-32: Efficacy of Terbut 500 SC in all trials (STEME)**

product name	Terbut 500 SC					Lumax 537,5 SE				
number of trial	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT	dose	Effi- cacy 14- 16 DAT	Effica- cy 28- 35 DAT	Effica- cy 44- 56 DAT	Effi- cacy 73 DAT
SGS/2017/14 5/PL01 (300 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	-	99	99	99	3,5 l/ha	-	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	-	99	99	99					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	99,5	99,5	99,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	-	99,5	99,5	99,5	Gardo gold 500 SC				
SGS2017H0 01GER01	0,8 l/ha+0,2 l/ha (adjuvant)	99	-	23,8	22,5	4 l/ha	99	-	91,3	90
	1 l/ha + 0,2 l/ha (adjuvant)	99	-	50	57,5					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	99	-	76,3	67,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	99	-	99	86,3					
SGS2017H0 01GER03	0,8 l/ha+0,2 l/ha (adjuvant)	-	90	40	80	4 l/ha	-	93,8	47,5	50
	1 l/ha + 0,2 l/ha (adjuvant)	-	92,5	47,5	81,3					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	92,5	70	87,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	-	95	90	100					
Terbut 500 SC- PL06	0,8 l/ha+0,2 l/ha (adjuvant)	63,8	77,5	80	82,5	Lumax 537,5 SE				
	1 l/ha + 0,2 l/ha (adjuvant)	67,5	90	90	91,3	3,5 l/ha	100	100	100	100
	1,2 l/ha+ 0,2 l/ha (adjuvant)	68,8	87,5	92,5	93,8					
	1 l/ha	65	85	87,5	90					

A total of 4 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of STEME in maize (pre-emergence). Trials were conducted in different countries (Poland, Germany). Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 1 L/ha, 0,8 L/ha with 0,2 L/ ha **Hydron** (adjuvant), 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant), 1,2 L/ha with 0,2 L/ ha **Hydron** (adjuvant) and 1,5 L/ha with 0,2 L/ ha **Hydron** (adjuvant). As a standards were used Lumax 537,5 SE at dose 3,5 l/ha and Gardo Gold 500 SC at dose 4 l/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-32a and No. 3.2-32b).

**Table 3.2-32a: Average efficacy of TERBUT 500 SC (STEME).**

Average efficacy									
Terbut 500 SC					Lumax 537,5 SE				
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44- 56 DAT	Efficacy 73 DAT
0,8 l/ha+0,2 l/ha (adjuvant)	81,40	88,83	60,70	71,00	3,5 l/ha	100	100	100	100
1 l/ha + 0,2 l/ha (adjuvant)	83,25	93,83	71,63	82,28					
1,2 l/ha+ 0,2 l/ha (adjuvant)	83,90	93,17	84,58	87,08					
1,5 l/ha+ 0,2 l/ha (adjuvant)	99,00	97,25	96,17	95,27	4 l/ha	99	93,8	69,4	70
1 l/ha	65	85	87,5	90					



**Table 3.2-32b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (STEME).**

Average efficacy				
0,8 l/ha+0,2 l/ha (adjuvant)	1 l/ha + 0,2 l/ha (adjuvant)	1,2 l/ha+ 0,2 l/ha (adjuvant)	1,5 l/ha+ 0,2 l/ha (adjuvant)	1 l/ha
75,48	82,75	87,18	96,92	81,88

### Summary and conclusion (STEME- pre-emergence)

TERBUT 500 SC at dose 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant) reduced occurrence of STEME in maize (pre-emergence). At dose 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant) average efficacy 14-73 DAT reached 82,75 %. There was no significant different between Terbut 500 SC and standard herbicides (Lumax 537,3 SE and Gardo Gold 500 SC). To significantly reduce STEME recommended dose of Terbut 500 SC is 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant).

### Maize (pre-emergence)/CENCY

**Table 3.2-33: Efficacy of Terbut 500 SC in all trials (CENCY)**

product name	Terbut 500 SC					Lumax 537,5 SE				
	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
SGS/2017/145/PL 03 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	78,8	88,8	67,5	100	3,5 l/ha	100	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	80	88,8	95	96,3					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	100	100	93,8	0					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	97,5	98,8	97,5	100					
SGS/2017/145/PL 04 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	15	15	2,5	2,5	3,5 l/ha	88,8	89,5	99	96,8
	1 l/ha + 0,2 l/ha (adjuvant)	50	50	11,3	7,5					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	52,5	45	2,5	11,3					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	91,8	81,3	0	8,8					
SGS/2017/145/PL 05 (300 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	98	99,8	97	95,8	3,5 l/ha	100	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	100	100	97	97					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	100	100	99,5	99,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	100	100	99,8	99,8					
Terbut 500 SC- PL06	0,8 l/ha+0,2 l/ha (adjuvant)	57,5	78,8	82,5	82,5	3,5 l/ha	100	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	63,8	82,5	93,8	96,3					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	70,1	91,3	93,8	95					
	1 l/ha	66,3	87,5	88,8	90					

A total of 4 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of CENCY in maize (pre-emergence). Trials were conducted in different regions in Poland. Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 1 L/ha, 0,8 L/ha with 0,2 L/ ha **Hydron** (adjuvant), 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant), 1,2 L/ha with 0,2 L/ ha **Hydron** (adjuvant) and 1,5 L/ha with 0,2 L/ ha **Hydron** (adjuvant). As a standard was used Lumax 537,5 SE at dose 3,5 l/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-33a and No. 3.2-33b).

**Table 3.2-33a: Average efficacy of TERBUT 500 SC (CENCY).**

Average efficacy									
Terbut 500 SC					Lumax 537,5 SE				
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
0,8 l/ha+0,2 l/ha (adjuvant)	62,33	70,60	62,38	70,20	3,5 l/ha	97,2	97,375	99,75	99,2
1 l/ha + 0,2 l/ha (adjuvant)	73,45	80,33	74,28	74,28					
1,2 l/ha+ 0,2 l/ha (adjuvant)	80,65	84,08	72,40	51,45					
1,5 l/ha+ 0,2 l/ha (adjuvant)	96,43	93,37	65,77	69,53					

1 l/ha	66,3	87,5	88,8	90					
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**Table 3.2-33b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (CENCY).**

Average efficacy				
0,8 l/ha+0,2 l/ha (adjuvant)	1 l/ha + 0,2 l/ha (adjuvant)	1,2 l/ha+ 0,2 l/ha (adjuvant)	1,5 l/ha+ 0,2 l/ha (adjuvant)	1 l/ha
66,38	75,58	72,14	81,28	83,15

**Summary and conclusion (CENCY- pre-emergence)**

TERBUT 500 SC at dose 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant) reduced occurrence of CENCY in maize (pre-emergence). At dose 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant) average efficacy 14-73 DAT reached 75,58 %. There was no significant different between Terbut 500 SC and standard herbicide (Lumax 537,3 SE). To significantly reduce CENCY recommended dose of Terbut 500 SC is 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant).

**Maize (pre-emergence)/GERPU**

**Table 3.2-34: Efficacy of Terbut 500 SC in all trials (GERPU)**

product name	Terbut 500 SC					Lumax 537,5 SE				
number of trial	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
SGS/2017/145/PL0 1 (300 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	-	93,5	93,5	93,5	3,5 l/ha	-	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	-	94,8	94,8	94,8					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	97,3	97,3	96					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	-	99,8	99,8	99,8					
SGS/2017/145/PL0 6 (200 l/ha)	0,8 l/ha+0,2 l/ha (adjuvant)	-	86,3	40	65	3,5 l/ha	-	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	-	91,3	60	77,5					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	97,5	70	87,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	-	98,8	80	90					
SGS2017H001GER 05	0,8 l/ha+0,2 l/ha (adjuvant)	-	86,3	40	65	3,5 l/ha	-	100	100	100
	1 l/ha + 0,2 l/ha (adjuvant)	-	91,3	60	77,5					
	1,2 l/ha+ 0,2 l/ha (adjuvant)	-	97,5	70	87,5					
	1,5 l/ha+ 0,2 l/ha (adjuvant)	-	98,8	80	90					

A total of 3 trials were carried out to evaluate the efficacy of TERBUT 500 SC for the control of GERPU in maize (pre-emergence). Trials were conducted in different countries (Poland, Germany). Trials were made of randomized block design with a minimum of four replicates. The trials were performed with the use of different maize cultivars, differing in growth strength as well as soil and water requirements. TERBUT 500 SC was applied at dose rates: 0,8 L/ha with 0,2 L/ ha **Hydron** (adjuvant), 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant), 1,2 L/ha with 0,2 L/ ha **Hydron** (adjuvant) and 1,5 L/ha with 0,2 L/ ha **Hydron** (adjuvant). As a standard was used Lumax 537,5 SE at dose 3,5 l/ha. These studies were described in compliance with the principles of Good Experimental Practice (GEP) while the test results were summarize in appropriate Tables (see attachment No. 3.2-34a and No. 3.2-34b).

**Table 3.2-34a: Average efficacy of TERBUT 500 SC (GERPU).**

Average efficacy									
Terbut 500 SC					Lumax 537,5 SE				
dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT	dose	Efficacy 14-16 DAT	Efficacy 28-35 DAT	Efficacy 44-56 DAT	Efficacy 73 DAT
0,8 l/ha+0,2 l/ha (adjuvant)	-	88,70	57,83	74,50	3,5 l/ha	-	100	100	100
1 l/ha + 0,2 l/ha (adjuvant)	-	92,47	71,60	83,27					
1,2 l/ha+ 0,2 l/ha (adjuvant)	-	97,43	79,10	90,33					
1,5 l/ha+ 0,2 l/ha (adjuvant)	-	99,13	86,60	93,27					

**Table 3.2-34b: Summary of average efficacy 14-73 DAT of TERBUT 500 SC (GERPU).**

Average efficacy			
0,8 l/ha+0,2 l/ha (adjuvant)	1 l/ha + 0,2 l/ha (adjuvant)	1,2 l/ha+ 0,2 l/ha (adjuvant)	1,5 l/ha+ 0,2 l/ha (adjuvant)
73,68	82,44	88,96	93,00

#### Summary and conclusion (GERPU- pre-emergence)

TERBUT 500 SC at dose 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant) reduced occurrence of GERPU in maize (pre-emergence). At dose 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant) average efficacy 14-73 DAT reached 82,44 %. There was no significant different between Terbut 500 SC and standard herbicide (Lumax 537,3 SE). To significantly reduce GERPU recommended dose of Terbut 500 SC is 1 L/ha with 0,2 L/ ha **Hydron** (adjuvant).

**Table 3.2-35: Summary of efficacy 14-73 DAT of TERBUT 500 SC in maize (pre-emergence).**

Weed Species	Efficacy of Terbu 500 SC assessed 14-73 DAA						
	Pre-emergence						Comments - weed classification according to EPPO scale of efficacy *
	No. of trials where weed occurred	at 0,8 l/ha+0,2 l/ha (adjuvant)	at 1,0 L/ha +0,2 l/ha (adjuvant)	at 1,2 L/ha+0,2 l/ha (adjuvant)	at 1,5 L/ha+0,2 l/ha (adjuvant)	at 1,0 L/ha	
CHEAL	13	78,63	82,44	86,55	92,83	97,5	
VIOAR	6	72,79	86,43	90,34	94,46	91,28	
AMARE	5	87,61	91,96	96,24	99,58	92,04	
GALAP	4	75,60	82,44	86,20	94,42	-	
MATIN	5	89,40	94,64	98,70	99,88	94,39	
CAPBP	3	96,63	96,63	96,63	97,67	-	
POLCO	5	59,11	70,70	73,68	90,28	-	
MATCH	2	90,81	96,48	98,56	-	94,1	
STEME	4	75,48	82,75	87,18	96,92	81,88	
CENCY	4	66,38	75,58	72,14	81,28	83,15	
GERPU	3	73,68	82,44	88,96	93,00	-	

> 85%	effective
70-85%	medium effective
60-70%	medium resistant
<60 %	resistant

#### Summary and conclusion: maize (pre-emergence)

Terbut 500 SC at dose 1L/ha significantly reduced occurrence of CHEAL, VIOAR, AMARE, MATIN and MATCH in maize (pre- emergence). Terbut 500 SC was medium effective to reduce STEME and CENCY at dose 1L/ha. To significantly reduce occurrence of CAPBP recommended dose is 1L/ha + 0,2 l/ha **Hydron** (adjuvant). Terbut 500 SC was medium effective to reduce POLCO, GERPU, GALAP, STEME and CENCY at dose 1L/ha + 0,2 l/ha **Hydron** (adjuvant). There was no significant different between Terbut 500 SC and standard herbicides (Lumax 537,5 SE and Gardo Gold 500 SC).

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

A total of 26 trials were carried out in 2017 and 2019 in Poland, Germany and Czech Republic. The objective was to confirm the yield response of Terbut 500 SC in the presence of *Capsella bursa-pastoris*, *Viola arvensis*, *Chenopodium album*, *Amaranthus retroflexus*, *Galium aparine*, *Geranium pusillum*, *Tripleurospermum inodorum*, *Veronica arvensis*, *Fallopia convolvulus*, *Solanum nigrum*, *Matricaria Chamomilla*, *Cyanus segetum* and *Stellaria media*.

Terbut 500 SC at all tested rates did not have a negative effect on crop quality maize varieties studied. There was no effect of the test preparations on the quality parameters of yield.

### Summary and conclusion

Tested product- Terbut 500 SC showed high efficacy reduced occurrence of *Capsella bursa-pastoris*, *Viola arvensis*, *Chenopodium album*, *Amaranthus retroflexus*, *Galium aparine*, *Tripleurospermum inodorum*, *Veronica arvensis*, *Fallopia convolvulus*, *Solanum nigrum* and *Matricaria Chamomilla* and medium efficacy reduced occurrence of *Cyanus segetum* and *Stellaria media* in post-emergence maize.

Tested product- Terbut 500 SC showed high efficacy reduced occurrence of *Chenopodium album*, *Viola arvensis*, *Amaranthus retroflexus*, *Tripleurospermum inodorum*, *Matricaria Chamomilla* and *Capsella bursa-pastoris* and medium efficacy reduced occurrence of *Fallopia convolvulus*, *Geranium pusillum*, *Galium aparine*, *Cyanus segetum* and *Stellaria media* in pre-emergence maize.

The recommended doses in post-emergence maize are:

- 1 L/ha to reduce:
  - o Sensitive: *Capsella bursa-pastoris*, *Viola arvensis*, *Chenopodium album*, *Amaranthus retroflexus*, *Galium aparine*, *Tripleurospermum inodorum*, *Veronica arvensis*, *Fallopia convolvulus*, *Solanum nigrum*, *Matricaria Chamomilla*
  - o Medium sensitive: *Cyanus segetum*, *Stellaria media*
- 1 L/ha + 0,2 L/ha **Hydron** (adiuwant) reduce:
  - o Sensitive: *Stellaria media*

The recommended doses in pre-emergence maize are:

- 1 L/ha to reduce:
  - o Sensitive: *Chenopodium album*, *Viola arvensis*, *Amaranthus retroflexus*, *Tripleurospermum inodorum*, *Matricaria Chamomilla*
  - o Medium sensitive: *Stellaria media*, *Cyanus segetum*
- 1 L/ha + 0,2 L/ha **Hydron** (adiuwant) reduce:
  - o Sensitive: *Capsella bursa-pastoris*
  - o Medium sensitive: *Fallopia convolvulus*, *Geranium pusillum*, *Galium aparine*, *Cyanus segetum*, *Stellaria media*

Comments of zRMS:	<p>EPPO Standard PP 1/226 Number of efficacy trials provides guidance on the number of trials in target crops needed to demonstrate the efficacy of a plant protection product at the recommended dose. Where authorization is sought across a range of diverse conditions, such as across an authorization zone (PP 1/278 Principles of zonal data production and evaluation), then the number of trials conducted may need to increase. These trials should be done across the range of climatic and environmental conditions likely to be encountered, and over at least 2 years.</p> <p>Applicant submitted in total 26 efficacy trials carried out in two different growing seasons (2017 and 2019) for pre-emergence use and only in one growing season (2019) for post-emergence use. Only one growing season is not in line with appropriate EPPO standards. However, Applicant submitted explanations about conducting studies only in one growing season for post-emergence use, which was accepted by Evaluator.</p>
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	<p>For pre-emergence used Applicant submitted in total 14 field studies and for post-emergence used – 26 field trials. All trials were carried out in accordance to EPPO standards: EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/152 (4) and EPPO PP 1/50 (3).</p> <p>During trials different doses were studied:</p> <ul style="list-style-type: none"> <li>• for pre-emergence use – 1,0 l/ha for support solo use and for mixture tank use with adjuvant: 0,8 l/ha Terbut 500 SC+0,2 l/ha adjuvant; 1,0 l/ha Terbut 500 SC+0,2 l/ha adjuvant; 1,2 l/ha Terbut 500 SC+0,2 l/ha adjuvant and 1,5l/ha Terbut 500 SC +0,2 l/ha adjuvant.</li> <li>• for post -emergence use: 0,8 l/ha; 1,0 l/ha; 1,2 l/ha for solo use and 1,0 l/ha Terbut 500 SC+0,2 l/ha adjuvant for use in the mixture tank with adjuvant.</li> </ul> <p>Only trials with greater than 5 weeds/m<sup>2</sup> or over 2% ground cover have been included. In the opinion of ZRMs weed species which occurred only in 1 trial, should be excluded from label and GAP table.</p> <p>Applicant submitted classification of weed sensitivity in accordance to Polish rules. According to EPPO PP 1/226 at least 6 fully supportive results for major weeds and 2 trials for minor weeds should be required. According to Polish rules – at least 4 valid trials should be presented for major weeds and at least 2 valid trials for minor weeds. Therefore, based on knowledge of major/minor status of weeds in Poland, weeds with insufficient results should be excluded.</p> <p>Below, we presented the list of studied weeds with classification of its sensitivity observed at recommended dose at solo use (1,0 l/ha) and in the mixture tank with adjuvant (1,0 l/ha Terbut 500 SC + 0,2 l/ha adjuvant) weed at pre- and post-emergence use in maize:</p> <ul style="list-style-type: none"> <li>• <b>post emergence use at BBCH 12-16:</b></li> </ul> <p>CHEAL – 12 trials – major weed in maize – S in solo use at 1,0 l/ha and S in use in the mixture tank (1,0 l/ha Terbut 500 SC+0,2 l/ha adjuvant).</p> <p>VIOAR – 12 trials – minor weed in maize – S in solo use at 1,0 l/ha and S in use in the mixture tank (1,0 l/ha Terbut 500 SC+0,2 l/ha adjuvant).</p> <p>AMARE – 10 trials – major weed in maize – S in solo use at 1,0 l/ha and S in use in the mixture tank (1,0 l/ha Terbut 500 SC+0,2 l/ha adjuvant).</p> <p>GALAP – 7 trials – major weed in maize – S in solo use at 1,0 l/ha and S in use in the mixture tank (1,0 l/ha Terbut 500 SC+0,2 l/ha adjuvant).</p> <p>MATIN – 9 trials – major weed in maize – S in solo use at 1,0 l/ha and S in use in the mixture tank (1,0 l/ha Terbut 500 SC+0,2 l/ha adjuvant).</p> <p>CAPBP – 7 trials – minor weed in maize – S in solo use at 1,0 l/ha and S in use in the mixture tank (1,0 l/ha Terbut 500 SC+0,2 l/ha adjuvant).</p> <p>VERAR – 6 trials – minor weed in maize – S in solo use at 1,0 l/ha and S in use in the mixture tank (1,0 l/ha Terbut 500 SC+0,2 l/ha adjuvant).</p> <p>POLCO – 6 trials – major weed in maize – S in solo use at 1,0 l/ha and S in use in the mixture tank (1,0 l/ha Terbut 500 SC+0,2 l/ha adjuvant).</p> <p>SOLNI – 6 trials – major weed in maize – S in solo use at 1,0 l/ha and S in use in the mixture tank (1,0 l/ha Terbut 500 SC+0,2 l/ha adjuvant).</p> <p>MATCH – 3 trials – major weed in maize – due to not enough trials, this weed should be excluded from GAP table and label project.</p> <p>STEME – 2 trials – minor weed in maize – MS in solo use at 1,0 l/ha and S in use</p>
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	<p>in the mixture tank (1,0 l/ha Terbut 500 SC+0,2 l/ha adjuvant).</p> <p>CENCY – 2 trials – minor weed in maize – MS in solo use at 1,0 l/ha and MS in use in the mixture tank (1,0 l/ha Terbut 500 SC+0,2 l/ha adjuvant).</p> <ul style="list-style-type: none"> <li><b>pre-emergence use at BBCH 00-00</b></li> </ul> <p>CHEAL – major weed in maize – 13 trials for use in the mixture tank (1,0 l/ha Terbut 500 SC + 0,2 l/ha adjuvant) and only 1 trial for solo use (1,0 l/ha). CHEAL at solo use should be excluded from GAP table and label project due to not enough number of trials (at least 4 are required) and in the mixture tank can be concluded as MS weed.</p> <p>VIOAR – minor weed in maize – 6 trials for use in the mixture tank (1,0 l/ha Terbut 500 SC + 0,2 l/ha adjuvant) and only 1 trial for solo use (1,0 l/ha). VIOAR at solo use should be excluded from GAP table and label project due to not enough number of trials (at least 2 are required) and in the mixture tank can be concluded as S weed.</p> <p>AMARE – major weed in maize – 5 trials for use in the mixture tank (1,0 l/ha Terbut 500 SC + 0,2 l/ha adjuvant) and only 2 trials for solo use (1,0 l/ha). AMARE at solo use should be excluded from GAP table and label project due to not enough number of trials (at least 4 are required) and in the mixture tank can be concluded as S weed.</p> <p>GALAP – major weed in maize – 4 trials for use in the mixture tank (1,0 l/ha Terbut 500 SC + 0,2 l/ha adjuvant) and lack of trials for solo use (1,0 l/ha). GALAP at solo use should be excluded from GAP table and label project due to not enough number of trials (at least 4 are required) and in the mixture tank can be concluded as MS weed.</p> <p>MATIN – major weed in maize – 5 trials for use in the mixture tank (1,0 l/ha Terbut 500 SC + 0,2 l/ha adjuvant) and only 2 trials for solo use (1,0 l/ha). MATIN at solo use should be excluded from GAP table and label project due to not enough number of trials (at least 4 are required) and in the mixture tank can be concluded as S weed.</p> <p>CAPBP – minor weed in maize – 3 trials for use in the mixture tank (1,0 l/ha Terbut 500 SC + 0,2 l/ha adjuvant) and lack of trials for solo use (1,0 l/ha). CAPBP at solo use should be excluded from GAP table and label project due to not enough number of trials (at least 2 are required) and in the mixture tank can be concluded as S weed.</p> <p>POLCO – major weed in maize – 5 trials for use in the mixture tank (1,0 l/ha Terbut 500 SC + 0,2 l/ha adjuvant) and lack of trials for solo use (1,0 l/ha). POLCO at solo use should be excluded from GAP table and label project due to not enough number of trials (at least 4 are required) and in the mixture tank can be concluded as MS weed.</p> <p>MATCH – major weed in maize – 2 trials for use in the mixture tank (1,0 l/ha Terbut 500 SC + 0,2 l/ha adjuvant) and only 1 trial for solo use (1,0 l/ha). MATCH at solo and in the mixture tank use should be excluded from GAP table and label project due to not enough number of trials (at least 4 valid trials for each use are required).</p> <p>STEME – minor weed in maize – 4 trials for use in the mixture tank (1,0 l/ha Terbut 500 SC + 0,2 l/ha adjuvant) and only 1 trial for solo use (1,0 l/ha). STEME at solo use should be excluded from GAP table and label project due to not enough number of trials (at least 2 are required) and in the mixture tank can be concluded as MS weed.</p>
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	<p>CENCY – minor weed in maize – 4 trials for use in the mixture tank (1,0 l/ha Terbut 500 SC + 0,2 l/ha adjuvant) and only 1 trial for solo use (1,0 l/ha). CENCYE at solo use should be excluded from GAP table and label project due to not enough number of trials (at least 2 are required) and in the mixture tank can be concluded as MS weed.</p> <p>GERPU – major weed in maize – 3 trials for use in the mixture tank (1,0 l/ha Terbut 500 SC + 0,2 l/ha adjuvant) and lack of trials for solo use (1,0 l/ha). GERPU at solo and in the mixture tank use should be excluded from GAP table and label project due to not enough number of trials (at least 4 valid trials for each use are required).</p> <p><b>SUMMARY:</b> Terbut 500 SC / Tazoprym 500 SC / Cornao 500 SC (product code: Terbut 500 SC) is a pre-emergence (BBCH 00-00) and an early post-emergence (BBCH 12-16) herbicide in maize to control weeds.</p> <p><b>Accepted weed in Polish label:</b></p> <ul style="list-style-type: none"> <li>• <b>pre-emergence use:</b> <ul style="list-style-type: none"> <li>✓ <b>solo use at 1,0 l/ha:</b> lack of accepted weed species. All should be excluded from GAP table and label project.</li> <li>✓ <b>mixture tank use (1,0 l/ha Terbut 500 SC + 0,2 l/ha Hydron adjuvant):</b>  <i>susceptible weeds:</i> VIOAR, AMARE, MATIN, CAPBP and <i>moderately susceptible weeds:</i> CHEAL, GALAP, POLCO, STEME, CENCY, GERPU.</li> </ul> </li> <li>• <b>post-emergence use:</b> <ul style="list-style-type: none"> <li>✓ <b>solo use at 1,0 l/ha:</b> <i>susceptible weeds:</i> CHEAL, VIOAR, AMARE, GALAP, MATIN, CAPBP, VERAR, POLCO, SOLNI and <i>moderately susceptible weeds:</i> STEME, CENCY.</li> <li>✓ <b>mixture tank use (1,0 l/ha Terbut 500 SC + 0,2 l/ha Hydron adjuvant):</b>  <i>susceptible weeds:</i> CHEAL, VIOAR, AMARE, GALAP, MATIN, CAPBP, VERAR, POLCO, SOLNI , STEME and <i>moderately susceptible weeds:</i> CENCY.</li> </ul> </li> </ul> <p><b>Accepted volume of water:</b> 200-300 l/ha</p> <p><b>Accepted BBCH of maize:</b> for pre-emergence BBCH 00-00 and for post-emergence BBCH 12-16.</p> <p><b>Adjuvant:</b> in all trials as adjuvant was used – xxxx, however in the label Applicant proposed – HYDRON. In the opinion of Evaluator, in the label should be mentioned the same adjuvant which was used during trials. Also, Applicant for acceptance HYDRON in the label should clarify whether the proposed adjuvant in the label (HYDRON) has the same composition and properties as the one used in the studies (xxxx). In the Polish label Terbut in the mixture tank with Hydron as adjuvant was accepted. Because, the Applicant has included a relevant explanation - at the time of research in 2017, the trade name of the formulation did not yet function in official documents.</p>
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### Information on the occurrence or possible occurrence of the development of resistance (KCP 6.3)

Terbut 500 SC contains one active ingredient: terbuthylazine. According to HRAC (Herbicide Resistance Action Committee) classification terbuthylazine belongs to group C1, photosystem II inhibitors. Evidence of resistance to terbuthylazine has been limited to 5 weed species globally. The first documented cases of weed resistance to terbuthylazine were found in Czech Republic. Also in the areas of Czech Republic,



New Zealand and Italy it was reported that *Polygonum lapathifolium*, *Chenopodium album*, *Senecio vulgaris*, *Solanum nigrum* and *Amaranthus retroflexus* may be resistant to C1 group herbicides.

However, Good Agricultural Practices and Good Plant Protection Practices are the basis of the weed management strategy (EPPO Standard PP 2/1):

- select the correct active ingredient and product for the situation.
- follow label recommendations, particularly to ensure the treatment is made at the correct weed growth stage, under suitable climatic conditions and at the correct dosage. The minimum required dose should be applied but further dose reductions should be avoided since they can encourage a shift to tougher weed species. Timing of the application can be critical for perennial weeds, and it may be necessary to change the season of application each year to prevent a shift to species which are less susceptible at certain times of year.
- optimize the use of the range of agronomic tools to manage weed growth which are part of normal croor landscape management programmes. For example, crop rotation and cultivation or in non-crop areas such as roadsides, road and pavement sweepers. minimise the risk of spreading weed infestations. Ensure farm equipment is clean of soil and vegetation when moving between fields. Avoid introducing weeds seeds by using certified seed.

Where necessary mow/spray non-crop vegetation adjacent to field to prevent seed production. Good spraying practice should always be followed to attain effective weed control:

- spray equipment must be checked periodically (e.g. by authorized people).
- dose and spray accurately- calibrate the sprayer and make the correct amount of spray mix for the area to be treated.
- use the correct nozzles to maximise coverage of the weeds with minimum spray drift
- apply only under appropriate weather conditions, e.g. weeds are not stressed due to high temperatures, frost, drought or waterlogging.
- no rainfall falls during application or within two hours after application.
- suitable wind speed.
- monitor the weed control during the cropping season and look out for potential problems before they arise.

Comments of zRMS:	<p>Terbut 500 SC / Tazoprym 500 SC / Cornao 500 SC (product code: Terbut 500 SC) is a suspension concentrate (SC) formulation, containing 500 g of active substance: terbuthylazine in 1 litre. The product is intended for herbicidal control of range of weeds in maize (ZEAMX). Product applications in maize (ZEAMX) are recommended either pre-emergence or early post-emergence. Terbuthylazine is registered for use in Europe in many countries.</p> <p>Terbuthylazine belongs to the chemical group of Triazines. Terbuthylazine is rapidly translocated to the chloroplasts of the plant cell. Terbuthylazine is primarily interrupting the electron transport in photosystem II (Hill-reaction) and consequently an inhibitor of photosynthesis. The herbicidal activity of Terbuthylazine was first reported in 1966. It is applied world-wide in a wide range of crops like maize, sorghum, vines, orchards, forest and potatoes as a broad-spectrum herbicide against broad-leaved weeds.</p> <p>The Herbicide Resistance Action Committee (HRAC) grouped the mode of action of terbuthylazine in the international HRAC group C1. Following herbicides are included in HRAC group C1/5:</p> <p><b>Mechanism of resistance:</b> Resistance occurs generally when naturally existing unsusceptible biotypes are selected by repeated applications of the same “selecting factor” – e.g. one herbicide. The further development and spread of the resistance particularly depend on the seed production of the weed species and on the fitness of the resistant biotypes. However, herbicides mostly effect a specific target site, which are controlled by one or a few genes, so that one mutation of few genes already can cause a resistance. Use of herbicides with the same mode of action in one population can produce a considerable selection pressure, which may result in</p>
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fast reproduction of the resistant biotypes. These biotypes can generate increased population sizes and may infest more arable land without limitation, because the sensitive species and varieties are controlled by the herbicide or the same MOS group of herbicides.

Triazine group are applied in crops like sugar beet, potatoes and cereals for a selective and targeted weed control as an important mean of modern crop management. Although the development of resistance or even reduced susceptibility is a long-term process as weeds usually produce only one generation per year and new, resistant individuals spread quite slowly within the population, it is evident that a repeated application of herbicides with the same mode of action over 20-30 years results in selection pressure and induces selection of resistant eco-types.

**Evidence of resistance:** Terbuthylazine, belonging to the chemical group of Triazine, is classified with HRAC code C1 and with the biochemical mode of action “Inhibition of photosynthesis at photosystem”.

#	Year	Species	Country	MOAs	Actives	Situations
1	1982	<i>Polygonum lapathifolium</i>	Czech Republic	Photosystem II inhibitors (C1/5)	atrazine, terbuthylazine, terbutryn, prometryn, cyanazine, lenacil	Railways
2	1986	<i>Chenopodium album</i>	Czech Republic	Photosystem II inhibitors (C1/5)	atrazine, simazine, terbuthylazine, terbutryn, prometon, cyanazine, lenacil	Corn (maize), Sugar beets
3	1988	<i>Senecio vulgaris</i>	Czech Republic	Photosystem II inhibitors (C1/5)	atrazine, simazine, terbuthylazine, terbutryn, prometryn, cyanazine, lenacil	Orchards, Railways
4	1999	<i>Amaranthus retroflexus</i>	Italy	Photosystem II inhibitors (C1/5)	chloridazon = pyrazon, terbuthylazine, metamitron	Corn (maize), Soybean, Sugar beets
5	1999	<i>Solanum nigrum</i>	New Zealand	Photosystem II inhibitors (C1/5)	atrazine, terbuthylazine, prometryn, cyanazine	Corn (maize)

(Source: <http://weedscience.org/Summary/ResistByActive.aspx>).

Photosystem II inhibitors (C1/5) group comprises of very large number of herbicidal active ingredients and terbuthylazine is just one active substance out of 25. In spite of significant resistance of weeds to herbicides representing photosystem II inhibitors group only 5 weed species were found to develop resistance directly to terbuthylazine. **There is no report documenting weeds species resistant to terbuthylazine from Poland.**

**Cross resistance:** According to HRAC org. cross resistance is defined as the expression of a genetically-endowed mechanism conferring the ability to withstand herbicides from different chemical classes. It relates to herbicides from different chemical groups but of the same mode of action. If there is a resistance to at least two or more a.s. from the same chemical group or even from different chemical groups but of the same mode of action – cross resistance is a case.

Triazine herbicides have been persistently used for weed control in maize production in many parts of the world and this practice has led to widespread resistance in target weeds. The first report of herbicide resistance involved a triazine herbicide (Ryan, 1970), and since then triazine resistance has become the most prevalent and well characterized example of herbicide resistance world-wide. It is noteworthy that biotypes highly resistant to triazine herbicides as a result of a modified D1 protein are not resistant to the chemically distinct substituted urea herbicides, despite the fact that the substituted urea herbicides are also potent PS2 inhibitors (reviewed by Gronwald, 1994). The substituted urea and triazine herbicides bind to overlapping, but not identical, sites in PS2 (reviewed by Trebst,

	<p>1991). As a result, the mutation Ser 264 Gly providing resistance to triazine herbicides does not affect binding of substituted urea herbicides (Arntzen et al., 1982; Trebst, 1991). Plants containing triazine-resistant PS2 are resistant to other PS2-inhibiting herbicide chemistries including the triazinones, uracils, and pyridazinones (Fuerst et al., 1986; Ducruet and De Prado, 1982; Oettmeier et al., 1982; De Prado et al., 1989).</p> <p><b>Multiple resistance:</b> Cross resistance and multiple resistance is a very dynamic ongoing process, and the major prevention strategy is this - included in Good Agricultural Practice and Integrated Pest Management strategies with avoidance of sequential use of herbicides belonging to the same SOAs and cross resistant groups (B/2 and C2/7) – in a first place. There are 2 cases of multiple weeds resistance to photosystem II inhibitors (C1/5) herbicides. It is important to notify that there are no cases of multiple resistance relative to Photosystem II inhibitors C1/5 group found in Poland up to date.</p> <p><b>Sensitivity data:</b> For the active substances: terbuthylazine – no baseline sensitivity studies were available to the applicant. The overview of the Herbicide Resistance Action Committee (HRAC) about the evidence of resistance can replace baseline sensitivity studies. The International Survey of Herbicide Resistant Weeds (<a href="http://www.weedscience.org/in.asp">http://www.weedscience.org/in.asp</a>) cites cases of resistance to HRAC herbicide group C1/5 in the Central Zone: in Germany, Poland and Czech Republic. Sensitivity data should be generated and available in the future to measure sensitivity shift and resistance development.</p> <p>There were no special studies organized by the applicant concerning weed resistance risk. System of monitoring, testing and informing about resistance which is in place thanks to plant protection industry and the network of dedicated scientists as well as resulting communication with users, seems to be sufficient for the informed market introduction of Terbut 500 SC.</p> <p>Generally, evidences of resistance to HRAC Group C1/5 (Photosystem II inhibitors) and specifically to terbuthylazine are well documented by Weed Science organization and Herbicide Resistance Action Committee. 5 weeds species are reported worldwide being resistant to terbuthylazine, out of which 4 were reported in Europe, and none in Poland so far.</p> <p>The resistance risk is regarded acceptable if Terbut 500 SC is used under adherence to the management strategy and label recommendations.</p> <p><b>To prevent further development of resistance or cross-resistance and to maintain effective control of target weeds:</b></p> <ul style="list-style-type: none"> <li>• apply Terbut 500 SC at the recommended dose rate,</li> <li>• apply a maximum of 1 application per season in the optimum development phase of weeds,</li> <li>• use herbicides with different modes of action and overlapping weed spectrum,</li> <li>• prevent weeds reproduction by seed or by vegetative proliferation,</li> <li>• control efficacy of the applications. If applications show decreasing efficacy and other reasons (e.g. weather, application timing) can be excluded, consult local advisors,</li> <li>• use a reasonable crop rotation and mix of different herbicides programs,</li> <li>• integrate Terbut 500 SC into an overall pest management program,</li> <li>• clean equipment between sites and avoid movement of plant material between sites,</li> <li>• implement cultural practices known to reduce weed development,</li> <li>• monitor publicly available information regarding weed resistance</li> <li>• often consult local advisors.</li> </ul>
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	Always follow HRAG guidelines for the prevention and managing herbicide resistant grass and broadleaved weeds.
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### 3.3 Adverse effects on treated crops (KCP 6.4)

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

A total of 10 phytotoxicity trials were carried out in 2019 in different regions of Poland. Phytotoxicity assessment was carried out with the use of different cultivars (commercially grown varieties), which is compliant with PP 1/135 Phytotoxicity assessment. No signs of phytotoxicity effects were observed in all trials. Phytotoxicity in all test-ed samples was 0%.

**Table 3.3-1: Phytotoxicity of product**

No phytotoxicity symptom caused by Terbut 500 SC at the highest dose rate of 2 L/ha wit 0,4 L/ha Hy-dron (adjuvant) was recorded in all trials. No signs of phytotoxicity effects were observed in all trials. Phytotoxicity in all test-ed samples was 0%.

Comments of zRMS:	<p>In the evaluation process the fact that the active ingredient – terbuthylazine is used in many plant protection products and has been commonly used in crop protection for many years were taken into consideration.</p> <p>The Applicant submitted in total 10 selectivity studies conducted in one growing season (2019) on herbicide (Terbut 500 SC) containing this active substance.</p> <p>The selectivity evaluation of the herbicide was performed according to appropriate EPPO guidelines. The evaluation of herbicide selectivity was carried out 4-5 per season. Results were described in percent of destruction of plant for herbicides treatment compared to plant for untreated, where 0% means no phytotoxicity and 100% - complete destruction.</p> <p>Phytotoxicity assessment was carried out with the use of different cultivars of maize (commercially grown varieties: ex. Kwins, PR39H32, Farmgiant, P8400, Farmfire, Pyroxenia 130, Pioneer, San, P8400). Dosages N (recommended: for solo use – 1,0 l/ha and in the mixture tank with adiuvant: 1,0 l/ha Terbut 500 SC+ adiuvant 0,2 l/ha) and 2N (doubled recommended: for solo use 2,0 l/ha and for use in mixture tank: 2,0 l/ha Terbut 500 SC + 0,4 l/ha adiuvant) were studied in all trials. Experimental details and assessments methods were in accordance to EPPO standards.</p> <p>In all trials standard reference products were used (in pre-emergence use: Lumex 537,5 SE at dose 3,5 l/ha and 7,0 l/ha and for post-emergence use – Tezosar 500 SC at dose 1,0 l/ha and 2,0 l/ha.</p> <p><b>No phytotoxicity symptoms were observed for any tested dosage for all tested maize varieties. The crop developed normally and did not involve a loss in yield at harvest.</b></p>
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#### 3.3.2 Effect on the yield of treated plants or plant product (KCP 6.4.2)

Terbut 500 SC in rates: 1 l/ha, 2 l/ha, 1 L/ha wit 0,2 L/ha Hy-dron (adjuvant) and 2 L/ha wit 0,4 L/ha Hy-dron (adjuvant) caused no changes in plant vigor.

Comments of zRMS:	Applicant submitted 10 selectivity trials carried out in N-E EPPO zone in Poland in one growing season (2019). During those field trials the impact of Terbut 500 SC on the yield was studied. In all trials no detrimental effect on the yield was recorded at the proposed dose rate and even at the double dose rate. Application of Terbut 500 SC / Tazoprym 500 SC / Cornao 500 SC (product code: Terbut 500 SC) provided a yield similar to the untreated plots and to those treated with the reference products. No statistical differences were observed between untreated and treated plots and also between the tested product and the standard product.
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### 3.3.3 Effects on the quality of plants or plant products (KCP 6.4.3)

Terbut 500 SC in rates: 1 l/ha, 2 l/ha, 1 L/ha wit 0,2 L/ha **Hydron** (adjuvant) and 2 L/ha wit 0,4 L/ha **Hydron** (adjuvant) had no influence on marketable and unmarketable yield quality.

Comments of zRMS:	Submitted trials are sufficient. Influence of Terbut 500 SC / Tazoprym 500 SC / Cornao 500 SC (product code: Terbut 500 SC) on quantity and quality of yield was evaluated during selectivity research. The evaluation was carried out in accordance with EPPO guidelines. Following parameters were studied: moisture, Grain TKW and Grain HLW. In all trials no detrimental effect on the quality of yield was recorded at the proposed dose rate and even at the double dose rate. Application of Terbut 500 SC / Tazoprym 500 SC / Cornao 500 SC (product code: Terbut 500 SC) provided a quality yield similar to the untreated plots and to those treated with the reference products. No statistical differences were observed between untreated and treated plots and also between the tested product and the standard product.
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### 3.3.4 Effects on transformation processes (KCP 6.4.4)

Details concerning the remains of the active substance terbuthylazine are contained in Part B section 7.

Comments of zRMS:	<p>Assuming a long history of safe use of a.s.: terbuthylazine no special trials dedicated to evaluation of effects of Terbut 500 SC / Tazoprym 500 SC / Cornao 500 SC (product code: Terbut 500 SC) on transformation process were undertaken. The effect of the residues on processing was not investigated given the low residues in raw crop. Commodities confirmed by number of studies done for the EU evaluation of terbuthylazine.</p> <p>In the opinion of Evaluator, considering that product is applied at early stage of the crop and maize (BBCH 00-00 for pre-emergence use and BBCH 12-16 for post-emergence use) is not a typical crop used for subsequent processing, it could be agreed that no negative impact on processing is expected. Adverse effects on plant parts (seed) used for propagation purposes did not occur.</p> <p>The latest time of application for Terbut 500 SC is crop growth stage BBCH 16. Since applications of Terbut 500 SC are made at an early stage in the crop's development there is no risk that the actives would be translocated to the grain. The germination of maize seeds will be not negatively affected by the application of Terbut 500 SC, in the opinion of Evaluator.</p>
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### 3.3.5 Impact on treated plants or plant products to be used for propagation (KCP 6.4.5)

10 studies conducted in 2019 in Poland on maize revealed no negative impact of Terbut 500 SC on propagation material- seeds. No phytotoxicity symptoms occurring during the field trials suggest that product application in accordance with label recommendation has no negative impact on parts of plant used for propagating purposes.

#### Summary and conclusion

A total of 10 phytotoxicity trials were carried out in 2019 in different regions of Poland. No signs of phytotoxicity effects were observed in all trials. Phytotoxicity in all test-ed samples was 0%. In all trials there was no changes in plant vigor or no influence on marketable and unmarketable yield quantity or no influence on sugar content. No phytotoxicity symptoms occurring during the field trials suggest that product application in accordance with label recommendation has no negative impact on parts of plant used for propagating purposes.

Comments of zRMS:	<p>Terbut 500 SC / Tazoprym 500 SC / Cornao 500 SC (product code: Terbut 500 SC) is a basically soil-applied, pre-emergence or early post-emergence herbicide of which decomposes in plants to non-toxic metabolites during the vegetation period. Therefore, it can be assumed that application of Terbut 500 SC in maize - crop of interest in this submission - will pose no risk for maize propagation capabilities.</p> <p>The active substances: terbuthylazine, is commonly used for many years in many countries. No adverse effects on parts of plant used for propagating purposes were reported.</p> <p>No adverse effect on the yield and quality and no phytotoxicity symptoms were recorded in the field trials. Also, no information is available pointing to presence of any limitations to using of terbuthylazine in seed crops of maize.</p> <p><b>In the opinion of Evaluator, the product Terbut 500 SC has no negative impact on parts of plants used for propagating purposes.</b></p>
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### 3.4 Observations on other undesirable or unintended side-effects (KCP 6.5)

#### 3.4.1 Impact on succeeding crops (KCP 6.5.1)

According to intended GAP, Terbut 500 SC will be apply at the latest in BBCH 16 in maize. There will be about 3-4 months until harvest of the crop, and at least about 5-6 months before succeeding crop will be sown. Ploughing the crop prematurely after the use of **MCPA** **terbuthylazine** due to crop failure (e.g. damage by winterkilling) can be excluded since such a decision should have been taken already before spraying the herbicide to control the weeds in cereals.

Comments of zRMS:	<p>The EU requirements on plant protection products requires, that sufficient data must be reported to permit an evaluation of possible adverse effects of a treatment with the plant protection product on succeeding crops if studies and evaluations presented in the other part of the dossier, show that significant residues of the active substance, its metabolites or degradation products, which have or may have biological activity on succeeding crops, remain in soil or in plant materials up to sowing or planting time of possible succeeding crops. Therefore, the Applicant should present the assessment of the possible effect of Terbut 500 SC / Tazoprym</p>
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	<p>500 SC / Cornao 500 SC (product code: Terbut 500 SC) on crops grown as rotational or replacement crops following crops treated with that product, prepared in accordance to the EPPO Standard Efficacy evaluation of plant protection products.</p> <p>Effects on succeeding crops (PP 1/207 (2)). This standard is intended as a general standard on the methods used to examine whether the active substance of a plant protection product can cause negative effects on crops grown after a crop treated with that product. These crops can be grown as normal rotational crops as well as replacement crops in case of crop failure.</p> <p>Product decomposes in the soil during the growing season without endangering crops. Therefore, it can be assumed that application Terbut 500 SC / Tazoprym 500 SC / Cornao 500 SC (product code: Terbut 500 SC) in maize will pose no risk for succeeding crops.</p> <p>Lack of additional tests in this range - not submitted by the applicant. The half-life (DT<sub>50</sub>) for terbuthylazine – 77-169 days. As regards effects on succeeding crops the applicant proposed the following label text which was accepted by Evaluator.</p> <p>Necessary precautions to prevent the negative impact on succeeding crops should be included in the label claim: <i>“The product decomposes in soil during the vegetation period to a level that does not pose a threat to succeeding crops. If a plantation treated with the product needs to be liquidated earlier (as a result of plant damage caused by frost, disease or pests), only maize can be cultivated after pre-sowing ploughing.”</i></p>
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### 3.4.2 Impact on other plants including adjacent crops (KCP 6.5.2)

At the moment there was no danger in the application of terbuthylazine on neighboring plants. Moreover, the strict adherence to all the rules during the herbicide techniques treatments as well as observance of GEP rules, it can protect the neighboring plants from potential adverse effects relating to the protection of the crop. It is crucial to take care when carrying the liquid spray drift during spraying as well as to keep the appropriate buffer-zone.

Comments of zRMS:	<p>As every plant protection product – including Terbut 500 SC / Tazoprym 500 SC / Cornao 500 SC (product code: Terbut 500 SC) should not be used during wind that may cause drift spray solution on adjacent plants, especially dicotyledonous crops / plants. Such recommendation will be contained on the label - instruction of use.</p> <p>Compliance with this basic requirement of producer by users using plant protection products should protect the adjacent crops against unintended and potentially harmful, herbicidal action of product. In addition, the producer's recommendations is that before application of the product, user should inform of this fact all the interested parties whose property (crops) may be exposed to drift of product if they requested such information.</p> <p>Generally, the product is a foliar herbicide effective on broadleaved weeds. Therefore, warnings to avoid spray drift on adjacent crops should appear on the label.</p> <p>Terbut 500 SC / Tazoprym 500 SC / Cornao 500 SC (product code: Terbut 500 SC) effectively controlled broadleaf and grass plants therefore users must exercise caution to avoid drift or vapours which may cause stunting or discoloration and damage to non-target foliage. Also, appropriate buffer zone should be provided. However, detailed assessment of predicted rates of Terbut 500 SC / Tazoprym 500 SC / Cornao 500 SC (product code: Terbut 500 SC) in off-field areas, the TER values describing the risk for non-target plants should be described in Ecotoxicological sections.</p>
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### 3.4.3 Effects on beneficial and other non-target organisms (KCP 6.5.3)

No effects observed on non-target organisms.

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

#### Summary and conclusion

The strict adherence to all the rules during the herbicide techniques treatments as well as observance of GEP rules, it can protect the neighboring plants from potential adverse effects relating to the protection of the crop. It is crucial to take care when carrying the liquid spray drift during spraying as well as to keep the appropriate buffer-zone.

No effects observed on non-target organisms.

Comments of zRMS:	Detailed studies on the possible adverse effects to beneficial organisms are submitted and summarised in Part B, Section 9 (Ecotoxicology).
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### 3.5 Other/special studies

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

Table 3.6-1: List of test facilities

Test facility	Address	Certificate (Yes or No)
SGS Polska Sp. z o.o.	ul. Jana Kazimierza 3 01-248 Warszawa	Yes
Syntech Reasearch Poland Sp. z o.o.	69/1 Jagiellonska 85-027 Bydgoszcz	Yes
Poznań University of Life Sciences, Research and Education Center Gorzyń,	Wojska Polskiego 28, 60-637 Poznań	Yes

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

Tables considered not relevant can be deleted as appropriate.

MS to blacken authors of vertebrate studies in the version made available to third parties/public.

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

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
3.2.3	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017. SGS Polska Sp. z o.o. SGS/2017/145/PL01 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017. SGS Polska Sp. z o.o. SGS/2017/145/PL02 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017. SGS Polska Sp. z o.o. SGS/2017/145/PL03 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim

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
3.2.3	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017. SGS Polska Sp. z o.o. SGS/2017/145/PL04 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017. SGS Polska Sp. z o.o. SGS/2017/145/PL05 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017. SGS Polska Sp. z o.o. SGS/2017/145/PL06 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Czech Republic, 2017. SGS Polska Sp. z o.o. SGS2017H001CZ01 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Germany, 2017. SGS Polska Sp. z o.o. SGS20I7H001GERO1 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim

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
3.2.3	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Germany, 2017. SGS Polska Sp. z o.o. SGS2OI7HOO1GERO2 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Germany, 2017. SGS Polska Sp. z o.o. SGS2OI7HOO1GERO3 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Germany, 2017. SGS Polska Sp. z o.o. SGS2OI7HOO1GERO4 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Germany, 2017. SGS Polska Sp. z o.o. SGS2OI7HOO1GERO5 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Łukasz Sobiech	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation. Poznań University of Life Sciences AH/19/K/14/Ce/04 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Łukasz Sobiech	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation.	N	Synthos Agro

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Poznań University of Life Sciences AH/19/K/14/Dziem/03 GEP Unpublished		Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Łukasz Sobiech	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation. Poznań University of Life Sciences AH/19/K/14/Gr/01 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Łukasz Sobiech	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation. Poznań University of Life Sciences AH/19/K/14/Nw/01 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Łukasz Sobiech	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation. Poznań University of Life Sciences AH/19/K/14/Nw/05 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Łukasz Sobiech	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation. Poznań University of Life Sciences AH/19/K/14/Ra/02 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Zdzisław Jaskólski	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE SynTech Research Poland Sp. z o.o. Terbut 500 S.C.-PL06 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim

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
3.2.3	Mateusz Ćwiek	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE SynTech Research Poland Sp. z o.o. Terbut 500 S.C.-PL07 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Mateusz Świtkowski	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE SynTech Research Poland Sp. z o.o. Terbut 500 S.C.-PL08 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Grzegorz Dąbrowski	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE SynTech Research Poland Sp. z o.o. Terbut 500 S.C.-PL09 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Maciej Kasperek	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE SynTech Research Poland Sp. z o.o. Terbut 500 S.C.-PL10 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Łukasz Nasalski	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE SynTech Research Poland Sp. z o.o. Terbut 500 S.C.-PL11 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Michał Springer	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE SynTech Research Poland Sp. z o.o. Terbut 500 S.C.-PL12 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim

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
3.2.3	Mateusz Ćwiek	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE SynTech Research Poland Sp. z o.o. Terbut 500 S.C.-PL13 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Beata Szymańska	2019	Evaluation of the phytotoxicity of the product Terbut 500 SC in the cultivation of corn. Poznań University of Life Sciences AH/19/K/14/BR/2 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Beata Szymańska	2019	Evaluation of the phytotoxicity of the product Terbut 500 SC in the cultivation of corn. Poznań University of Life Sciences AH/19/K/14/GR/5 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Beata Szymańska	2019	Evaluation of the phytotoxicity of the product Terbut 500 SC in the cultivation of corn. Poznań University of Life Sciences AH/19/K/14/NW/1 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Beata Szymańska	2019	Evaluation of the phytotoxicity of the product Terbut 500 SC in the cultivation of corn. Poznań University of Life Sciences AH/19/K/14/RA/4 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Beata Szymańska	2019	Evaluation of the phytotoxicity of the product Terbut 500 SC in the cultivation of corn. Poznań University of Life Sciences AH/19/K/14/ZŁ/3 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim



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
3.2.3	Grzegorz Dąbrowski	2019	Evaluation of the selectivity of the product Terbut 500 S.C. in maize. SynTech Research Poland Sp. z o.o. Terbut 500 S.C.-PL01 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Maciej Kasperek	2019	Evaluation of the selectivity of the product Terbut 500 S.C. in maize. SynTech Research Poland Sp. z o.o. Terbut 500 S.C.-PL02 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Mateusz Ćwiek	2019	Evaluation of the selectivity of the product Terbut 500 S.C. in maize. SynTech Research Poland Sp. z o.o. Terbut 500 S.C.-PL03 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Łukasz Nasalski	2019	Evaluation of the selectivity of the product Terbut 500 S.C. SynTech Research Poland Sp. z o.o. Terbut 500 S.C.-PL04 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim
3.2.3	Mateusz Świtkowski	2019	Evaluation of the selectivity of the product Terbut 500 S.C. in maize. SynTech Research Poland Sp. z o.o. Terbut 500 S.C.-PL05 GEP Unpublished	N	Synthos Agro Sp. z o. o. ul. Chemików 1 32-600 Oświęcim

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

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

The following tables are to be completed by MS

**List of data submitted by the applicant and not relied on**

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

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

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