FINAL REGISTRATION REPORT

Part B

Section 3

Efficacy Data and Information

Concise summary

Product code: **MEZOFLOR 103 SC**

Product names: **MEZOFLOR 103 SC / FLOCORN 103 SC**

Chemical active substances:

Mesotrione, 100 g/L
Florasulam, 3 g/L

Central Zone

Zonal Rapporteur Member State: Poland

CORE ASSESSMENT

(authorization)

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

Submission date: 07/2023

MS Finalisation date: 12/2023, 12/2024

Version history

When	What
07/2023	Initial dRR
12/2023	ZRMs evaluated dRR submitted by Applicant.
12/2024	The final Registration Report

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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).

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. However, in the briefly summary – Mezoflor 103 SC / Flocorn 103 SC can be granted in PL to control weeds in maize, according to accepted GAP table. Detailed assessment is presented after each chapter in commenting box.

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
Zonal uses (field or outdoor uses, certain types of protected crops)														
1	Poland	Maize (ZEAMX)	F	**susceptible weeds:** *Capsella bursa-pastoris* *Galinsoga parviflora* *Thlaspi arense* *Matricaria chamomilla* ~~*Matricaria martima*~~ *Anthemis arvensis* ~~*Viola arvensis*~~ ~~*Centaurea cyanus*~~ ~~*Stellaria media*~~ ~~*Geranium pusillum*~~ ~~*Polygonum convolvulus*~~ ~~*Brassica napus*~~ ~~*Persicaria maculosa*~~ **moderate susceptible weeds:** *Chenopodium album* ~~*Echinochloa crus-galli*~~ *Galium aparine* ~~*Solanum nigrum*~~ ~~*Capsella bursa-pastoris*~~ ~~*Galinsoga parviflora*~~ ~~*Thlaspi arense*~~ ~~*Matricaria chamomilla*~~ *Matricaria martima*	Foliar spray-ing	BBCH 12-18	1	N/A	1.0 L/ha	Mesotrione 100 g as/ha Florasulam 3.00 g as/ha	200 -300 L/ha	Not relevant		Acceptable

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
				~~*Anthemis arvensis*~~ *Viola arvensis* *Centaurea cyanus* *Stellaria media* *Geranium pusillum* *Polygonum convolvulus* *Brassica napus* ~~*Persicaria maculosa*~~ ~~*Amaranthus retroflexus*~~ ~~*Anchusa arvensis*~~ **Medium resistance:** *Echinochloa crus-galli*										
				susceptible weeds: *Chenopodium album,* *Galium aparine* ~~*Solanum nigrum*~~ *Capsella bursa-pastoris* *Galinsoga parviflora* *Thlaspi arense* *Matricaria chamomilla* *Matricaria martima* *Anthemis arvensis* *Viola arvensis* *Stellaria media* ~~*Geranium pusillum*~~ *Polygonum convolvulus* ~~*Brassica napus*~~ ~~*Persicaria maculosa*~~ ~~*Amaranthus retroflexus*~~	Foliar spray-ing	BBCH 12-18	1	-	1.25 L/ha	Mesotrione 125 g as/ha Florasulam 3.75 g as/ha	200 – 300 L/ha	Not relevant		Acceptable

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use-No. *	**Member state(s)**	**Crop and/ or situation** (crop destination / purpose of crop)	**F, Fn, Fnp G, Gn, Gnp or I ****	**Pests or Group of pests controlled** (additionally: develop-mental stages of the pest or pest group)	**Application**				**Application rate**			**PHI** (days)	**Remarks:** e.g. g safener/ synergist per ha, other dose rate expression, dose range (min-max)	**zRMS Conclusion (efficacy)**
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product / ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min / max			
				~~*Anchusa arvensis*~~ **moderate susceptible weeds:** *Echinochloa crus-galli* ~~*Galium aparine*~~ ~~*Solanum nigrum*~~ ~~*Capsella bursa-pastoris*~~ ~~*Galinsoga parviflora*~~ ~~*Thlaspi arense*~~ ~~*Matricaria chamomilla*~~ ~~*Matricaria martima*~~ ~~*Anthemis arvensis*~~ ~~*Viola arvensis*~~ *Centaurea cyanus* ~~*Stellaria media*~~ *Geranium pusillum* ~~*Polygonum convolvulus*~~ *Brassica napus*										

* 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 MEZOFLOR 103 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 Request.
This document describes the acceptable use conditions required for the registration of MEZOFLOR 103 SC containing as a.i. mesotrione (100 g/L), florasulam (3 g/L). The formulation of this product is soluble concentrate (SC).
This document shows the efficacy of new product MEZOFLOR 103 SC containing mesotrione which was included into Annex I of Directive 91/414; COMMISSION DIRECTIVE 2003/68/EC of 11 July 2003 amending Council Directive 91/414/EEC to include trifloxystrobin, carfentrazone-ethyl, mesotrione, fenamidone and isoxaflutole as active substances and is now deemed approved under Reg. 1107/2011 (via Reg. 540/2011). The SANTE report for mesotrione (SANTE/11654/2016-23/03/2017) is considered to provide the relevant review information or a reference to where such information can be found.
Commission Implementing Regulation (EU) 2017/725 of 24 April 2017 amending Implementing Regulation (EU) No 540/2011 as regards the extension of the approval periods of active substance mesotrione.

Mesotrione belongs to the chemical group of triketones (2-benzylcyclohexane-1,3-diones). This substance is a systemic herbicide, which affects to the plants by blocking the function of the essential plant enzyme 4-hydroxy-phenyl-pyruvatedioxygenase (4-HPPD) in the cytosol of sensitive plants.

In the case of **florasulam**, Commission Implementing Regulation (EU) 2015/1397 of 14 August 2015 renewing the approval of the active substance florasulam in accordance with Regulation (EC) No 1107/2009 of the European Parliament and of the Council concerning the placing of plant protection products on the market, and amending the Annex to Commission Implementing Regulation (EU) No 540/2011. The SANTE report for florasulam (SANTE/10542/2015-rev.1-14/07/2015) is considered to provide the relevant information or a reference to where such information can be found.
Active substance – florasulam is a post emergent herbicide, which belongs to the chemical group of 1,5c triazolopyrimidine sulfonanilides, a class of herbicides which affect to inhibit the plant enzyme acetolactate synthase enzyme (ALS) which is essential for creation of amino acids with branched chains such as valine or leucine.
Information on the detailed composition of MEZOFLOR 103 SC can be found in the confidential dossier of this submission (Registration Report – Part C).
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 1-4, 5, 6, 7, 8, 9.

Description of active substances

Mesotrione is not a new substance. Mesotrione is the ISO common name for 2-(4-mesyl-2-nitrobenzoyl) cyclohexane -1,3-dione (IUPAC). Mesotrione is classified by Herbicide Resistance Action Committee (HRAC) in group 27.
Florasulam is the ISO common name for 2′,6′,8-trifluoro-5-methoxy[1,2,4]triazolo[1,5-c] pyrimidine-2-sulfonanilide (IUPAC). Florasulam is classified by Herbicide Resistance Action Committee (HRAC) in group 2.

Mode of action

This document provides information on the effectiveness of MEZOFLOR 103 SC plant protection product containing two active substances: mesotrione and florasulam.

Mesotrione belongs to triketones (2-benzylcyclohexane-1,3-diones) is a systemic of selective activity herbicides taken up via roots and shoots and translocated rapidly in both xylem and phloem into all plant parts. This herbicide inhibit phydroxyphenyl pyruvate dioxygenase (HPPD), which converts p-hydroxymethyl pyruvate to homogentisate. This is a key step in plastoquinone biosynthesis and its inhibition gives rise to bleching symptoms on new growth. These symptoms result from an indirect inhibition of carotenoid synthesis due to the involvement of plastoquinone as a cofactor of phytoene desaturase. In sensitive plants symptoms of white chlorosis become visible within a few days after application in actively growing tissues being in the cell elongation phase. Complete death of sensitive plants may occur up to 2 weeks after application. Maize has a natural tolerance against mesotrione as it can detoxify the herbicide into inactive compounds. This detoxification is mediated by cytochrome-P450-oxygenase and is so rapid in maize that mesotrione is not translocated away from the treated zone to the point of action. Sensitive weed species cannot detoxify mesotrione in this way.

Florasulam, which belongs to is a selective, post emergent herbicide is taken up by the leaves. This substance is rapidly degraded in soil and poorly taken up by the roots, thus providing very little soil activity. After foliar absorption, florasulam is translocated to the meristematic tissue, where it inhibits the plant enzyme acetolactate synthase (ALS) also called acetohydroxyacid synthase (AHAS), a key enzyme in the biosynthesis of the branched-chain amino acids isoleucine, leucine and valine. The inhibition of ALS results in a number of distinctive whole plant symptoms. Growth of sensitive species is retarded within a matter of hours of application although visible effects may not be observed for several days. Symptoms appear first in the upper meristematic region the plants as chlorosis and necrosis. The upper new leaves often taken on a wilted appearance. The effects then spread to the remaining parts of the plant. In some species there is a reddening of the midrib and veins. Complete desiccation of the plant may occur in 7 – 10 days in ideal growing conditions but may take up to 6 to 8 weeks under less ideal conditions.

Table 3.2-1: Details of the active substances

Active substance	Mesotrione	Florasulam
Concentration (Unit: g/kg or g/L)	100 g/L	3 g/L
Chemical group	triketones (2-benzylcyclohexane-1,3-diones)	1,5c triazolopyrimidine sulfonanilides
Mode of action	Inhibits the plant enzyme 4-hydroxy-phenyl-pyruvatedioxygenase (4-HPPD)	Inhibits the plant enzyme acetolactate synthase (ALS)
Biological action	post-emergence herbicide	post-emergence herbicide
Group of pesticides	herbicide	herbicide

Description of the plant protection product

This document summarise the information related to the data on application for the plant protection product MEZOFLOR 103 SC/ FLOCORN 103 SC containing active substance mesotrione and florasulam. MEZOFLOR 103 SC/ FLOCORN 103 SC is a suspension concentrate (SC) containing 100 g/L mesotrione and 3 g/L florasulam for use as a herbicide. Herbicide is use for post-emergence to control of burdensome monocotyledons and dicotyledonous weeds in maize.

Mesotrione belongs to triketones, which inhibit phydroxyphenyl pyruvate dioxygenase (HPPD), which converts p-hydroxymethyl pyruvate to homogentisate. which ultimately leads to inhibition of carotenoid synthesis.
The applicant submits the documentation for efficacy studies to evaluation herbicide MEZOFLOR 103 SC, proposes its application to post – emergence control weeds in maize.

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

Uses		Member State	Requested rates	Comments / Other relevant details on GAPs
Crop	**Targets**			
Maize	**susceptible weeds:** *Capsella bursa-pastoris* *Galinsoga parviflora* *Thlaspi arense* *Matricaria chamomilla* *Matricaria martima* *Anthemis arvensis* *Viola arvensis* *Centaurea cyanus* *Stellaria media* *Geranium pusillum* *Polygonum convolvulus* *Brassica napus* *Persicaria maculosa* **moderate susceptible weeds:** *Chenopodium album* *Echinochloa crus-galli* *Galium aparine* *Solanum nigrum* *Capsella bursa-pastoris* *Galinsoga parviflora* *Thlaspi arense* *Matricaria chamomilla* *Matricaria martima* *Anthemis arvensis* *Viola arvensis* *Centaurea cyanus* *Stellaria media* *Geranium pusillum* *Polygonum convolvulus* *Brassica napus* *Persicaria maculosa* *Amaranthus retroflexus* *Anchusa arvensis* **Medium resistance:** *Echinochloa crus-galli*	PL	1.0 L/ha	

Uses		Member State	Requested rates	Comments / Other relevant details on GAPs
Crop	Targets			
	susceptible weeds: *Chenopodium album,* *Galium aparine* *Solanum nigrum* *Capsella bursa-pastoris* *Galinsoga parviflora* *Thlaspi arense* *Matricaria chamomilla* *Matricaria martima* *Anthemis arvensis* *Viola arvensis* *Stellaria media* *Geranium pusillum* *Polygonum convolvulus* *Brassica napus* *Persicaria maculosa* *Amaranthus retroflexus* *Anchusa arvensis* **moderate susceptible weeds:** *Echinochloa crus-galli* *Galium aparine* *Solanum nigrum* *Capsella bursa-pastoris* *Galinsoga parviflora* *Thlaspi arense* *Matricaria chamomilla* *Matricaria martima* *Anthemis arvensis* *Viola arvensis* *Centaurea cyanus* *Stellaria media* *Geranium pusillum* *Polygonum convolvulus* *Brassica napus*		1.25 L/ha	

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

Description of the target pests

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

EPPO code	Scientific name	Common name*
CHEAL	*Chenopodium album*	Komosa biała
ECHCG	*Echinochloa crus-galli*	Chwastnica jednostronna

EPPO code	Scientific name	Common name*
GALAP	*Galium aparine*	Przytulia czepna
SOLNI	*Solanum nigrum*	Psianka czarna
CAPBP	*Capsella bursa-pastoris*	Tasznik pospolity
GASPA	*Galinsoga parviflora*	Żółtlica drobnokwiatowa
THLAR	*Thlaspi arense*	Tobołki polne
MATCH	*Matricaria chamomilla*	Rumianek pospolity
MATMA (MATIN)	*Matricaria martima or Tripleurospermum maritimum*/*Matricaria inodora or Tripleurospermum inodorum*	Maruna bezwonna/maruna nadmorska
ANTAR	*Anthemis arvensis*	Rumian polny
VIOAR	*Viola arvensis*	Fiołek polny
CENCY	*Centaurea cyanus*	Chaber bławatek
STEME	*Stellaria media*	Gwiazdnica pospolita
GERPU	*Geranium pusillum*	Bodziszek drobny
POLCO	*Polygonum convolvulus*	Rdestówka powojowata/rdest powojowaty
BRSNW	*Brassica napus*	Samosiewy rzepaku
POLPE	*Persicaria maculosa*	Rdest plamisty
AMARE	*Amaranthus retroflexus*	Szarłat szorstki
LYCAR	*Anchusa arvensis*	Farbownik polny

* optional

Weeds controlled by the plant protection product MEZOFLOR 103 SC are: CHEAL, ECHCG, GALAP, SOLNI, CAPBP, GASPA, THLAR, MATCH, MATMA (MATIN), ANTAR, VIOAR, CENCY, STEME, GERPU, POLCO, BRSNW, POLPE, AMARE, LYCAR.

Chenopodium album - an annual weed that produces a strong taproot. The seeds germinate from spring to late summer. It grows on all types of soil. However, it prefers well-cultivated, nitrogen-rich, humus, clay and sandy soils. It absorbs particularly large amounts of nutrients from the soil. Cotyledons fleshy, oval elongated, with a petiole about 15 mm long. The underside of the cotyledons is red-violet, the upper side is silvery, covered with a mealy coating. The leaves are initially oblong to ovate, blue-green, with a mealy coating, often with uneven teeth. Older leaves oval to lanceolate, very uneven, with a long petiole. The uppermost leaves on the stem are lanceolate and entire. Flowers small, forming pseudo-ears or false umbels. On average, the plant produces about 3,000 black seeds, but can also produce up to 20,000. In the soil, they retain their germination capacity for a long time from 10-15 years and even more than 39 years. They germinate at a temperature of 2-30 ° C, optimum 15-20 ° C.

Echinochloa crus-galli (barnyard grass) - an annual weed belonging to the group of thermophilic plants. It is usually called one-sided millet, chicken millet, Japanese millet, millet, wild millet. It sprouts the earliest of all weed species. It likes soils rich in minerals, humus, sandy and loamy, with loamy substrate. After sprouting, the first leaf is curled, broadly lanceolate, dark green to gray green in color. The lack of a

leaf tongue and an ear is characteristic. In addition to the roots, the seedling produces adventitious roots at the base of the stem. At this stage of growth, weeds are easy to confuse with species of trichinella and fingergrass. In the later stage of development, weed produces leaves often with a reddish tint with a light stripe in the middle. A distinct distinguishing feature is the flattened leaf sheath. The pseudo-ears are arranged in panicles or clusters. Chaff usually with a long bone. One-sided weed is a grass with a varied habit and reaches, depending on the position, a height of 150 cm. The plant produces 300-500 kernels.

Cleavers (***Galium aparine***) - annual plant, spring or winter, sprouts from autumn to spring, does not germinate in the summer months, rough and sticky. It occurs primarily on soils with good moisture, rich in nutrients, humus, with a large thickness, loam and loam. With the right amount of nutrients, it is found on virtually all soils. Cotyledons fleshy, firm, oval elongated, approx. 15 mm long, with a petiole and indented at the end of the midrib. Lanceolate leaves, whorled (6-9 each) in the nodes of the stem. Relatively soft, usually dark green. On the upper side there are bristles bent forward (rough). The flowers are inconspicuous, white, forming multi-flowered, umbel-shaped inflorescences along the collected leaves, much longer than the leaves. Seeds 4-6 mm in diameter, spherical, covered with densely hooked setae. 300-400 seeds per plant. From practice it is known that in the soil they retain their germination capacity for 7-8 years.

Black nightshade (***Solanum nigrum***) - an annual weed that germinates in late spring. It produces a short conical root. It prefers loose, humus to slightly acidic soils, rich in nutrients, especially in nitrogen. Likes sandy to clay soils. The smooth, entire cotyledons are ovate to round-oval in shape, with a distinctly pointed tip. The petiole is rounded at the base with a pronounced middle nerve. The true leaves are broadly ovate or almost triangular, entire to indented. Leaf petiole slightly pubescent, dull dark green. Stem with a black tint at the base. Flowers collected in umbellates on short stalks, containing 5 to 10 flowers. The fruit is the size of a pea, black-blue to green-yellow when ripe. The seeds are grey-brown, with a finely meshed surface, kidney-shaped and flattened. Each plant produces about 500 seeds.

Shepherd's purse (***Capsella bursa-pastoris***) A biennial, less often a one-year-old weed sprouting almost all year round. Produces spindly roots. It prefers nitrogen-rich, airy, sometimes slightly humus, clay and sandy soils. Cotyledons of seedlings very small, round to oval with a short petiole. There are two types of leaves. Lower leaves with petioles form a rosette, undivided, sinuately toothed or pinnate. In the upper part of the plant, there are few undivided stem leaves, entire to serrated, covering the stem with a wide lobe. Flowers densely placed on protruding petioles. The petals of the crown are white, obovate. Plants bloom as early as fall, spring to early summer. The pods are heart-shaped, slightly rounded at the top. The plant produces 2,000 to 4,000 seeds that are light brown, almost smooth.

Galinsoga parviflora - an annual weed that germinates in late spring. It belongs to the group of thermophilic and photophilous plants. It prefers freshly tilled, sandy to loamy soils with a high content of nutrients, especially nitrogen. Locally, it occurs in high intensity also on soils rich in humus. A seedling with small club-shaped cotyledons, truncated at the end, slightly recessed in the middle. The true leaves are arranged opposite, slightly toothed, slightly shiny but sparsely pubescent. Unlike the lower leaves, the upper leaves have very short petioles or are almost sessile. Egg-shaped seeds, covered with short bristly hairs.

Thlaspi arense – an annual weed, spring and winter, sprouting mostly in spring, but also in autumn. Prefers soil rich in nutrients, humus, sandy loam. The entire cotyledons, with a slightly elongated tip, have a round oval shape with a distinct petiole. The true leaves are light green, obovate at the base, with a petiole. Upper leaves with an arrow-shaped base, mostly incised or toothed, without hairs. Flowers small, white. Seeds dark brown, concentrically ribbed.

Matricaria chamomilla - an annual, wintering weed with a spindle-shaped root. It prefers freshly tilled, nutrient-rich but low-calcium clay or sandy soils. Seedling with club-shaped cotyledons at the ends triangular, but without petioles and hairy. The true leaves are initially lanceolate, with only one or two narrow side lobes. In the later growth phase, double or triple pinnate with narrow, threadlike leaves, hairless or with a small amount of hairs. Flower receptacle conical, hairless and hollow inside. Flower baskets with white ligulate flowers, hanging down at night and after pollination. Gray-brown seeds with 4-5 ribs. Each plant produces about 500 seeds.

Matricaria maritima L. subsp. inodora (L.) or Tripleurospermum inodorum - annual weed sprouting from autumn to spring, spring or winter. It grows well in warm, loose, nutrient-rich, low-calcium soils. Prefers clay and sandy soils. This species is a highly spreading weed. Seedlings with round and firm cotyledons. The leaves are lanceolate at first, later pinnate. Leaf patches shorter and thicker than in common chamomile. The plant is completely or almost odorless. This species can reach a height of up to 120 cm. Single inflorescence baskets, with yellow tubular flowers, white tongue-shaped. Flower receptacle broadly conical. One plant produces up to 1000 dark brown seeds with a crown. The seeds germinate at a temperature of 5 °C to 35 °C. *Matricaria martima* or *Tripleurospermum maritimum* (EPPO code MATMA) is know also as *Matricaria inodora* or *Tripleurospermum inodorum* (EPPO code MATIN). All these name are connected with the same weed, for this reason, in dossier MATIN and MATMA EPPO code are written equally, the summary of the results is common to both codes.

Anthemis arvensis - annual, spring or winter weed, sprouting in autumn and spring, with a spindle-shaped root. Likes light, sandy, loamy soils with a low content of calcium. It is an indicator of soil acidity. Cotyledons of seedlings oval or round, tip rounded. Leaves at first solitary, later double pinnate, with narrow, club-shaped side lobes, white-hairy. Inflorescences full, elongated, wedge-shaped, lanceolate and sharp flower bracts. The plant produces about 500 seeds. They are rounded, longitudinally ribbed, at the top they have a swollen, often leathery ring.

Viola arvensis - an annual weed that germinates all year round, especially in autumn. It can be winter or spring. It is not very demanding as to the soil and is practically found on all types of soil. However, it grows better in low-calcium and moderately acidic soils. After germination, the cotyledons are broadly spatulate, entire, with an indented end, with a short petiole. In the later growth phase, the leaves are irregularly notched on the edges. In the lower part of the plant, round or ovoid lanceolate leaves with long petioles with pinnate stipules. Flowers on long stalks, single, with five petals of unequal size. The color of the flowers is varied, most often white and yellowish, and the upper ones are also partly purple. The plant produces up to 2,500 pear-shaped, light brown, longitudinally furrowed seeds. Their optimal temperature for germination is approx. 13 °C.

Centaurea cyanus - an annual plant that can be both winter and spring. The seeds germinate mainly in the fall. This weed produces spindly roots. It prefers nutrient-rich, sandy and loamy soils. Seedlings have broadly oval cotyledons 15 mm long. An additional feature is the narrowing at the petiole, with the middle nerve visible. The leaves are lanceolate in shape with greyish-white, woolly hairs. There are two types of leaves, the lower ones are pinnate with black serrations and the upper ones with the entire edge, undivided, sessile. Dark blue inflorescences. Flowers of the ligulate type, large, serrated. One plant can give about 700-1600 seeds. They are silky fluffy, mostly blue-grey-brown in color with a white tip. In the soil, they remain viable for 5-10 years.

Stellaria media – an annual spring or winter weed, sprouting in autumn and spring. In mild winters it forms a dense layer. It prefers well-cultivated, slightly acidic to alkaline, and nitrogen-rich soils. Likes airy and water-rich soil, but not too wet. After germination, the cotyledons are narrow, ovate to lanceolate and pointed. The length of the tail is equal to the length of the gill. The leaves are delicate, entire, light green. From round to ovoid in shape, with a pronounced sharp tip and petiole. Arranged opposite. Flowers small, collected in two-armed tops. A flower with five deeply indented bifid petals, giving the impression of 10 petals. The plant produces up to 15,000 seeds. They are spherical, kidney-shaped, red-brown to black with warts on the surface. Seeds retain the ability to germinate in the soil for 6-68 years, and germination takes place at a temperature of 2 °C with an optimum of 13 to 20 °C.

Geranium pusillum - weed mainly annual, sometimes biennial. It can be spring or winter. Seed germination occurs from spring to autumn. It grows well on soils rich in nutrients with low calcium content. It belongs to the group of thermophilic weeds. After germination, symmetrically arranged cotyledons are kidney-shaped with a long petiole. The true leaves are round in outline. They are divided into 5-7 parts, with strongly visible deep indentations and soft hairs. Light purple flowers, sometimes pink or white. The light brown leathery seeds are smooth.

Polygonum convolvulus L. is a common weed of cereal crops where it is frequently found twining around the stems of the crop plants. It is also a weed of gardens and roadsides. A summer annual, it germinates in nature in the late spring or early summer. The fruits are nuts, only one being produced per flower and they are shed with the dried-up periant still attached. Effective reproduction is entirely by the nuts.

Brassica napus L. var. Napus - self-sown rape, developing on the stubble after harvest, is nothing desirable and is treated on an equal footing with recognizable weeds. Unfortunately, it is impossible to eliminate them in one hundred percent, because the natural feature of rapeseed is uneven ripening and shedding of pods. Some begin to sprout immediately after shedding, others may remain dormant for several years, causing problems with weed infestation in subsequent seasons. The dormant period can last up to 10 years.

Persicaria maculosa - an annual weed sprouting from spring to summer, rich in forms of occurrence. It prefers moist, well-structured, nutrient-rich, sandy and loamy soils. Cotyledons of seedlings elliptical with a red hypocotyl. The true leaves are lanceolate, pointed, along the veins and on the edges covered with hairs, often with a dark spot on the upper side. The membranous sheath of the leaf adheres to the stem, is short-hairy, the edges covered with long cilia. The pink flowers are gathered in a cylindrical spike on the tops of the stems or growing from the axils of the leaves. Each plant produces 200 - 800 seeds. The seeds are lenticular, sharp, smooth, black and shiny.

Amaranthus retroflexus – an annual weed, sprouting from late spring to summer. It can reach a height of 15 to 130 cm. It prefers loose, permeable, mineral-rich, humus and well-cultivated soils. In particular, in favorable climatic conditions, rough amaranth is a competitive weed for cultivated plants. Cotyledons of seedlings oblong oval, rounded at the ends, gradually narrowing into a petiole. The main nerve is clearly visible on the underside of the cotyledon. The true leaves are ovate, the petiole is long, grey-blue-green, pointed at the end. The stem, petioles and undersides of the leaves are often reddish-purple. Flowers in clusters, gathered in short, densely blooming, thick, greenish spikes with prickly perianth leaves. Seeds are black, shiny, lenticular and remain viable in the soil for many years. Each plant produces between 1000 and 5000 seeds.

Table 3.2-4: Major / minor status of intended uses (for all cMS and zRMS).

Crop and/or situation	Crop status		Pests or group of pests controlled	Pest status	
	Major	minor		Major	minor
Maize (ZEAMX)	PL	-	*Chenopodium album*	PL	-
			Echinochloa crus-galli	PL	-
			Galium aparine		PL
			Solanum nigrum	PL	~~PL~~
			Capsella bursa-pastoris	-	PL
			Galinsoga parviflora	-	PL
			Thlaspi arense	-	PL
			Matricaria chamomilla	-	PL
			Matricaria martima or Tripleurospermum maritimum/Matricaria inodora or Tripleurospermum inodorum	-	PL
			Anthemis arvensis	-	PL
			Viola arvensis	-	PL
			Centaurea cyanus	-	PL
			Stellaria media	-	PL
			Geranium pusillum	-	PL
			Polygonum convolvulus	PL	
			Brassica napus	-	PL
			Persicaria maculosa	PL	
			Amaranthus retroflexus	PL	
			Anchusa arvensis	~~PL~~	PL

Compliance with the Uniform Principles

Assessment was performed according EPPO guidelines.

Information on trials submitted (3.1 Efficacy data)

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

Crop *	Targets*	Country	Years	Type of trial**	Number of trials (number of valid trials)		GEP, non-GEP, official***	Comments (any other relevant information)
					Poland	-		
Maize (ZEAMX)	Weeds monocotyledonus and dicotyledonous	Poland	2020	MED + E	5	-	GEP	The study was conducted in Poland under different climate and soil for different varieties of maize
			2021	MED + E	12	-	GEP	
			2022	MED + E	4	-	GEP	
TOTAL	-	-		-	21	-	-	-

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

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

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

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

Crop	Reference standard	Country(ies) where the product is registered (1)	Authorization number	Active substances	Formulation		Registered application rate(3)	Application rate in trials (per treatment)	Remark(4)
					Type(2)	Concentration of a.s.			
Maize	NOTOS 100 SC	Poland	Zezwolenie MRiRW nr R-200/2016 z dnia 19.09.2016 r. ostatnio zmienione decyzją MRiRW nr R-374/2021d z dnia 12.07.2021 r.	mesotrione	SC	100 g/L	1.5 L/ha	1.5 L/ha	
	OSORNO SC	Poland	Zezwolenie MRiRW nr R-38/2016 z dnia 16.02.2016 r. odnowione decyzją MRiRW nr R-26/2021 z dnia 23.06.2021 r.	mesotrione	SC	100 g/L	0.75 – 1.0 L/ha	1.0 L/ha	
	OSORNO SC	Poland	Zezwolenie MRiRW nr R-38/2016 z dnia 16.02.2016 r. odnowione decyzją MRiRW nr R-26/2021 z dnia 23.06.2021 r.	mesotrione	SC	100 g/L	1.5 L/ha	1.5 L/ha	
	MUSTANG 306 SE	Poland	Zezwolenie MRiRW nr R-	Florasulam + 2,4-D	SE	6.25 g/L + 300 g/L	0.6 L/ha	0.6 L/ha	

Crop	Reference standard	Country(ies) where the product is registered (1)	Authorization number	Active substances	Formulation		Registered application rate(3)	Application rate in trials (per treatment)	Remark(4)
					Type(2)	Concentration of a.s.			
			53/2010 z dnia 10.06.2010 r. zmienione decyzją MRiRW nr R-328/2015d z dnia11.05.2015 r.						

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

Comments of zRMS:	This document summarizes the information related to the efficacy of the plant protection product – Mezoflor 103 SC / Flocorn 103 SC (product code: Mezoflor 103 SC). Mezofor 103 SC is a suspension concentrate (SC) formulation containing mesotrione (100 g/L) and florasulam (3 g/L) in Poland under Regulation (EC) 1107/2009. For now, this mentioned active substances are on the list of approved active substances. All needed information's are included in this dRR. **Florasulam**, 1'1-(2, 6-difluorophenyl)-8-fluoro-5-methoxy[l, 2, 4]triazolo(l, 5-c]pyrimidine-2- sulfonamide, is a sulfonamide herbicide that is currently registered in Europe and Canada for use in cereal weed control, Florasulam is being developed in the U.S. for control of wild buckwheat, wild mustard. volunteer canola, field pennycress, common chickweed, shepherd's purse, bedstraw, and smartweed, when used in a post-emergent application in wheat, barley, oats, rye, and triticale. The mode of action at the cellular level involves the inhibition ofthe enzyme, acetolactate synthase (ALS). Florasulam was introduced in 2000 and is now one of the leading products in this class of herbicides. Florasulam, a herbicide belonging to the sulfonylurea family, plays a crucial role in managing broadleaf weeds across various crops. It stands as one of the most extensively utilized active ingredients in herbicides. This powerful compound effectively inhibits weed growth by impeding the development of diverse broadleaf weeds. Florasulam finds valuable application in scientific research, particularly in exploring the impact of herbicides on plant growth and development. The mechanism of Florasulam centers around the inhibition of acetolactate synthase (ALS), an enzyme crucial in the biosynthesis of branched-chain amino acids. By impeding ALS, Florasulam effectively blocks the synthesis of these amino acids, which are essential for the growth and development of plants. Ultimately, this disruption leads to the demise of the targeted plant species. The selectivity of florasulam in maize is due to differences in metabolism; the hydrolysis of the compound is rapid in maize. Flumetsulam shows a similar, metabolism-based selectivity in soy. The transfer of the triazolopyrimidine moiety to the sulfonamide nitrogen in the two lastly developed compounds significantly modified their selectivity: they are effective against mono- and dicotyledonous weeds, penoxsulam in rice and pyroxsulam in wheat; and the chemical modification relative to flumetsulam and florasulam had a beneficial effect on mammalian toxicity as well. **Mesotrione** is a new herbicide being developed for the selective pre- and post-emergence control of a wide range of broad-leaved and grass weeds in maize (*Zea mays*). It is a member of the benzoylcyclohexane-1,3-dione family of herbicides,

	which are chemically derived from a natural phytotoxin obtained from the Californian bottlebrush plant, *Callistemon citrinus*. The compound acts by competitive inhibition of the enzyme 4-hydroxyphenylpyruvate dioxygenase (HPPD), a component of the biochemical pathway that converts tyrosine to plastoquinone and α-tocopherol. Mesotrione is an extremely potent inhibitor of HPPD from *Arabidopsis thaliana*, with a Ki value of c 6–18 pM. It is rapidly taken up by weed species following foliar application, and is distributed within the plants by both acropetal and basipetal movement. Maize is tolerant to mesotrione as a consequence of selective metabolism by the crop plant. Slower uptake of mesotrione, relative to susceptible weed species, may also contribute to its utility as a selective herbicide for use in maize. First mesotrione herbicide was registered in 2001, it was developed because a researcher in the mid-1970s noticed that one of the shrubs in his yard didn't have many weeds growing under it [https://www.agweb.com/opinion/mesotrione-story]. Mesotrione is safe to maize at the recommended use rates registered. In extensive field tests in the USA and Europe, no crop injury has been observed with pre-emergence applications, and injury averages ≤3% for post-emergence applications. No adverse effects on crop yields have been observed [Wichert et al., 1999]. In contrast, soybean (*Glycine max* (L) Merr) is extremely sensitive, developing bleaching symptoms when treated with of mesotrione at application rates as low as 4 g ha−1. Nevertheless, there is no risk of carry-over in rotational soybean crops due to the rapid degradation of mesotrione in soils [Wichert et al., 1999]. In Poland 58 PPPs with mesotrione and 84 PPPs with florasulam are already registered in Poland (in line to Polish Registry of PPPs dated 30.11.23). However, this formulation of mesotrione with florasulam is not registered in Poland yet. Mezoflor 103 SC / Flocorn 103 SC (product code: Mezoflor 103 SC) will be the first PPP on the Polish market. The product – Mezoflor 103 SC / Flocorn 103 SC (product code: Mezoflor 103 SC) containing mesotrione (100 g/L) and florasulam (3 g/L) by Synthos Agro Sp. z o. o. has not been previously evaluated in any country according to Uniform Principles. Poland is a ZRMs. Mezoflor 103 SC / Flocorn 103 SC is used as herbicide in maize. The reports and data were submitted to support of the evaluation of the Mezoflor 103 SC product authorization in PL.

3.2.1 Preliminary tests (KCP 6.1)

Preliminary studies on product MEZOFLOR 103 SC were not carried out because this herbicide contains mesotrione and florasulam which are known and has long been used in the protection of plants. The effect of active substances is well known and sufficient large scale efficacy trials are available to evaluate the effectiveness of MEZOFLOR 103 SC. Therefore, preliminary tests are not described and not required.

Comments of zRMS:	Preliminary range-finding tests were not submitted by the Applicant. The active substances of Mezoflor 103 SC / Flocorn 103 SC (product code: Mezoflor 103 SC) – mesotrione and florasulam, are registered and have been commonly used in agricultural practice for many years. So, many efficacy trials are available to evaluate the effectiveness of products containing those active compounds. **Preliminary tests were not necessary in this case in the opinion of Evaluator.** In Poland this formulation is not registered yet. Applicant did not submitted justification to combine both active ingredients in Mezoflor 103 SC. However, in the

	opinion of ZRMs such justification in this case is not required. Expecially in case that the presented efficacy trials, of these two compounds (mesotrione and florasulam) demonstarted the activity against studied weeds in maize. Mezoflor 103 SC demonstarted at least comparable control or even higher to the standard reference products used during trials: NOTOS 100 SC (with 100 g/L of mesotrione, used at dose 1,5 l/ha); OSORNO SC (with 100 g/L of mesotrione, used at dose 1,0 l/ha and 1,5 l/ha) and MUSTANG 306 SE (with 6.25 g/L of florasulam + 300 g/L of 2,4-D, used at dose 0,6 l/ha). Therefore, in the opinion of ZRMs the inclusion of proposed amount of florasulam (3 g/L) and mesotrione (100 g/L) in the formulation of Mezoflor 103 SC can be stated as fully justified. **Mezoflor 103 SC / Flocorn 103 SC (product code: Mezoflor 103 SC) – composition of florasulam (3 g/L) and mesotrione 100 g/L) have a very good effectiveness against maize weeds, as shown in the following section.**

3.2.2 Minimum effective dose tests (KCP 6.2)

No results of preliminary screening tests are here. The efficacy of reduced rates of MEZOFLOR 103 SC for weed control in maize was investigated in field tests carried out in 2020, 2021 and 2022. 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/ECHCG

17 field trials were established in order to determine the minimum effective dose for the control of the maize/ECHCG. MEZOFLOR 103 SC was tested at 0.5 to 1.25 L/ha (in 2020) and 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of ECHCG. The rates reflect the proposed label rate at 40%, 60%, 80% in 2020 and 60% and 80% in 2021 and 2022 of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/GALAP

6 field trials were established in order to determine the minimum effective dose for the control of the maize/GALAP. MEZOFLOR 103 SC was tested at 0.5 to 1.25 L/ha (in 2020) and 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of GALAP. The rates reflect the proposed label rate at 40%, 60%, 80% in 2020 and 60% and 80% in 2021 and 2022 of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/CHEAL

19 field trials were established in order to determine the minimum effective dose for the control of the maize/CHEAL. MEZOFLOR 103 SC was tested at 0.5 to 1.25 L/ha (in 2020) and 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of CHEAL. The rates reflect the proposed label rate at 40%, 60%, 80% in 2020 and 60% and 80% in 2021 and 2022 of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/GERPU

6 field trials were established in order to determine the minimum effective dose for the control of the

maize/GERPU. MEZOFLOR 103 SC was tested at 0.5 to 1.25 L/ha (in 2020) and 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of GERPU. The rates reflect the proposed label rate at 40%, 60%, 80% in 2020 and 60% and 80% in 2021 and 2022 of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/MATIN, MATMA

12 field trials were established in order to determine the minimum effective dose for the control of the maize/MATIN (MATMA). MEZOFLOR 103 SC was tested at 0.5 to 1.25 L/ha (in 2020) and 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of MATIN (MATMA). The rates reflect the proposed label rate at 40%, 60%, 80% in 2020 and 60% and 80% in 2021 and 2022 of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/ GASPA

4 field trials were established in order to determine the minimum effective dose for the control of the maize/GASPA. MEZOFLOR 103 SC was tested at 0.5 to 1.25 L/ha (in 2020) and 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of GASPA. The rates reflect the proposed label rate at 40%, 60%, 80% in 2020 and 60% and 80% in 2021 and 2022 of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/ VIOAR

10 field trials were established in order to determine the minimum effective dose for the control of the maize/VIOAR. MEZOFLOR 103 SC was tested at 0.5 to 1.25 L/ha (in 2020) and 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of VIOAR. The rates reflect the proposed label rate at 40%, 60%, 80% in 2020 and 60% and 80% in 2021 and 2022 of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/ CENCY

3 field trials were established in order to determine the minimum effective dose for the control of the maize/CENCY. MEZOFLOR 103 SC was tested at 0.5 to 1.25 L/ha (in 2020) and 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of CENCY. The rates reflect the proposed label rate at 40%, 60%, 80% in 2020 and 60% and 80% in 2021 and 2022 of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/THLAR

6 field trials were established in order to determine the minimum effective dose for the control of the maize/THLAR. MEZOFLOR 103 SC was tested at 0.5 to 1.25 L/ha (in 2020) and 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of THLAR. The rates reflect the proposed label rate at 40%, 60%, 80% in 2020 and 60% and 80% in 2021 and 2022 of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/ POLCO

9 field trials were established in order to determine the minimum effective dose for the control of the maize/POLCO. MEZOFLOR 103 SC was tested at 0.5 to 1.25 L/ha (in 2020) and 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of POLCO. The rates reflect the proposed label rate at 40%, 60%,

80% in 2020 and 60% and 80% in 2021 and 2022 of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/ BRSNW

8 field trials were established in order to determine the minimum effective dose for the control of the maize/BRSNW. MEZOFLOR 103 SC was tested at 0.5 to 1.25 L/ha (in 2020) and 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of BRSNW. The rates reflect the proposed label rate at 40%, 60%, 80% in 2020 and 60% and 80% in 2021 and 2022 of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/ STEME

3 field trials were established in order to determine the minimum effective dose for the control of the maize/STEME. MEZOFLOR 103 SC was tested at 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of STEME. The rates reflect the proposed label rate at 60% and 80% in 2021 and 2022 of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/ SOLNI

5 field trials were established in order to determine the minimum effective dose for the control of the maize/SOLNI. MEZOFLOR 103 SC was tested at 0.75 to 1.25 L/ha (in 2021and 2022) in maize for the control of SOLNI. The rates reflect the proposed label rate at 60% and 80% of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/ CAPBP

6 field trials were established in order to determine the minimum effective dose for the control of the maize/CAPBP. MEZOFLOR 103 SC was tested at 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of CAPBP. The rates reflect the proposed label rate at 60% and 80% of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/ ANTAR

3 field trials were established in order to determine the minimum effective dose for the control of the maize/ANTAR. MEZOFLOR 103 SC was tested at 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of ANTAR. The rates reflect the proposed label rate at 60% and 80% of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/ MATCH

3 field trials were established in order to determine the minimum effective dose for the control of the maize/MATCH. MEZOFLOR 103 SC was tested at 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of MATCH. The rates reflect the proposed label rate and 60%, 80% of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/ POLPE

2 field trials were established in order to determine the minimum effective dose for the control of the

maize/POLPE. MEZOFLOR 103 SC was tested at 0.5 to 1.25 L/ha (in 2020) and 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of POLPE. The rates reflect the proposed label rate and 60%, 80% of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/ AMARE

2 field trials were established in order to determine the minimum effective dose for the control of the maize/AMARE. MEZOFLOR 103 SC was tested at 0.5 to 1.25 L/ha (in 2020) and 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of AMARE. The rates reflect the proposed label rate and 60%, 80% of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

Maize/ LYCAR

2 field trials were established in order to determine the minimum effective dose for the control of the maize/LYCAR. MEZOFLOR 103 SC was tested at 0.75 to 1.25 L/ha (in 2021 and 2022) in maize for the control of LYCAR. The rates reflect the proposed label rate and 60%, 80% of the full recommended rate of MEZOFLOR 103 SC in accordance with the EPPO standard PP 1/225 '*Minimum effective dose*'.

In the table 3.2-7 are summarizes the results of the control efficiency of individual weeds that appeared in the experiments and the density of weeds (expressed as number of plants per m^2) or % weed cover of the ground surface in control fields. The summary of results consists of partial assessments made in each trial. For example, the weed CHEAL shows the minimum and maximum values that occurred in the assessments made in all 19 experiments. A summary of detailed results for each experiment can be found in this dossier in Tables 3.2.8 - 3.2.27.

Table 3.2-7: Minimum effective dose. Efficacy of MEZOFLOR 103 SC at proposed label rate, at 40%, 60% and 80% dose rates on target at assessment timing against targeted weeds.

Grouping*	Number of trials	Infestation of the untreated control (unit)		% control with MEZOFLOR 103 SC							
				0.5 L/ha (40% of full rate)		0.75 L/ha (60% of full rate)		1.0 L/ha (80% of full rate)		1.25 L/ha (Full rate)	
		Mean	Min & Max	Mean	Min & Max	Mean	Min & Max	Mean	Min & Max	Mean	Min & Max
CHEAL	19	23.09 (number of weeds/m^2)	5.0-94.0 (number of weeds/m^2)	76.3	61.25-87,5	65.1	0-97.5	77.0	40.0-100.0	85.6	60.0-100.0
		28.95 (%)	15-40 (%)								
ECHCG	17	7.89 (number of weeds/m^2)	2.0-14.0 (number of weeds/m^2)	71.2	57.5-85.0	49.1	0.0-93.75	59.9	0.0-100.0	71.7	10.0-100.0
		8 (%)	5-10(%)								
GALAP	6	7.51 (number of weeds/m^2)	6.0-10.0 (number of weeds/m^2)	77.6	61.25-85.0	69.1	43.8-91.25	80.7	61.3-100.0	87.5	72.5-100.0
		4.9 (%)	2.0-8.5 (%)								
SOLNI	5	11.47 (number of weeds/m^2)	5.0-40.0 (number of weeds/m^2)	-	-	66.7	51.3-96.0	78.9	68.8-97.0	88.6	81.3-100.0
CAPBP	6	84.59 (number of weeds/m^2)	1.0-100.0 (number of weeds/m^2)	-	-	84.6	66.3-100.0	89.5	73.8-100.0	94.3	80.0-100.0
GASPA	4	7.25 (number of weeds/m^2)	5.0-9.75 (number of weeds/m^2)	81.9	71.25-91.25	80.0	47.5-100.0	87.8	61.3-100.0	91.0	72.5-100.0
THLAR	6	8.06 (number of weeds/m^2)	4.0-15.0 (number of weeds/m^2)	58.8	45.0-81.25	81.1	56.25-100.0	86.2	63.75-100.0	90.9	68.75-100.0
		4.6 (%)	3.0-5.5 (%)								
MATCH	3	6.05 (number of weeds/m^2)	5.0-7.0 (number of weeds/m^2)			70.7	47.5-80.0	87.4	75.0-91.3	94.0	83.8-100.0
		5.25 (%)	3.0-6.5 (%)								
MATIN/	12	9.86	4.0-30.0	77.7	63.75-83.75	73.1	55.0-96.25	82.2	60.0-100.0	89.0	65.0-100.0

Grouping*	Number of trials	Infestation of the untreated control (unit)		% control with MEZOFLOR 103 SC							
				0.5 L/ha (40% of full rate)		0.75 L/ha (60% of full rate)		1.0 L/ha (80% of full rate)		1.25 L/ha (Full rate)	
		Mean	Min & Max	Mean	Min & Max	Mean	Min & Max	Mean	Min & Max	Mean	Min & Max
MATMA		(number of weeds/m^2)	(number of weeds/m^2)								
ANTAR	3	5.07 (number of weeds/m^2)	4.0-7.0 (number of weeds/m^2)	-	-	93.2	65.0-100.0	94.6	70.0-100.0	95.8	75.0-100.0
VIOAR	10	8.07 (number of weeds/m^2)	1.3-10.0	58.9	45.0-81.75	67.6	48.8-93.75	78.2	55.0-100.0	85.1	60.0-100.0
CENCY	3	11.22 (number of weeds/m^2)	5.0-21.0 (number of weeds/m^2)	70.4	62.5-81.25	65.9	42.5-91.25	71.4	50.0-100.0	76.5	55.0-100.0
STEME	3	7.89 (number of weeds/m^2)	4.0-13.0 (number of weeds/m^2)	-	-	78.8	61.3-100.0	84.8	68.8-100.0	90.1	81.3-100.0
GERPU	6	6.35 (number of weeds/m^2)	4.0-10.0 (number of weeds/m^2)			75.8	65.0-91.25	80.6	68.0-100.0	84.1	70.0-100.0
POLCO	9	6.65 (number of weeds/m^2)	0.7-16.0 (number of weeds/m^2)	78.8	70.0-83.75	72.4	28.8-98.0	83.3	57.7-100.0	91.6	69.0-100.0
		11.7 (%)	5.0-18.8 (%)								
BRSNW	8	5.9 (number of weeds/m^2)	4.0-20.0 (number of weeds/m^2)	78.8	77.5-81.25	72.1	40.0-90.0	78.6	45.0-97.25	84.6	52.5-100.0
		8.4 (%)	5.0-10.0 (%)								
POLPE	2	7.81 (number of weeds/m^2)	7.0-9.5 (number of weeds/m^2)	78.3	71.25-82.5	81.5	71.3-92.5	89.2	81.3-100.0	95.1	86.3-100.0
		8.2 (%)	3.0-13.8 (%)								
AMARE	2	6.61 (number of weeds/m^2)	5.0-8.0 (number of weeds/m^2)	67.9	58.75-72.5	72.5	65.0-81.25	83.0	75.0-97.25	92.0	81.25-98.75
LYCAR	2	4.56 (number of weeds/m^2)	4.0-5.0 (number of weeds/m^2)			77.7	42.5-100.0	81.5	47.5-100.0	86.5	57.5-100.0

Comments of zRMS:

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. However, in the appropriate research of efficacy were tested differ doses and to register was chosen the lowest effective, which is in accordance with EPPO 1/225 (2).

Mezoflor 103 SC / Flocorn 103 SC (product code: Mezoflor 103 SC) containing florasulam (3 g/L) and mesotrione (100 g/L) was tested at a range of dose rates, but to demonstrate minimum effective dose rate, the control obtained with Mezoflor 103 SC applied at different dose rates was evaluated in 21 eff. trials carried out on maize. Those trials were conducted in one EPPO zones: N-E EPPO zone in Poland during different growing seasons (2020, 2021 and 2022). Following doses were studied during trials: 0,5 l/ha (0.4N), 0,75 l/ha (0.6N), 1,0 l/ha (0.8 N) and 1,25 l/ha (N rate).

Following weeds were studied during trials : VIOAR (10), CENCY (3), STEME (3), GERPU (6), POLCO (9), BRSNW (8), POLPE (2), AMARE (2), LYCAR (2), CHEAL (19), ECHCG (17), GALAP (6), SOLNI (5), CAPBP (6), GASPA (4), THLAR (6), MATCH (3), MATIN / MATMA (12) and ANTAR (3). In all studies – level of infestation was at the acceptable level.

Below, ZRMs presented results for MED dose against Mezoflor 103 SC / Flocorn 103 SC:

Weed	Number of trials	Mean eff. at 0,5 l/ha	Mean eff. at 0,75 l/ha	Mean eff. at 1,0 l/ha	Mean eff at 1,25 l/ha
AMARE	2	67,9%	72,5%	83,0%	92,0%
ANTAR	3	not studied	93,2%	94,6%	95,8%
BRSNW	8	78,8%	72,1%	78,6%	84,6%
CAPBP	6	not studied	84,6%	89,5%	94,3%
CENCY	3	70,4%	65,9%	71,4%	76,5%
CHEAL	19	76,3%	65,1%	77,0%	85,6%
ECHCG	17	71,2%	49,1%	59,9%	71,7%
GALAP	6	77,6%	69,1%	80,7%	87,5%
GASPA	4	81,9%	80,0%	87,8%	91,0%
GERPU	6	not studied	75,8%	80,6%	84,1%
LYCAR	2	not studied	77,7%	81,5%	86,5%
MATCH	3	not studied	70,7%	87,4%	84,0%
MATIN/MATMA	12	77,7%	73,1%	82,2%	89,0%
POLCO	9	78,8%	72,4%	83,3%	91,6%
POLPE	2	78,3%	81,5%	89,2%	95,1%
SOLNI	5	not studied	66,7%	78,9%	88,6%
STEME	3	not studied	78,8%	84,8%	90,1%
THLAR	6	58,8%	81,1%	86,2%	90,9%
VIOAR	10	58,9%	67,6%	78,2%	85,1%

S > 85% eff. **MS** 70-85% eff **MT** 60-70% eff. **T** <60% eff.

Classification marked by colour and eff. of weeds sensitivity according to Polish rules

	Trials submitted by Applicant are sufficient for Poland for MED dose. The clear dose responses was observed for the most of studied weed species. The most effective was dose 1,25 l/ha. However, also dose 1,0 l/ha was characterized by good efficiency. So, both of those doses (1.0 and 1,25 l/ha) should be recommended for use to control weeds in maize. The higher dose, should be use in the case of higher infestaion of weeds. On the basis on obtained results it has been noted that: – *for dose 0,5 l/ha* – 2 weeds were claassified as a tolerant (THLAR, VIOAR), 1 weed as a moderately tolerant (AMARE) and 9 weeds as moderately susceptible (BRSNW, CENCY, CHEAL, ECHCG, GALAP, GASPA, MATMA/MATIN, POLCO, POLPE). Lack of weeds classified as a sensitive. – *for dose 0,75 l/ha* – 1 weed was classified as a tolerant (ECHCG), 4 weeds as a moderately tolerant (CENCY, CHEAL, GALAP, SOLNI), 12 weeds as a moderately susceptible (AMARE, BRSNW, CAPBP, GASPA, GERPU, LYCAR, MATCH, MATIN/MATMA, POLCO, POLPE, STEME, THLAR) and 1 weed as a susceptible (ANTAR). – *for dose 1,0 l/ha* – 1 weed was classified as a tolerant (ECHCG), lack of moderately tolerant weeds, 12 as a moderately sensitive weeds (AMARE, BRSNW, CENCY, CHEAL, GALAP, GERPU, LYCAR, MATIN/MATMA, POLCO, SOLNI, STEME, VIOAR) and 6 as a senstive weeds (ANTAR, CAPBP, GASPA, MATCH, POLPE, THLAR). – *for dose 1,25 l/ha* – lack of weeds classified as a tolerant and a moderately tolerant, 5 weeds as a moderately susceptible (BRSNW, CENCY, ECHCH, GERPU, MATCH) and 14 weeds a susceptible weeds (AMARE, ANTAR CAPBP, CHEAL, GALAP, GASPA, LYCAR, MATIN/MATMA, POLCO, POLPE, SOLNI, STEME, THLAR, VIOAR). For 4 weed species no clear dose response was observed: CENCY, CHEAL, ECHCG and GALAP. For 15 weed species clear dose response was observed (AMARE, ANTAR, BRSNW, CAPBP, GASPA, GERPU, LYCAR, MATCH, MATIN/MATMA, POLCO, POLPE, SOLNI, STEME, THLAR, VIOAR). **Evaluator conclusion:** The claimed dose rate is 1,0 – 1,25 l of product/ha. The minimum effective dose were tested in maize through the NE climatic EPPO zone. The range of 1,0 - 1,25 L product/ha gives control of many of the main susceptible weeds in maize. The 1.0 L product/ha rate gives effective control of many susceptible species, whilst higher rates of up to 1,25 L product/ha rate are needed to give optimum control of other species. The dose rate of 1,0 – 1,25 l of product/ha showed the best efficacy in all mentioned above N-E EPPO zone.

3.2.3 Efficacy tests (KCP 6.2)

The applicant submitted 21 efficacy trials (in total) showing the results in research into product efficacy carried out in 2020, 2021 and 2022 in maize (5 in 2020, 12 in 2021 and 4 in 2022).

List of these reports is contained in **Appendix 1.**
Trials were randomized block design and conducted in different regions in Poland.
The efficacy trials were designed, conducted and reported according to the following EPPO guidelines:

- PP 1/152(4) Design and analysis of efficacy evaluation trials;
- PP 1/181(4), PP 1/181(5) Conduct and reporting of efficacy evaluation trials including good experimental practice;

- PP 1/135(4) Phytotoxicity assessment;
- PP 1/225(2) Minimum effective dose.

Details on trial methodology

A total 21 trials were carried out to evaluated the efficacy of MEZOFLOR 103 SC for the control of CHEAL, ECHCG, GALAP, SOLNI, CAPBP, GASPA, THLAR, MATCH, MATMA (MATIN), ANTAR, VIOAR, CENCY, STEME, GERPU, POLCO, BRSNW, POLPE, AMARE, LYCAR. All trials were conducted in Poland in 2020, 2021 and 202 in different climatic zones, with the use of different varieties of maize, sown on different soils.

TRIAL: 276_01_F20_472

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	21 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	Opoka
	Sowing period	30.04.2020
Application	Crop stage (BBCH)* at application	From BBCH 13 to BBCH 16
	Timing Pest stage at application (1)	ECHCG (BBCH 12-14) GALAP (BBCH 18-22) CHEAL (BBCH 13-18) GEPRU (BBCH 12-14) VIOAR (BBCH 18-25) MATIN/MATMA (BBCH 11-15)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², vigour of the weeds, the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 28 DAT, 54 DAT
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.5
	Natural / artificial innoculation	natural
	Field	Rąbiń Kręta 25, Krzywiń / prov. Wielkopolska (Poland)

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

MEZOFLOR 103 SC, similar to reference NOTOS 100 SC caused no phytotoxicity symptoms or changes

in plant vigour.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Echinochloa crus-galli, Geranium pusillum* and *Tripleurospermum inodorum*. In the case of *Chenopodium album*, the efficacy of MEZOFLOR 103 SC was above 88.3%. Moreover, the effectiveness of MEZOFLOR 103 SC in control *Viola arvensis* was 80.8%.
High efficiency (over 85%) was obtained in the case of applied of MEZOFLOR 103 SC at rate 1.0 L/ha in control *Echinochloa crus-galli, Galium aparine, Chenopodium album, Geranium pusillum*. In the case of *Matricaria inodora*, the efficacy was above 90%. MEZOFLOR 103 SC at rate 1.0 L/ha was medium effective in the case of control *Viola arvensis.*
Medium effective (between 70 – 85%) was obtained in the case of *Echinochloa crus-galli, Galium aparine, Chenopodium album, Geranium pusillum, Tripleurospermum inodorum* and *Viola arvensis.*
The reference product – NOTOS 100 SC present the efficacy above 90% in control *Echinochloa crus-galli, Geranium pusillum* and *Tripleurospermum inodorum*. The efficacy of NOTOS 100 SC in control *Chenopodium album* and *Galium aparine*, was above 88%. In the case of control *Viola arvensis*, the efficacy was above 80%.
Assessment of beneficial organisms were not conducted due to low infestation levels.

TRIAL 276_02_F20_473

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	21 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	Konkurent
	Sowing period	29.04.2020
Application	Crop stage (BBCH)* at application	From BBCH 14 to BBCH 17
	Timing Pest stage at application (1)	ECHCG (BBCH 14-18) CENCY (BBCH 15-20) CHEAL (BBCH 18-22) GERPU (BBCH 20-24) THLAR (BBCH 12-14) GASPA (BBCH 11-14)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², vigour of the weeds, the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 28 DAT, 54 DAT
Other re-	Soil type, pH	Sandy clay loam, pH 6.5

levant information	Natural / artificial innoculation	natural
	Field	Sepienko 17, Kościan / prov. Wielkopolska (Poland)

MEZOFLOR 103 SC, similar to reference NOTOS 100 SC caused no phytotoxicity symptoms or changes in plant vigour.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Echinochloa crus-galli, Geranium pusillum* and *Galinsoga parviflora.* High efficacy (over 85%) was obtained in control *Chenopodium album*. In control *Thlaspi arvense* the efficacy of MEZOFLOR 103 SC was above 80%.
High efficacy (over 85%) was obtained in the case of applied of MEZOFLOR 103 SC at rate 1.0 L/ha in control *Echinochloa crus-galli, Centaurea cyanus, Chenopodium album, Geranium pusillum.* In the case of *Galinsoga parviflora*, the efficacy of MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 90%. In control *Thlaspi arvense* the efficacy of MEZOFLOR 103 SC was above 77%.
The reference product – NOTOS 100 SC present the efficacy above 90% in control *Echinochloa crus-galli, Geranium pusillum*, and *Galinsoga parviflora.* The efficacy of NOTOS 100 SC in control *Centaurea cyanus* and *Chenopodium album* was above 85% and in the case of *Thlaspi arvense* – the efficacy was above 80%.
Assessment of beneficial organisms were not conducted due to low infestation levels.

TRIAL 276_02_F20_474

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	21 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	Rosomak
	Sowing period	22.04.2020
Application	Crop stage (BBCH)* at application	From BBCH 13 to BBCH 15
	Timing Pest stage at application (1)	ECHCG (BBCH 12-14) AMARE (BBCH 12-14) CHEAL (BBCH 12-14) POLCO (BBCH 12-14) MATIN/MATMA (BBCH 12-14) GASPA (BBCH 11-13)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², vigour of the weeds, the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)

	Assessment dates	14 DAT, 28 DAT, 60 DAT
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.4
	Natural / artificial innoculation	natural
	Field	Wszembórz 20, Kołaczkowo / prov. Wielkopolska (Poland)

MEZOFLOR 103 SC, similar to reference NOTOS 100 SC caused no phytotoxicity symptoms or changes in plant vigour.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Amaranthus retroflexus, Chenopodium album, Fallopia convolvulus, Tripleurospermum inodorum* and *Galinsoga parviflora*. In control *Echinochloa crus-galli* the efficacy was above 85%.
MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 90% in control *Chenopodium album, Fallopia convolvulus, Tripleurospermum inodorum* and *Galinsoga parviflora*. In control *Amaranthus retroflexus* the efficacy was above 85%/ The efficacy of the control of the *Echinochloa crus-galli* was over 80%.
The efficacy of MEZOFLOR 103 SC at rate 0.75 L/ha in control *Chenopodium album* and *Galinsoga parviflora* was above 90%. In the case of *Fallopia convolvulus* and *Tripleurospermum inodorum* the efficacy was above 85%. In control *Echinochloa crus-galli* and *Amaranthus retroflexus* the efficacy was above 75%.
The reference product – NOTOS 100 SC present the efficacy above 85% in control *Echinochloa crus-galli, Chenopodium album, Fallopia convolvulus* and *Tripleurospermum inodorum* and. In control *Amaranthus retroflexus* and *Galinsoga parviflora* the efficacy was above 90%.
Assessment of beneficial organisms were not conducted due to low infestation levels.

TRIAL 276_02_F20_475

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	21 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	Hulk
	Sowing period	24.04.2020
Application	Crop stage (BBCH)* at application	From BBCH 13 to BBCH 15
	Timing Pest stage at application (1)	ECHCG (BBCH 12-14) POLPE (BBCH 12-14) GALAP (BBCH 12-14) GASPA (BBCH 13-15) CHEAL (BBCH 13-15) MATIN/MATMA (BBCH 11-13)
	Number of	1

	applications Intervals between applications	
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², vigour of the weeds, the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	16 DAT, 27 DAT, 55 DAT
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.4
	Natural / artificial innoculation	natural
	Field	Grabionna 51, Miasteczko Krajeńskie / prov. Wielkopolska (Poland)

MEZOFLOR 103 SC, similar to reference NOTOS 100 SC, caused no phytotoxicity symptoms or changes in plant vigour.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Echinochloa crus-galli, Persicaria maculosa, Galium aparine, Galinsoga parviflora, Chenopodium album* and *Tripleurospermum inodorum.*
Moreover, an efficacy above 90% was obtained in the case of applied of MEZOFLOR 103 SC at rate 1.0 L/ha in the control *Echinochloa crus-galli, Persicaria maculosa, Galium aparine, Galinsoga parviflora, Chenopodium album* and *Tripleurospermum inodorum* In the case of *Galinsoga parviflora*, the efficacy of MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 90%.
MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy above 90% in control *Echinochloa crus-galli, Persicaria maculosa, Chenopodium album* and *Tripleurospermum inodorum*. In control of *Galium aparine* and *Galinsoga parviflora*.
The reference product – NOTOS 100 SC present the efficacy above 90% in control *Echinochloa crus-galli, Persicaria maculosa, Galium aparine, Galinsoga parviflora, Chenopodium album* and *Tripleurospermum inodorum.*
Assessment of beneficial organisms were not conducted due to low infestation levels.

TRIAL 276_05_F20_476

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	21 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	P9027
	Sowing period	25.04.2020

Application	Crop stage (BBCH)* at application	From BBCH 13 to BBCH 15
	Timing Pest stage at application (1)	ECHCG (BBCH 12-14) CHEAL (BBCH 14-16) BRSNW (BBCH 12-14) GALAP (BBCH 11-13) MENAR (BBCH 13-15) GERPU (BBCH 12-14)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², vigour of the weeds, the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	16 DAT, 27 DAT, 55 DAT
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.5
	Natural / artificial innoculation	natural
	Field	Antoniów, Milejów / prov. lubelskie (Poland)

MEZOFLOR 103 SC, similar to reference NOTOS 100 SC, caused no phytotoxicity symptoms or changes in plant vigour.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Chenopodium album, Brassica napus var. oleifera, Galium aparine* and *Geranium pusillum.* In the control *Echinochloa crus-galli* the efficacy was above 85%.
MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 90% in control *Chenopodium album* and *Galium aparine*. In the control *Echinochloa crus-galli*, *Brassica napus var. oleifera* and *Geranium pusillum* the efficacy was above 85%.
MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy above 90% in control *Galium aparine*. In the control of *Chenopodium album*, *Brassica napus var. oleifera* and *Geranium pusillum* the efficacy was above 85%. In the case of the control *Echinochloa crus-galli,* the efficacy was above 75%.
The reference product – NOTOS 100 SC present the efficacy above 90% in control *Chenopodium album, Galium aparine* and *Geranium pusillum.* In the control of *Echinochloa crus-galli* and *Brassica napus var. oleifera* the efficacy was above 85%.
Assessment of beneficial organisms were not conducted due to low infestation levels.
Mentha arvensis (MENAR) has occurred only in this field, for this reason will not be taken into account in the GAP table.

TRIAL SGS/2021/073/PL01

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental	Plot design	Random Complete Block (RCB)

design	Plot size	18 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	P8400
	Sowing period	01.05.2021
Application	Crop stage (BBCH)* at application	From BBCH 13 to BBCH 14
	Timing Pest stage at application (1)	ECHCG (BBCH 12-15) CHEAL (BBCH 14-17) MATCH (BBCH 16-32) VIOAR (BBCH 12-15) VICCR (BBCH 13-14)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², vigour of the weeds, the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	13 DAT, 27 DAT, 76 DAT
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.4
	Natural / artificial innoculation	natural
	Field	Pielgrzymowo / prov. Warminsko - mazurskie (Poland)

MEZOFLOR 103 SC, similar to reference NOTOS 100 SC and MUSTANG 306 SE, caused no phytotoxicity symptoms or changes in plant vigour.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Chenopodium album* and *Matricaria chamomilla*. In the control of *Echinochloa crus-galli* and *Viola arvensis* the efficacy was above 85%.
MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 90% in control of *Matricaria chamomilla*. In the control of *Echinochloa crus-galli, Chenopodium album* and *Viola arvensis* the efficacy was above 75%.
MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy above 70% in control *Chenopodium album* and *Matricaria chamomilla*. In the control *Echinochloa crus-galli* and *Viola arvensis* the efficacy was over 65%.
The reference product – NOTOS 100 SC present the efficacy above 90% in control *Chenopodium album.* In the control of *Echinochloa crus-galli. Matricaria chamomilla and Viola arvensis* the efficacy was above 80%. The second reference product – MUSTANG 306 SE present the efficacy above 85% in control of *Matricaria chamomilla,* and *Chenopodium album*. In the case of control *Echinochloa crus-galli. Matricaria* the efficacy was 0%, this reference product was ineffective.
Assessment of beneficial organisms were not conducted due to low infestation levels.
Vicia cracca (VICCR) has occurred only in this field, for this reason will not be taken into account in the GAP table.

TRIAL SGS/2021/073/PL02

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	18 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	Kentos
	Sowing period	27.05.2021
Application	Crop stage (BBCH)* at application	From BBCH 13 to BBCH 14
	Timing Pest stage at application (1)	BRSNW (BBCH 12-14) CHEAL (BBCH 14-16) VIOAR (BBCH 12-16) LYCAR (BBCH 14-16) CENCY (BBCH 16-18) PARPH (BBCH 12-14) ECHCG (BBCH 11-13)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², vigour of the weeds, the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	12 DAT, 24 DAT, 40 DAT
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.0
	Natural / artificial innoculation	natural
	Field	Podgórzyn / prov. Kujawsko-pomorskie (Poland)

MEZOFLOR 103 SC, similar to reference NOTOS 100 SC and MUSTANG 306 SE, caused no phytotoxicity symptoms or changes in plant vigour.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 80% in control *Chenopodium album, Viola arvensis* and *Echinochloa crus-galli.* In the control *Brassica napus var. oleifera*, *Anchusa arvensis* and *Centaurea cyanus* the efficacy was over 70%.
MEZOFLOR applied at rate 1.0 L/ha showed efficacy above 75% in control *Chenopodium album*, *Viola arvensis* and *Echinochloa crus-galli*. In the control *Brassica napus var. oleifera*, *Anchusa arvensis* and *Centaurea cyanus* the efficacy was above 60%.
The efficacy of MEZOFLOR 103 SC at rate 0.75 L/ha in control *Chenopodium album, Viola arvensis* and *Echinochloa crus-galli* was above 70%. In the case of the rest weeds (*Brassica napus var. oleifera, Anchusa arvensis* and *Centaurea cyanus* the efficacy was over 50%.

Assessment of beneficial organisms were not conducted due to low infestation levels.
The reference product – NOTOS 100 SC present the efficacy above 80% in control *Chenopodium album*, *Viola arvensis* and *Echinochloa crus-galli*. In the case of *Brassica napus var. oleifera*, *Anchusa arvensis* and *Centaurea cyanus* the efficacy was above 60%. The second reference product – MUSTANG 306 SE present the efficacy over 80% in the control *Brassica napus var. oleifera*, *Chenopodium album* and *Centaurea cyanus*. In the case of *Viola arvensis* and *Centaurea cyanus* the efficacy was above 50%. The efficacy of MUSTANG 306 SE in control *Echinochloa crus-galli* was 0%.
Papaver rhoeas (PAPRH) has occurred only in this field, for this reason will not be taken into account in the GAP table.

TRIAL SGS/2021/073/PL03

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	15 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	Opoka
	Sowing period	30.04.2021
Application	Crop stage (BBCH)* at application	From BBCH 13 to BBCH 14
	Timing Pest stage at application (1)	ECHCG (BBCH 11-12) CHEAL (BBCH 11-13) POLCO (BBCH 12-13) VIOAR (BBCH 12-14)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², vigour of the weeds, the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	13 DAT, 27 DAT, 85 DAT
Other relevant information	Soil type, pH	Sandy clay loam, pH 6.0
	Natural / artificial innoculation	natural
	Field	Sławęcin / prov. pomorskie (Poland)

MEZOFLOR 103 SC, similar to reference NOTOS 100 SC and MUSTANG 306 SE, caused no phytotoxicity symptoms or changes in plant vigour.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 85% in control Chenopodium album, *Fallopia convolvulus* and *Viola arvensis*. In the control *Echinochloa crus-galli*, the efficacy of MEZOFLOR 103 SC applied at rate 1.25 L/ha was above 60%.

MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 80% in control *Chenopodium album, Fallopia convolvulus* and *Viola arvensis*. In the control *Echinochloa crus-galli*, the efficacy of MEZOFLOR 103 SC applied at rate 1.0 L/ha was above 55%.
80% effectiveness was achieved in the case of control *Fallopia convolvulus* with used MEZOFLOR 103 SC at rate 0,75 L/ha. In the case of control *Chenopodium album* and *Viola arvensis*, efficacy of MEZOFLOR 103 SC applied at rate 0.75 L/ha was above 75%. An efficacy of MEZOFLOR 103 SC applied at rate 0.75 L/ha in control *Echinochloa crus-galli* was above 50%.
The reference product – NOTOS 100 SC present the efficacy above 80% in control *Echinochloa crus-galli, Chenopodium album, Fallopia convolvulus* and *Viola arvensis*. The second reference product – MUSTANG 306 SE present the efficacy above 85% in control *Chenopodium album, Fallopia convolvulus* and *Viola arvensis*. The control *Echinochloa crus-galli* with this reference product was ineffective
Assessment of beneficial organisms were not conducted due to low infestation levels.

SGS/2021/073/PL04

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	18 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	LG 31.256
	Sowing period	29.04.2021
Application	Crop stage (BBCH)* at application	From BBCH 15 to BBCH 16
	Timing Pest stage at application (1)	CHEAL (BBCH 18-31) POLCO (BBCH 14-15) ECHCG (BBCH 18-31) MATCH (BBCH 16-51)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², vigour of the weeds, the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 25 DAT, 67 DAT
Other relevant information	Soil type, pH	Sandy clay loam, pH 5.9
	Natural / artificial innoculation	natural
	Field	Marszowice / prov. dolnośląskie (Poland)

MEZOFLOR 103 SC, similar to reference NOTOS 100 SC and MUSTANG 306 SE, caused no phytotox-

icity symptoms or changes in plant vigour.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Chenopodium album, Fallopia convolvulus* and *Matricaria chamomilla*. The efficacy above 80% was achieved in control *Echinochloa crus-galli*.
MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 80% in control of *Chenopodium album* and *Matricaria chamomilla*. In the control of *Fallopia convolvulus* and *Echinochloa crus-galli*, the efficacy of MEZOFLOR 103 SC applied at rate 1.0 L/ha was above 70%.
MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy over 75% in control *Matricaria chamomilla*. An efficacy of control *Chenopodium album* and *Fallopia convolvulus* was above 65%. In the case of *Echinochloa crus-galli*, the efficacy was above 50%.
The reference product – NOTOS 100 SC present the efficacy above 90% in control *Chenopodium album, Fallopia convolvulus* and *Matricaria chamomilla*. *Echinochloa crus-galli* was controled with efficacy above 80%. The second reference product – MUSTANG 306 SE present the efficacy above 90% in control *Fallopia convolvulus* and *Matricaria chamomilla*. The control *Echinochloa crus-galli* with this reference product was ineffective. In the case of *Chenopodium album* the efficacy in control was above 75%.
Assessment of beneficial organisms were not conducted due to low infestation levels.

TRIAL SGS/2021/073/PL05

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	18 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	P 8329
	Sowing period	27.04.2021
Application	Crop stage (BBCH)* at application	From BBCH 15 to BBCH 16
	Timing Pest stage at application (1)	CHEAL (BBCH 18-31) POLPE (BBCH 14-16) BRSNW (BBCH 14-16) THLAR (BBCH 41-51) GALAP (BBCH 14-16)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², vigour of the weeds, the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 24 DAT, 65 DAT
Other re-	Soil type, pH	Sandy clay loam, pH 6.0

levant information	Natural / artificial innoculation	natural
	Field	Mikołajowa / prov. opolskie (Poland)

MEZOFLOR 103 SC, similar to reference NOTOS 100 SC and MUSTANG 306 SE, caused no phytotoxicity symptoms or changes in plant vigour.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Chenopodium album, Fallopia convolvulus* and *Matricaria chamomilla*. In the control *Brassica napus var. oleifera* and *Galium aparine*, the efficacy of MEZOFLOR 103 SC applied at rate 1.25 L/ha was above 80%.
MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 80% in control *Chenopodium album, Persicaria maculosa, Brassica napus var. oleifera* and *Thlaspi arvense.* In the control *Galium aparine*, the efficacy of MEZOFLOR 103 SC applied at rate 1.0 L/ha was above 70%.
MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy over 75% in control *Persicaria maculosa, Brassica napus var. oleifera* and *Thlaspi arvense*.
An efficacy of control *Chenopodium album* and *Galium aparine* was above 65%.
The reference product – NOTOS 100 SC present the efficacy above 90% in control *Chenopodium album, Persicaria maculosa, Brassica napus var. oleifera* and *Thlaspi arvense*. *Galium aparine*was controled with efficacy above 75%. The second reference product – MUSTANG 306 SE present the efficacy above 90% in control *Persicaria maculosa, Brassica napus var. oleifera, Thlaspi arvense* and *Galium aparine*. In the case of *Chenopodium album* the efficacy in control was above 75%.
Assessment of beneficial organisms were not conducted due to low infestation levels.

TRIAL SGS/2021/073/PL06

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Random Complete Block (RCB)
	Plot size	21 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	Baobi
	Sowing period	07.05.2021
Application	Crop stage (BBCH)* at application	From BBCH 15 to BBCH 16
	Timing Pest stage at application (1)	ECHCG (BBCH 21-26) CHEAL (BBCH 19-31) POLCO (BBCH 19-31) MATCH (BBCH 16-19) SOLNI (BBCH 14-19)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha

Assessment	Assessment types	number of weeds/m², vigour of the weeds, the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 28 DAT, 74 DAT
Other relevant information	Soil type, pH	Sandy clay loam, pH 5.5
	Natural / artificial innoculation	natural
	Field	Dąbrówka / prov. kujawsko-pomorskie (Poland)

MEZOFLOR 103 SC, similar to reference NOTOS 100 SC and MUSTANG 306 SE, caused no phytotoxicity symptoms or changes in plant vigour.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Chenopodium album, Matricaria chamomilla* and *Solanum nigrum*. *I*n the control *Echinochloa crus-galli* and *Fallopia convolvulus*, the efficacy of MEZOFLOR 103 SC applied at rate 1.25 L/ha was above 85%.
MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 80% in control *Matricaria chamomilla* and *Solanum nigrum.* In the control *Echinochloa crus-galli* and *Chenopodium album*, the efficacy of MEZOFLOR 103 SC applied at rate 1.0 L/ha was above 75%. In the case of *Fallopia convolvulus* the efficacy was above 65%.
MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy over 60% in control *Solanum nigrum* and *Matricaria chamomilla*. An efficacy of control *Echinochloa crus-galli*, Chenopodium album and *Fallopia convolvulus* was above 50%. The reference product – NOTOS 100 SC present the efficacy above 90% in control *Matricaria chamomilla* and *Solanum nigrum*. *Echinochloa crus-galli*, *Chenopodium album* and *Fallopia convolvulus* was controled with efficacy above 85%. The second reference product – MUSTANG 306 SE present the efficacy above 90% in control *Fallopia convolvulus*, *Matricaria chamomilla* and *Solanum nigrum*. In the case of *Fallopia convolvulus* the efficacy in control was above 75%.
Assessment of beneficial organisms were not conducted due to low infestation levels.

TRIAL SH21KU103W

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Randomized block
	Plot size	33 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	Farmoritz
	Sowing period	29.04.2021
Application	Crop stage (BBCH)* at application	BBCH 13
	Timing Pest stage at application (1)	CHEAL (BBCH 12-14) ECHCG (BBCH 11-13) CAPBP (BBCH 16-31) THLAR (BBCH 19-31) MATMA/MATIN (BBCH 12-14) ANTAR (BBCH 14-15)

		VIOAR (BBCH 10-12) CENCY (BBCH 16) STEME (BBCH 21) GERPU (BBCH 14-15) POLCO (BBCH 12-14) BRSNW (BBCH 10-12) SINss (BBCH 12-14)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 43 DAT, 51 DAT, 98 DAT
Other relevant information	Soil type, pH	Sandy loam, pH 5.3
	Natural / artificial innoculation	natural
	Field	Winna Góra / prov. wielkopolskie (Poland)

MEZOFLOR 103 SC, similar to reference OSORNO SC and MUSTANG 306 SE, caused no phytotoxicity symptoms.

MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Capsella bursa-pastoris, Thlaspi arvense, Anthemis arvensis, Stellaria media, Fallopia convolvulus* and *Sinapis sp*. The efficacy of control *Viola arvensis* and *Geranium pusillum* with MEZOFLOR 103 SC at rate 1.25 L/ha was above 80%. In the case of control *Tripleurospermum maritimum, Centaurea cyanus* and *Brassica napus var. oleifera* the efficacy was over 75%. The efficacy of MEZOFLOR 103 SC at rate 1.25 L/ha in control *Chenopodium album* was above 66%.

MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 90% in control *Thlaspi arvense, Anthemis arvensis, Stellaria media, Fallopia convolvulus* and *Sinapis sp.*. The average efficacy of MEZOFLOR 103 SC in control *Capsella bursa-pastoris* was over 88%, in control *Viola arvensis, Geranium pusillum and Brassica napus var. oleifera* was above 70%. MEZOFLOR 103 SC at rate 1.0 L/ha presented efficacy above 65% in control *Tripleurospermum inodorum* and *Centaurea cyanus*. In the case of *Chenopodium album* the efficacy was above 50%.

MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy above 90% in control *Thlaspi arvense* and *Sinapis sp*.. The average efficacy of MEZOFLOR 103 SC in control *Capsella bursa-pastoris, Anthemis arvensis, Stellaria media* and *Fallopia convolvulus* was above 80%. In the case of *Geranium pusillum* the efficacy of MEZOFLOR 103 SC was over 73%. In the case of *Viola arvensis, Centaurea cyanus* and *Brassica napus var. oleifera* the average efficacy was over 60%. In control *Chenopodium album* the efficacy of MEZOFLOR 103 SC was over 37%.

The reference product – OSORNO SC present the efficacy above 90% in control *Chenopodium album, Capsella bursa-pastoris, Thlaspi arvense, Anthemis arvensis, Centaurea cyanus, Stellaria media, Brassica napus var. oleifera* and *Sinapis sp*. In the case of *Viola arvensis* the efficacy was above 85%. The efficacy in the control *Echinochloa crus-galli, Tripleurospermum inodorum* and *Fallopia convolvulus* was above 65%. This reference product was not effective in the case of *Geranium pusillum.*

The second reference product – MUSTANG 360 SE present the efficacy above 90% in control *Capsella*

bursa-pastoris, Thlaspi arvense, Anthemis arvensis, Stellaria media and *Sinapis sp*. In the case of *Fallopia convolvulus* the efficacy was over 85%. The efficacy above 70% was in control *Geranium pusillum*. In the case of *Chenopodium album*, *Tripleurospermum inodorum*, *Centaurea cyanus* and *Brassica napus var. oleifera* the efficacy was over 60%. *Viola arvensis* was reduced with efficacy over 30%. In the case of *Echinochloa crus-galli* this product was ineffective.
Assessment of beneficial organisms were not conducted due to low infestation levels.
Due to unfavorable meteorological conditions, unfavorable to the growth of the weed species *Echinochloa crus-galli* (ECHCG), the effectiveness of MEZOFLOR 103 SC was 0%, therefore the results for this weed from the field were not taken into account. Moreover, the species of weeds - *Sinapis sp*. was present in insufficient number of study, for these reason, the results were not taken into account in summary of the results.

TRIAL SH21KU104W

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Randomized block
	Plot size	33 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	Farmueller
	Sowing period	29.04.2021
Application	Crop stage (BBCH)* at application	BBCH 13
	Timing Pest stage at application (1)	CHEAL (BBCH 12-14) ECHCG (BBCH 11-13) CAPBP (BBCH 16-31) POLCO (BBCH 14) MATMA/MATIN (BBCH 12-14) ANTAR (BBCH 14-15) VIOAR (BBCH 12-14) BRSNW (BBCH 10-12) SINss (BBCH 12-14) GERPU (BBCH 14-15)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 43 DAT, 51 DAT, 98 DAT
Other relevant infor-	Soil type, pH	Sandy loam, pH 5.3
	Natural / artificial	natural

mation	innoculation	
	Field	Winna Góra / prov. wielkopolskie (Poland)

MEZOFLOR 103 SC, similar to reference OSORNO SC and MUSTANG 306 SE, caused no phytotoxicity symptoms.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Capsella bursa-pastoris, Fallopia convolvulus, Tripleurospermum inodorum, Anthemis arvensis* and *Sinapis sp.*.
The efficacy of control *Viola arvensis, Brassica napus var. oleifera* and *Geranium pusillum* with MEZOFLOR 103 SC at rate 1.25 L/ha was above 85%. In the case of control *Chenopodium album*, the efficacy was above 70 %.
MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 90% in control *Capsella bursa-pastoris, Fallopia convolvulus, Anthemis arvensis* and *Sinapis sp.*. The average efficacy of MEZOFLOR 103 SC in control *Tripleurospermum inodorum, Viola arvensis* and *Brassica napus var. oleifera* was over 80%, control *Geranium pusillum* was above 75%. In the case of *Chenopodium album* the efficacy was above 55%.
MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy above 90% in control *Capsella bursa-pastoris, Anthemis arvensis* and *Sinapis sp.* In the case of *Fallopia convolvulus* the efficacy of MEZOFLOR 103 SC was over 80%. In the case of *Tripleurospermum inodorum, Brassica napus var. oleifera* and *Geranium pusillum* the average efficacy was over 75%. In control *Viola arvensis* the efficacy of MEZOFLOR 103 SC was over 65%, in the case of *Chenopodium album* the efficacy of MEZOFLOR 103 SC was above 40%.
The reference product – OSORNO SC present the efficacy above 90% in control *Chenopodium album, Capsella bursa-pastoris, Anthemis arvensis, Viola arvensis, Brassica napus var. oleifera* and *Sinapis sp*.
In the case of *Tripleurospermum inodorum* the efficacy was above 85%. The efficacy in the control *Fallopia convolvulus* and *Echinochloa crus-gall* was above 70%. This reference product was not effective in the case of *Geranium pusillum.*
The second reference product – MUSTANG 360 SE present the efficacy above 90% in *control Capsella bursa-pastoris, Anthemis arvensis* and *Sinapis sp*..
In the case of *Fallopia convolvulus* the efficacy was over 85%. The efficacy above 75% was in control *Chenopodium album, Tripleurospermum inodorum, Brassica napus var. oleifera* and *Geranium pusillum.*
In the case of *Viola arvensis* the efficacy was over 38%. In the case of *Echinochloa crus-galli* this product was ineffective.
Assessment of beneficial organisms were not conducted due to low infestation levels.
Due to unfavorable meteorological conditions, unfavourable to the growth of the weed species *Echinochloa crus-galli* (ECHCG), the effectiveness of MEZOFLOR 103 SC was 0%, therefore the results for this weed from the field were not taken into account. In the case of *Sinapis* sp the results were not taken into account in the summary of the results due to insufficient number of study.

TRIAL SH21KU105W

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Randomized block
	Plot size	33 m²
	Number of replications	4

Crop	Trials per crop	Maize
	Varieties per crop	Farmgigant
	Sowing period	29.04.2021
Application	Crop stage (BBCH)* at application	BBCH 13
	Timing Pest stage at application (1)	CHEAL (BBCH 12-14) ECHCG (BBCH 11-13) CAPBP (BBCH 16-31) THLAR (BBCH 19-31) MATMA/MATIN (BBCH 12-14) ANTAR (BBCH 14-15) VIOAR (BBCH 10-12) BRSNW (BBCH 10-12) LYCAR (BBCH 14) GERPU (BBCH 10-12)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 43 DAT, 51 DAT, 98 DAT
Other relevant information	Soil type, pH	Sandy loam, pH 5.4
	Natural / artificial innoculation	natural
	Field	Winna Góra / prov. wielkopolskie (Poland)

MEZOFLOR 103 SC, similar to reference OSORNO SC and MUSTANG 306 SE, caused no phytotoxicity symptoms.

MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Capsella bursa-pastoris, Thlaspi arvense, Anthemis arvensis* and *Anchusa arvensis.* The efficacy of control *Tripleurospermum inodorum, Viola arvensis, Brassica napus var. oleifera* and *Geranium pusillum* with MEZOFLOR 103 SC at rate 1.25 L/ha was above 85%. In the case of control *Chenopodium album,* the efficacy was above 70 %.

MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 90% in control *Capsella bursa-pastoris, Thlaspi arvense, Anthemis arvensis* and *Anchusa arvensis.*

The average efficacy of MEZOFLOR 103 SC in control *Tripleurospermum inodorum, Viola arvensis* and *Brassica napus var. oleifera* was over 80%, control *Geranium pusillum* was above 75%. In the case of *Chenopodium album* the efficacy was above 60%.

MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy above 90% in control *Capsella bursa-pastoris, Thlaspi arvense, Anthemis arvensis* and *Anchusa arvensis*. In the case of *Tripleurospermum inodorum* the efficacy of MEZOFLOR 103 SC was over 80%. In the case of *Brassica napus var. oleifera* and *Geranium pusillum* the average efficacy was over 75%. In control *Viola arvensis* the efficacy of MEZOFLOR 103 SC was over 65%, in the case of *Chenopodium album* the efficacy of MEZOFLOR 103 SC

was above 40%.
The reference product – OSORNO SC present the efficacy above 90% in control *Chenopodium album, Capsella bursa-pastoris, Thlaspi arvense, Anthemis arvensis, Viola arvensis, Brassica napus var. oleifera* and *Anchusa arvensis*. In the case of *Tripleurospermum inodorum* the efficacy was above 82%. The efficacy in the control *Echinochloa crus-galli* was above 50%. This reference product was not effective in the case of *Geranium pusillum.*
The second reference product – MUSTANG 360 SE present the efficacy above 90% in control *Thlaspi arvense, Anthemis arvensis* and *Anchusa arvensis.* In the case of *Capsella bursa-pastoris* and *Brassica napus var. oleifera* the efficacy was over 85%. The efficacy above 75% was in control *Chenopodium album, Tripleurospermum inodorum* and *Geranium pusillum*. In the case of *Viola arvensis* the efficacy was over 38%. In the case of *Echinochloa crus-galli* this product was ineffective.
Assessment of beneficial organisms were not conducted due to low infestation levels.
Due to unfavourable meteorological conditions, unfavourable to the growth of the weed species *Echinochloa crus-galli* (ECHCG), the effectiveness of MEZOFLOR 103 SC was 0%, therefore the results for this weed from the field were not taken into account.

TRIAL SH21KU106Z

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Randomized block
	Plot size	33 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	Ricardinio
	Sowing period	07.05.2021
Application	Crop stage (BBCH)* at application	BBCH 14
	Timing Pest stage at application (1)	POLCO (BBCH 12-18) STEME (BBCH 14-20) CHEAL (BBCH 13-18) ECHCG (BBCH 10-22) GALAP (BBCH 11-16) CAPBP (BBCH 13-20)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 32 DAT, 46 DAT, 112 DAT
Other re-	Soil type, pH	Podzolic soils, pH 6.2

levant information	Natural / artificial innoculation	natural
	Field	Nienadówka / prov. podkarpackie (Poland)

MEZOFLOR 103 SC, similar to reference OSORNO SC and MUSTANG 306 SE, caused no phytotoxicity symptoms.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Fallopia convolvulus, Chenopodium album* and *Capsella bursa-pastoris*. The efficacy of control *Stellaria media* and *Galium aparine* with MEZOFLOR 103 SC at rate 1.25 L/ha was above 80%. In the case of control *Echinochloa crus-galli*, the efficacy was above 57 %.
MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 80% in control *Fallopia convolvulus, Chenopodium album* and *Capsella bursa-pastoris.* The average efficacy of MEZOFLOR 103 SC in control *Stellaria media* and *Galium aparine* was over 70%. In the case of *Echinochloa crus-galli* the efficacy was above 40%.
MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy above 70% in control *Fallopia convolvulus, Chenopodium album* and *Capsella bursa-pastoris.* In the case of *Galium aparine* the efficacy of MEZOFLOR 103 SC was over 50%. In the case of *Echinochloa crus-galli* the average efficacy was over 25%.
The reference product – OSORNO SC present the efficacy above 90% in control *Fallopia convolvulus, Chenopodium album* and *Capsella bursa-pastoris*. In the case of *Stellaria media* the efficacy was above 85%. The efficacy in the control *Galium aparine* was above 70%. In the case of *Echinochloa crus-galli* the efficacy in control was over 65%.
The second reference product – MUSTANG 360 SE present the efficacy above 90% in control *Fallopia convolvulus, Stellaria media, Chenopodium album, Galium aparine* and *Capsella bursa-pastoris.*
In the case of *Echinochloa crus-galli* this product was ineffective.
Assessment of beneficial organisms were not conducted due to low infestation levels.

TRIAL SH21KU107Z

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Randomized block
	Plot size	33 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	Ricardinio
	Sowing period	07.05.2021
Application	Crop stage (BBCH)* at application	BBCH 14
	Timing Pest stage at application (1)	CHEAL (BBCH 13-18) LAMPU (BBCH 11-16) SOLNI (BBCH 14-25) POLCO (BBCH 12-18) ECHCG (BBCH 10-22)

		CAPBP (BBCH 13-20)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 32 DAT, 46 DAT, 112 DAT
Other relevant information	Soil type, pH	Podzolic soils, pH 6.2
	Natural / artificial innoculation	natural
	Field	Nienadówka / prov. podkarpackie (Poland)

MEZOFLOR 103 SC, similar to reference OSORNO SC and MUSTANG 306 SE, caused no phytotoxicity symptoms.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Chenopodium album* and *Fallopia convolvulus.* The efficacy of control *Solanum nigrum* and *Capsella bursa-pastoris* with MEZOFLOR 103 SC at rate 1.25 L/ha was above 85%. In the case of control *Echinochloa crus-galli*, the efficacy was above 55 %.
MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 80% in control *Chenopodium album, Fallopia convolvulus.* The average efficacy of MEZOFLOR 103 SC in control *Capsella bursa-pastoris*, was over 75%, in control *Solanum nigrum* was above 75%.
MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy above 75% in control *Chenopodium album, Fallopia convolvulus* and *Capsella bursa-pastoris*. In the case of *Solanum nigrum*, the efficacy of MEZOFLOR 103 SC at rate 0.75 L/ha was above 60%. In control *Echinochloa crus-galli* the efficacy of MEZOFLOR 103 SC was above 25%.
The reference product – OSORNO SC present the efficacy above 90% in control *Chenopodium album, Fallopia convolvulus* and *Capsella bursa-pastoris*. In the case of *Solanum nigrum* the efficacy was above 80%. The efficacy in the control *Echinochloa crus-galli* was above 60%.
The second reference product – MUSTANG 360 SE present the efficacy above 90% in control *Chenopodium album, Solanum nigrum, Fallopia convolvulus and Capsella bursa-pastoris.* In the case of *Echinochloa crus-galli* this product was ineffective.
Assessment of beneficial organisms were not conducted due to low infestation levels.
Lamium purpureum (LAMPU) has occurred only in this field, for this reason will not be taken into account in the GAP table.

TRIAL SH21KU108Z

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (4), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(3)
Experimental design	Plot design	Randomized block
	Plot size	33 m²
	Number of replications	4

Crop	Trials per crop	Maize
	Varieties per crop	Ronaldinio
	Sowing period	04.05.2021
Application	Crop stage (BBCH)* at application	BBCH 16
	Timing Pest stage at application (1)	AMARE (BBCH 13-18) SOLNI (BBCH 16-20) MATMA/MATIN (BBCH 12-16) THLAR (BBCH 13-22) ECHCG (BBCH 11-20)
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 32 DAT, 46 DAT, 112 DAT
Other relevant information	Soil type, pH	Humus earth, pH 6.5
	Natural / artificial innoculation	natural
	Field	Krzeczowice / prov. podkarpackie (Poland)

MEZOFLOR 103 SC, similar to reference OSORNO SC and MUSTANG 306 SE, caused no phytotoxicity symptoms.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Amaranthus retroflexus, Tripleurospermum inodorum* and *Thlaspi arvense*. The efficacy of control *Solanum nigrum* with MEZOFLOR 103 SC at rate 1.25 L/ha was above 85%. In the case of control *Echinochloa crus-galli*, the efficacy was above 50 %.
MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 80% in control *Amaranthus retroflexus* and *Thlaspi arvense*. The average efficacy of MEZOFLOR 103 SC in control *Tripleurospermum inodorum*, was over 78%, in control *Solanum nigrum* was above 75%. In the case *of Echinochloa crus-galli* the efficacy of MEZOFLOR 103 SC was above 36%.
MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy above 70% in control *Amaranthus retroflexus* and *Thlaspi arvense*. In the case of *Solanum nigrum* and *Tripleurospermum inodorum*, the efficacy of MEZOFLOR 103 SC at rate 0.75 L/ha was above 60%. In control *Echinochloa crus-galli* the efficacy of MEZOFLOR 103 SC was above 20%.
The reference product – OSORNO SC present the efficacy above 90% in control *Amaranthus retroflexus, Solanum nigrum, Tripleurospermum inodorum* and *Thlaspi arvense*. In the case of *Echinochloa crus-galli* the efficacy was above 60%.
The second reference product – MUSTANG 360 SE present the efficacy above 90% in control *Amaranthus retroflexus, Solanum nigrum, Tripleurospermum inodorum* and *Thlaspi arvense*. In the case of *Echinochloa crus-galli* this product was ineffective.
Assessment of beneficial organisms were not conducted due to low infestation levels.

TRIAL 7 H/2022

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (5), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(4)
Experimental design	Plot design	Randomized block
	Plot size	15 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	Kurant
	Sowing period	30.04.2022
Application	Crop stage (BBCH)* at application	BBCH 13-14
	Timing Pest stage at application (1)	CHEAL BBCH 12-14 SOLNI BBCH 11-12 STEME BBCH 21-24 ARCLA BBCH 11-12 VIOAR BBCH 12-32 CIRAR BBCH 14-33 CAPBP BBCH 13-15 POLAV BBCH 13-21 POLCO BBCH 11-12 ECHCG BBCH 12-13 PESGL BBCH 10-11 POAAN BBCH 13-39 AGRRE BBCH 12-23
	Number of applications Intervals between applications	1
	Spray volumes	300 L/ha
Assessment	Assessment types	number of weeds/m², the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 35 DAT, 63 DAT
Other relevant information	Soil type, pH	Loamy sand, pH 6.2
	Natural / artificial innoculation	natural
	Field	Żernica Wiśniowa / prov. śląskie (Poland)

MEZOFLOR 103 SC, similar to reference OSORNO SC and MUSTANG 306 SE, caused no phytotoxicity symptoms.

MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Chenopodium album, Solanum nigrum, Stellaria media, Viola arvensis, Cirsium arvense* and *Capsella bursa-pastoris*. In the case of control *Arctium lappa* and *Polygonum convolvulus* the efficacy was above 80%. *Polygonum aviculare* was control with 72.3% of efficacy. The efficacy of control *Setaria glauca*, *Poa annua* and

Elymus repens was below 50% - the product was ineffective.
MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 80% in control *Chenopodium album, Solanum nigrum, Stellaria media, Arctium lappa, Cirsium arvense, Capsella bursa-pastoris* and *Polygonum convolvulus*. The average efficacy of MEZOFLOR 103 SC in control P*olygonum aviculare* was over 60%. In the case of *Echinochloa crus-galli, Setaria glauca, Poa annua* and *Elymus repens* the efficacy of MEZOFLOR 103 SC applied at rate 1.0 L/ha was ineffective.
MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy above 90% in control *Solanum nigrum, Stellaria media* and *Capsella bursa-pastoris*. In the case of A*rctium lappa, Viola arvensis, Cirsium arvense* and *Polygonum convolvulus*, the efficacy of MEZOFLOR 103 SC at rate 0.75 L/ha was above 70%. In the case of C*henopodium album, Polygonum aviculare, Echinochloa crus-galli, Setaria glauca, Poa annua* and *Elymus repens* was above 37% or less.
The reference product – OSORNO SC present the efficacy above 90% in control *Chenopodium album, Solanum nigrum, Stellaria media, Viola arvensis, Cirsium arvense, Capsella bursa-pastoris* and *Echinochloa crus-galli.* In the case of *Arctium lappa, Polygonum aviculare* the efficacy was above 70%. This reference product was ineffective in control *Setaria glauca, Poa annua* and *Elymus repens.*
The second reference product – MUSTANG 360 SE present the efficacy above 90% in control *Chenopodium album, Solanum nigrum, Stellaria media* and *Capsella bursa-pastoris.* In the case of *Arctium lappa, Viola arvensis, Cirsium arvense* and *Polygonum aviculare*. This reference product was ineffective in control *Echinochloa crus-galli, Setaria glauca, Poa annua* and *Elymus repens*.
Few of the detected weeds: *Arctium lappa, Cirsium arvense, Polygonum aviculare, Setaria glauca, Poa annua* and *Elymus repens* occurred only in this experiment, therefore these species were not included in the GAP due to the insufficient number of studies.

TRIAL 110/2022

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (5), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(4)
Experimental design	Plot design	Randomized block
	Plot size	33 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	Farmuller
	Sowing period	27.04.2022
Application	Crop stage (BBCH)* at application	BBCH 12-18
	Timing Pest stage at application (1)	CHEAL BBCH 16-31 ECHCG BBCH 13-21 VIOAR BBCH 16-31 BRSNW BBCH 16-31
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha

Assessment	Assessment types	number of weeds/m², the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 25 DAT
Other relevant information	Soil type, pH	Sandy loam, pH 5.3
	Natural / artificial innoculation	natural
	Field	Winna Góra / prov. wielkopolskie (Poland)

MEZOFLOR 103 SC, similar to reference OSORNO SC and MUSTANG 306 SE, caused no phytotoxicity symptoms.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 85% in control Brassica napus. In the case of control *Viola arvensis* and *Chenopodium album* the efficacy was above 60%. In the case of *Echinochloa crus-galli*, the efficacy was below 15% - the product was ineffective.
MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy above 80% in control *Brassica napus*. In the case of control *Viola arvensis* and *Chenopodium album* the efficacy was above 60%. In the case of *Echinochloa crus-galli*, the efficacy was below 7% - the product was ineffective.
MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy above 77% in control *Brassica napus*. In the case of control *Viola arvensis* and *Chenopodium album* the efficacy was above 50%. In the case of *Echinochloa crus-galli*, the efficacy was below 5% - the product was ineffective.
The reference product – OSORNO SC present the efficacy above 90% in control *Chenopodium album.* In the case of *Viola arvensis* and *Brassica napus* the efficacy was above 80%. This reference product was ineffective in control *Echinochloa crus-galli.*
The second reference product – MUSTANG 360 SE present the efficacy above 90% in control *Brassica napus.* In the case of *Chenopodium album* the efficacy was above 77%. This reference product was ineffective in control *Echinochloa crus-galli* and *Viola arvensis*.

TRIAL 111/2022

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (5), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(4)
Experimental design	Plot design	Randomized block
	Plot size	33 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	Ronaldinio
	Sowing period	22.04.2022
Application	Crop stage (BBCH)* at application	BBCH 14
	Timing Pest stage at application (1)	GALAP BBCH 13-31 SOLNI BBCH 15-21 ECHCG BBCH 15-31 VIOAR BBCH 11-16 CHEAL BBCH 16-31

	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	14 DAT, 24 DAT, 55 DAT
Other relevant information	Soil type, pH	Podzolic soils, pH 6.2
	Natural / artificial innoculation	natural
	Field	Nienadówka / prov. podkarpackie (Poland)

MEZOFLOR 103 SC, similar to reference OSORNO SC and MUSTANG 306 SE, caused no phytotoxicity symptoms.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 80% in control *Chenopodium album, Solanum nigrum, Galium aparine* and *Viola arvensis*. In the case of control *Echinochloa crus-galli* the efficacy was above 50%.
MEZOFLOR 103 SC applied at rate 1.0 L/ha presented efficacy above 70% in control *Galium aparine, Solanum nigrum, Viola arvensis* and *Chenopodium album*. In the case of control *Echinochloa crus-galli* the efficacy was below 50%.
MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy between 50 to 60% in control *Galium aparine, Solanum nigrum, Viola arvensis* and *Chenopodium album*. In the case of control *Echinochloa crus-galli* the efficacy was below 32.5%.
The reference product – OSORNO SC present the efficacy between 85 and 90% in control *Solanum nigrum, Viola arvensis* and *Chenopodium album*. The lower efficacy, between 60 to 70% was detected in the case of control *Galium aparine* and *Echinochloa crus-galli.*
The second reference product – MUSTANG 360 SE present the efficacy above 90% in control *Solanum nigrum, Galium aparine* and *Chenopodium album.* In the case of *Viola arvensis* the efficacy was above 76%. This reference product was ineffective in control *Echinochloa crus-galli*.

TRIAL 112/2022

Guidelines	General guidelines	EPPO PP 1/152 (4), EPPO PP 1/135 (4), EPPO PP 1/181 (5), EPPO PP 1/225 (2)
	Specific guidelines	EPPO PP 1/50(4)
Experimental design	Plot design	Randomized block
	Plot size	33 m²
	Number of replications	4
Crop	Trials per crop	Maize
	Varieties per crop	SY-BOOST
	Sowing period	02.05.2022

Application	Crop stage (BBCH)* at application	BBCH 14
	Timing Pest stage at application (1)	THLAR BBCH 10-16 MATMA/MATIN BBCH 12-18 POLCO BBCH 10-20 ECHCG BBCH 11-22 GASPA BBCH 10-14
	Number of applications Intervals between applications	1
	Spray volumes	200 L/ha
Assessment	Assessment types	number of weeds/m², the visual efficacy of weed control for each individual weed in relation to the untreated plot (%)
	Assessment dates	7 DAT, 27 DAT, 52 DAT
Other relevant information	Soil type, pH	Clay loam, pH 5.7
	Natural / artificial innoculation	natural
	Field	Pawłokoma / prov. podkarpackie (Poland)

MEZOFLOR 103 SC, similar to reference OSORNO SC and MUSTANG 306 SE, caused no phytotoxicity symptoms.
MEZOFLOR 103 SC applied at rate 1.25 L/ha showed efficacy above 90% in control *Tripleurospermum inodorum* and *Polygonum convolvulus*. The efficacy of control *Galinsoga parviflora* and *Thlaspi* arense was between 75-82%. In the case of control *Echinochloa crus-galli* the efficacy was above 50%.
MEZOFLOR 103 SC applied at rate 1.0 L/ha showed efficacy between 70 to 80% in control *Thlaspi arense, Tripleurospermum inodorum, Polygonum convolvulus*. In the case of *Galinsoga parviflora* the efficacy was above 60%. MEZOFLOR 103 SC applied at rate 1.0 L/ha was insufficient in the case of control *Echinochloa crus-galli.*
MEZOFLOR 103 SC applied at rate 0.75 L/ha showed efficacy between above 60% in control *Thlaspi arense, Tripleurospermum inodorum, Polygonum convolvulus Polygonum convolvulus*. In the case of control *Echinochloa crus-galli* the efficacy was above 24%.
The reference product – OSORNO SC present the efficacy between 85 and 95% in control *Thlaspi arense, Tripleurospermum inodorum, Polygonum convolvulus* and *Galinsoga parviflora*. The lower efficacy - 67% was detected in the case of control *Echinochloa crus-galli.*
The second reference product – MUSTANG 360 SE present the efficacy above 90% in control *Thlaspi arense, Tripleurospermum inodorum, Polygonum convolvulus.* In the case of *Galinsoga parviflora* the efficacy was above 72%. This reference product was ineffective in control *Echinochloa crus-galli*.

Maize / ECHCG

For Table 3.2-8: Efficacy of MEZOFLOR 103 SC in all trials (ECHCG)

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m^2 or % surface coverage**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. for control % surface coverage or number of weeds/m^2**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU106Z	**Control (number of weeds/m^2)**	11	10	12	10	9	10.4	**OSORNO SC**					
	1.25		66.3	60	52.5	50	57.2	1.5	75	67.5	57.5	60	65.0
	1		43.8	45	38.8	33.8	40.35	**MUSTANG 306 SL**					
	0.75		32.5	28.8	27.5	17.5	26.6	0.6	0	0	0	0	0.0
SH21KU107Z	**Control (number of weeds/m^2)**	8	8	9	7	9	8.2	**OSORNO SC**					
	1.25		65	55	52.5	47.5	55.0	1.5	67.5	66.3	62.5	55	62.8
	1		48.8	41.3	38.8	35	41.0	**MUSTANG 306 SL**					
	0.75		31.3	26.3	21.3	21.3	25.1	0.6	0	0	0	0	0.0
SH21KU108Z	**Control (number of weeds/m^2)**	7	8	10	8	9	8.4	**OSORNO SC**					
	1.25		61.3	48.8	47.5	45	50.7	1.5	70	66.3	61.3	56.3	63.5
	1		45	37.5	32.5	30	36.3	**MUSTANG 306 SL**					
	0.75		28.8	22.5	20	18.8	22.5	0.6	0	0	0	0	0.0
276_01_F20_472	**Control (number of weeds/m^2)**	6	6.75	7.5	8.5		7.2	**NOTOS 100 SC**					
	1.25		82.5	87.5	100		90.0	1.5	83.75	88.75	100		90.8
	1		81.25	86.25	100		89.2						
	0.75		77.5	82.5	92		84.0						
	0.5		61.25	66.25	85		70.8						

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m^2 or % surface coverage**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. for control % surface coverage or number of weeds/m^2**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
276_01_F20_473	**Control (number of weeds/m^2)**	7	7	7	8.25		7.3	**NOTOS 100 SC**					
	1.25		82.5	87.5	100		90.0	1.5	83.75	88.75	100		90.8
	1		77.5	82.5	100		86.7						
	0.75		72.5	77.5	93.75		81.3						
	0.5		61.25	66.25	83.75		70.4						
276_01_F20_474	**Control (number of weeds/m^2)**	7	6.75	7.25	7.75		7.2	**NOTOS 100 SC**					
	1.25		80	90	90		86.7	1.5	77.5	87.5	87.5		84.2
	1		77.5	80	81.25		79.6						
	0.75		71.25	76.25	78.75		75.4						
	0.5		57.5	67.5	68.75		64.6						
276_01_F20_475	**Control (number of weeds/m^2)**	6	6.75	7.25	8.25		7.1	**NOTOS 100 SC**					
	1.25		92.5	100	100		97.5	1.5	93.75	100	100		97.9
	1		91.25	100	100		97.1						
	0.75		87.5	91.25	93.75		90.8						
	0.5		71.25	81.25	83.75		78.8						
276_01_F20_476	**Control (number of weeds/m^2)**	8	10.5	11.25	11.25		10.3	**NOTOS 100 SC**					
	1.25		80	82.5	99.5		87.3	1.5	82.5	82.5	98.25		87.8
	1		80	81.25	92.5		84.6						
	0.75		75	77.5	77.5		76.7						
	0.5		70	71.25	71.25		70.8						
SGS/2021/073/PL01	**Control (number of weeds/m^2)**	6.3	6	6	6		6.1	**NOTOS 100 SC**					

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m^2 or % surface coverage**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. for control % surface coverage or number of weeds/m^2**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
	1.25		86.3	92.5	87.5		88.8	1.5	87.5	87.5	87.5		87.5
	1		76.3	77.5	76.3		76.7	**MUSTANG 306 SL**					
	0.75		65	65	65		65.0	0.6	0	0	0		0.0
SGS/2021/073/PL02	**Control (number of weeds/m^2)**	6.5	7	7	7		6.9	**NOTOS 100 SC**					
	1.25		72.5	86.3	95.5		84.8	1.5	67.5	83.8	94		81.8
	1		63.8	80	87.5		77.1	**MUSTANG 306 SL**					
	0.75		60	73.8	82.5		72.1	0.6	0	0	0		0.0
SGS/2021/073/PL03	**Control (number of weeds/m^2)**	6.3	6	6	7		6.3	**NOTOS 100 SC**					
	1.25		28.8	86.3	93.8		69.6	1.5	88.8	82.5	92.5		87.9
	1		0	80	87.5		55.8	**MUSTANG 306 SL**					
	0.75		0	72.5	82.5		51.7	0.6	0	0	0		0.0
SGS/2021/073/PL04	**Control (% surface coverage)**	5	7.00	10.00	10.00		8.0	**NOTOS 100 SC**					
	1.25		67.5	88.8	91.3		82.5	1.5	67.5	88.8	90		82.1
	1		50	82.5	81.3		71.3	**MUSTANG 306 SL**					
	0.75		50	50	62.5		54.2	0.6	0	0	0		
SGS/2021/073/PL06	**Control (number of weeds/m^2)**	8	8	8.00	8.00		8.0	**NOTOS 100 SC**					
	1.25		75	90	92.5		85.8	1.5	80	90	94.8		88.3
	1		66.3	75	85		75.4	**MUSTANG 306 SL**					
	0.75		45	52.5	47.5		48.3	0.6	0	0	0		
7 H/2022	**Control (number of weeds/m^2)**	12	2	2.70	4.00		5.2	**OSORNO SC**					
	1.25		78	73	61		70.7	1	83	89	86		86.0

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m^2 or % surface coverage**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. for control % surface coverage or number of weeds/m^2**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
	1		61	0	0		20.3	**MUSTANG 306 SL**					
	0.75		28	0	0		9.3	0.6	0	0	0		0.0
110/2022	**Control (number of weeds/m^2)**	7	8	8			7.7	**OSORNO SC**					
	1.25		20	10			15.0	1	10	40			25.0
	1		15	0			7.5	**MUSTANG 306 SL**					
	0.75		10	0			5.0	0.6	15	0			7.5
111/2022	**Control (number of weeds/m^2)**	9	10	7	9.00		8.8	**OSORNO SC**					
	1.25		61.3	53.8	51.3		55.5	1	66.3	61.3	57.5		61.7
	1		47.5	42.5	42.5		44.2	**MUSTANG 306 SL**					
	0.75		36.3	31.3	30		32.5	0.6	0	0	0		0.0
112/2022	**Control (number of weeds/m^2)**	12.00	10	12.00	14.00		12.0	**OSORNO SC**					
	1.25		67.5	48.8	37.5		51.3	1	73.8	68.8	60		67.5
	1		45	43.8	28.8		39.2	**MUSTANG 306 SL**					
	0.75		32.5	27.5	13.8		24.6	0.6	0	0	0		0.0

A total of 17 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of ECHCG in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha, 1.0 L/ha, 0.75 L/ha and 0.5 L/ha in 2020. In the next years (2021 and 2022) the number of doses was reduced, 3 doses were tested: 1.25 L/ha, 1.0 L/ha and 0.75 L/ha. The dose 0.5 L/ha was eliminated due to the low effectiveness of the control the weeds in maize cultivation. As a standards were used NOTOS 100 SC at dose 1.5 L/ha, OSORNO SC at dose 1.5 L/ha and 1.0 L/ha and MUSTANG 306 SE at dose 0.6 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. 3.2-8a and No. 3.2-8b).

Table 3.2-8a: Average efficacy of MEZOFLOR 103 SC (ECHCG)

Avarage efficacy					
Name of product	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	68.65	72.99	78.28	47.50
	1	57.06	60.89	67.05	32.93
	0.75	47.24	50.31	55.52	19.20
	0.5	64.25	70.50	78.50	-
OSORNO SC	1	58.28	64.78	67.83	-
OSORNO SC	1.5	70.83	66.70	60.43	57.10
NOTOS 100 SC	1.5	81.26	88.01	94.46	-
MUSTANG 306 SL	0.6	1.25	0	0	0

Table 3.2-8b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (ECHCG)

Average efficacy							
MEZOFLOR 103 SC				**OSORNO SC**		**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L/ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
71.7	59.9	49.1	71.1	63.8	63.2	87.9	0.4

Summary and conclusion (ECHCG)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of ECHCG in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 71.7 %. There was no significant different between MEZOFLOR 103 SC and standard herbicide – OSORNO SC. In the case of NOTOS 100 SC and MUSTANG 360 SL – there were statistical differences between these reference products and MEZOFLOR 103 SC. To reduce ECHCG recommended dose of MEZOFLOR 103 SC are 1.25 L/ha (moderate susceptible) and 1.0 L/ha (medium resistant).

Maize / GALAP

Table 3.2-9: Efficacy of MEZOFLOR 103 SC in all trials (GALAP)

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m^2 or % surface coverage**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface coverage or number of weeds/m^2**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU106Z	**Control (number of weeds/m^2)**	9	9	10	9	8	9.0	**OSORNO SC**					
	1.25		78.8	85	81.3	77.5	80.7	1.5	73.8	77.5	76.3	72.5	75.0
	1		61.3	75	67.5	67.5	67.8	**MUSTANG 306 SL**					
	0.75		48.8	52.5	50	51.3	50.7	0.6	80	95	95	95	91.3
276_01_F20_472	**Control (number of weeds/m^2)**	8	7.25	7.5	9.25		8.0	**NOTOS 100 SC**					
	1.25		81.25	86.25	100		89.2	1.5	81.25	86.25	100		89.2
	1		78.75	83.75	100		87.5						
	0.75		76.25	81.25	90.75		82.8						
	0.5		61.25	66.25	80.75		69.4						
276_01_F20_475	**Control (number of weeds/m^2)**	6	6.75	7.75	9.25		7.4	**NOTOS 100 SC**					
	1.25		90	100	100		96.7	1.5	90	100	100		96.7
	1		91.25	100	98.75		96.7						
	0.75		86.25	90	87.5		87.9						
	0.5		73.75	81.25	80		78.3						
276_01_F20_476	**Control (number of weeds/m^2)**	6	6.25	6.25	6.25		6.2	**NOTOS 100 SC**					
	1.25		90	95.75	99.75		95.2	1.5	90	94.75	99.5		94.8
	1		90	91.25	97.25		92.8						
	0.75		90	90	91.25		90.4						

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m^2 or % surface coverage**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface cover-age or number of weeds/m^2**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
	0.5		85	85	85		85.0						
SGS/2021/073/PL05	**Control (% surface coverage)**	2	3.5	5.50	8.50		4.9	**NOTOS 100 SC**					
	1.25		82.5	91.3	92.5		88.8	1.5	77.5	78.8	78.8		78.4
	1		72.5	77.5	82.5		77.5	**MUSTANG 306 SL**					
	0.75		62.5	62.5	62.5		62.5	0.6	83.8	91.3	92.5		89.2
111/2022	**Control (number of weeds/m^2)**	8	10	8.00	6.00		8.0	**OSORNO SC**					
	1.25		72.5	81.3	77.5		77.1	1	71.3	73.8	71.3		72.1
	1		62.5	70	66.3		66.3	**MUSTANG 306 SL**					
	0.75		50	46.3	43.8		46.7	0.6	85	92.5	91.3		89.6

A total of 6 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of GALAP in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha, 1.0 L/ha, 0.75 L/ha and 0.5 L/ha in 2020. In the next years 2021 and 2022 the number of doses was reduced, 3 doses were tested: 1.25 L/ha, 1.0 L/ha and 0.75 L/ha. The dose 0.5 L/ha was eliminated due to the low effectiveness of the control the weeds in maize cultivation. As a standards were used NOTOS 100 SC at dose 1.5 L/ha, OSORNO SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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. 3.2-9a and No. 3.2-9b).

Table 3.2-9a: Average efficacy of MEZOFLOR 103 SC (GALAP)

Avarage efficacy					
Name of product	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	82.51	89.93	91.84	77.50
	1	76.05	82.92	85.38	67.50
	0.75	68.97	70.43	70.97	51.30
	0.5	73.33	77.50	81.92	
OSORNO SC	1	71.30	73.80	71.30	
OSORNO SC	1.5	73.80	77.50	76.30	72.50
NOTOS 100 SC	1.5	84.69	89.95	94.58	
MUSTANG 306 SL	0.6	82.9	92.9	92.9	95

Table 3.2-3b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (GALAP)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
87.5	80.7	69.1	77.6	75.0	72.1	89.7	90.1

Summary and conclusion (GALAP)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of GALAP in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 87.5 %. At dose 1.0 L/ha average efficacy 7-112 DAT reached 80.7% There are significant different between MEZOFLOR 103 SC and standard herbicide – OSORNO SC. There were no statistical differences between MEZOFLOR 103 SC applied at rate 1.25 L/ha and reference products – NOTOS 100 SC and MUSTANG 360 SC. To reduce GALAP recommended dose of MEZOFLOR 103 SC is 1.25 L/ha and 1.0 L/ha (moderate susceptible).

Maize / CHEAL

Table 3.2-40: Efficacy of MEZOFLOR 103 SC in all trials (CHEAL)

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m^2 or % surface coverage**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface cover-age or number of weeds/m^2**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU103W	**Control (number of weeds/m^2)**	37	24	42	30	52	37.0	**OSORNO SC**					
	1.25		75	70	70	60	68.8	1.5	98	100	100	100	99.5
	1		65	55	50	40	52.5	**MUSTANG 306 SL**					
	0.75		55	45	30	20	37.5	0.6	70	70	70	60	67.5
SH21KU104W	**Control (number of weeds/m^2)**	45	43	50	40	45	44.6	**OSORNO SC**					
	1.25		78	70	70	65	70.8	1.5	98	98	100	100	99
	1		65	60	50	45	55.0	**MUSTANG 306 SL**					
	0.75		55	45	30	25	38.8	0.6	70	80	80	60	72.5
SH21KU105W	**Control (number of weeds/m^2)**	83	74	94	80	83	82.8	**OSORNO SC**					
	1.25		80	70	70	65	71.3	1.5	98	88	88	88	90.5
	1		70	60	60	55	61.3	**MUSTANG 306 SL**					
	0.75		60	50	40	20	42.5	0.6	65	80	80	60	71.3
SH21KU106Z	**Control (number of weeds/m^2)**	5	6	8	7	6	6.4	**OSORNO SC**					
	1.25		92.5	91.3	86.3	87.5	89.4	1.5	95	92.5	91.3	88.8	91.9
	1		82.5	77.5	77.5	76.3	78.5	**MUSTANG 306 SL**					
	0.75		68.8	66.3	65	63.8	66.0	0.6	97.5	96.3	95	93.8	95.7
SH21KU107Z	**Control (number of weeds/m^2)**	9	10	8	9	11	9.4	**OSORNO SC**					
	1.25		95	98.8	88.8	86.3	92.2	1.5	96.3	97.5	93.8	92.5	95.0
	1		80	86.3	81.3	78.8	81.6	**MUSTANG 306 SL**					
	0.75		72.5	76.3	77.5	75	75.3	0.6	98.8	98.8	97.5	97.5	98.15
276_01_F20_472	**Control (number of weeds/m^2)**	8	6.75	7.75	9.5		8.0	**NOTOS 100 SC**					
	1.25		80	85	100		88.3	1.5	80	85	100		88.3
	1		81.25	86.25	98.75		88.8						
	0.75		76.25	81.25	87.25		81.6						
	0.5		63.75	68.78	80.75		71.1						

	Control (number of weeds/m^2)	5	5.25	5.75	9.25		6.3	**NOTOS 100 SC**					
276_01_F20_473	**1.25**		80	85	100		88.3	1.5	80	85	100		88.3
	1		81.25	86.25	98.75		88.8						
	0.75		75	80	87.5		80.8						
	0.5		61.25	66.25	80		69.2						
	Control (number of weeds/m^2)	7	7	7.5	7.75		7.3	**NOTOS 100 SC**					
276_01_F20_474	**1.25**		85	97.5	97.5		93.3	1.5	80	93.75	93.75		89.2
	1		83.75	98.75	98.75		93.8						
	0.75		77.5	95	97.5		90.0						
	0.5		70	83.75	87.5		80.4						
	Control (number of weeds/m^2)	8	10.25	11.75	12.5		10.6	**NOTOS 100 SC**					
276_01_F20_475	**1.25**		93.75	100	100		97.9	1.5	93.75	100	100		97.9
	1		88.75	100	100		96.3						
	0.75		86.25	95	93.75		91.7						
	0.5		70	83.75	81.25		78.3						
	Control (number of weeds/m^2)	7	7.75	7.75	7.75		7.6	**NOTOS 100 SC**					
276_01_F20_476	**1.25**		91.25	93.75	100		95.0	1.5	91.25	93.75	100		95
	1		85	85	100		90.0						
	0.75		81.25	81.25	81.25		81.3						
	0.5		82.5	82.5	82.5		82.5						
	Control (number of weeds/m^2)	7.5	9	9	9		8.6	**NOTOS 100 SC**					
SGS/2021/073/PL01	**1.25**		88.8	93.8	88.8		90.5	1.5	91.3	92.5	90		91.3
	1		76.3	80	80		78.8	**MUSTANG 306 SL**					
	0.75		68.8	73.8	73.8		72.1	0.6	78.8	92.5	92.5		
	Control (number of weeds/m^2)	5.8	5	5	5		5.2	**NOTOS 100 SC**					
SGS/2021/073/PL02	**1.25**		73.8	82.5	91.5		82.6	1.5	73.8	85	91.5		83.4
	1		67.5	75	83.8		75.4	**MUSTANG 306 SL**					
	0.75		63.8	71.3	75		70.0	0.6	76.3	82.5	92.5		
	Control (number of weeds/m^2)	8.3	8	8	10		8.6	**NOTOS 100 SC**					
SGS/2021/073/PL03	**1.25**		87.5	87.5	90		88.3	1.5	87.5	83.8	90		87.1
	1		87.5	75	83.8		82.1	**MUSTANG 306 SL**					
	0.75		90	71.3	75		78.8	0.6	90	82.5	90		
SGS/2021/073/PL04	**Control (% surface coverage)**	20	28.8	37.50	40.00		31.6	**NOTOS 100 SC**					

	1.25		82.5	93.8	97.5		91.3	1.5	81.3	92.5	98.3		90.7
	1		76.3	82.5	82.5		80.4	**MUSTANG 306 SL**					
	0.75		65	70	71.3		68.8	0.6	73.8	76.3	75		
	Control (% surface coverage)	15	22.5	33.80	34.00		26.3	**NOTOS 100 SC**					
SGS/2021/073/PL05	**1.25**		86.3	92.5	96		91.6	1.5	82.5	91.3	92.5		88.8
	1		77.5	82.5	82.5		80.8	**MUSTANG 306 SL**					
	0.75		62.5	70	72.5		68.3	0.6	75	75	76.3		
	Control (number of weeds/m^2)	41	41	41.00	41.00		41.0	**NOTOS 100 SC**					
SGS/2021/073/PL06	**1.25**		81.3	97	97		91.8	1.5	76.3	87.5	95.3		86.4
	1		65	81.3	81.3		75.9	**MUSTANG 306 SL**					
	0.75		47.5	57.5	41.3		48.8	0.6	90	80	57.5		
	Control (number of weeds/m^2)	26	14.7	30.30	37.70		27.2	**OSORNO SC**					
7 H/2022	**1.25**		92	88	85		88.3	1	95	100	99		98.0
	1		90	75	70		78.3	**MUSTANG 306 SL**					
	0.75		83	55	0		46.0	0.6	88	91	84		87.7
	Control (number of weeds/m^2)	40						**OSORNO SC**					
SH22KU101W	**1.25**												
	1							**MUSTANG 306 SL**					
	0.75							0.6					
	Control (number of weeds/m^2)	60	55	55.00			56.7	**OSORNO SC**					
110/2022	**1.25**		60	70			65.0	1	95	97			96
	1		55	65			60.0	**MUSTANG 306 SL**					
	0.75		50	60			55.0	0.6	70	85			77.5
	Control (number of weeds/m^2)	14.00	16	12.00	14.00		14.0	**OSORNO SC**					
111/2022	**1.25**		87.5	91.3	83.8		87.5	1	91.3	93.8	91.3		92.1
	1		80	78.8	72.5		77.1	**MUSTANG 306 SL**					
	0.75		63.8	62.5	61.3		62.5	0.6	91.3	93.8	91.3		92.1

A total of 19 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of CHEAL in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha, 1.0 L/ha, 0.75 L/ha and 0.5 L/ha in 2020. In the next years 2021 ad 2022 the number of doses was reduced, 3 doses were tested: 1.25 L/ha, 1.0 L/ha and 0.75 L/ha. The dose 0.5 L/ha was eliminated due to the low effectiveness of the control the weeds in maize cultivation. As a standards were used NOTOS 100 SC at dose 1.5 L/ha, OSORNO SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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. 3.2-10a and No. 3.2-10b).

Table 3.2-50a: Average efficacy of MEZOFLOR 103 SC (CHEAL)

Avarage efficacy					
Name of product	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	83.69	87.25	89.57	72.76
	1	76.72	78.43	80.64	59.02
	0.75	68.52	68.76	64.44	40.76
	0.5	69.50	77.01	82.40	
OSORNO SC	1	93.77	96.93	95.15	
OSORNO SC	1.5	97.06	95.20	94.62	93.86
NOTOS 100 SC	1.5	83.77	89.49	95.11	
MUSTANG 306 SL	0.6	81.04	84.55	83.2	74.26

Table 3.2-60b: Summary of average efficacy 7-112 DAT of MEZOFLOR 103 SC (CHEAL)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	**1.0 L/ha**	**0.75 L/ha**	**0.5 L/ha**	**1.5 L/ha**	**1.0 L/ha**	**1.5 L/ha**	**0.6 L/ha**
85.6	77.0	65.1	76.3	95.2	95.3	89.7	82.0

Summary and conclusion (CHEAL)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of CHEAL in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 85.6%. At dose 1L/ha average efficacy 7-112 DAT reached 77.0% There was no significant different between MEZOFLOR 103 SC at rate 1.25 L/ha and standard herbicides (NOTOS 100 SC, OSORNO SC, MUSTANG 306 SE). To reduce GALAP recommended dose of MEZOFLOR 103 SC is 1.0 L/ha (moderate susceptible) to 1.25 L/ha.

Maize / GERPU

Table 3.2-71: Efficacy of MEZOFLOR 103 SC in all trials (GERPU)

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m² or % surface coverage**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy, % surface cover-age or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU103W	**Control (number of weeds/m²)**	5	4	4	5	5	4.6	**OSORNO SC**					
	1.25		80	80	85	88	83.3	1.5	0	0	0	0	0.0
	1		75	75	80	82	78.0	**MUSTANG 306 SL**					
	0.75		70	70	75	78	73.3	0.6	65	70	75	78	72.0
SH21KU104W	**Control (number of weeds/m²)**	5	8	4	5	5	5.4	**OSORNO SC**					
	1.25		70	75	75	75	73.8	1.5	0	0	0	0	0.0
	1		68	70	70	70	69.5	**MUSTANG 306 SL**					
	0.75		65	65	65	65	65.0	0.6	65	65	65	65	65.0
SH21KU105W	**Control (number of weeds/m²)**	5	5	7	4	5	5.2	**OSORNO SC**					
	1.25		70	85	85	85	81.3	1.5	0	0	0	0	0.0
	1		68	80	80	80	77.0	**MUSTANG 306 SL**					
	0.75		65	75	75	75	72.5	0.6	65	85	85	75	77.5
276_01_F20_472	**Control (number of weeds/m²)**	7	7.5	8.25	10		8.2	**NOTOS 100 SC**					
	1.25		82.5	87.5	100		90.0	1.5	83.75	88.75	100		90.8
	1		81.25	86.25	100		89.2						
	0.75		77.5	82.5	91		83.7						
	0.5		61.25	66.25	79.75		69.1						
276_01_F20_473	**Control (number of weeds/m²)**	7	6.25	7.25	9.75		7.6	**NOTOS 100 SC**					
	1.25		82.5	87.5	100		90.0	1.5	83.75	88.75	100		90.8
	1		77.5	82.5	100		86.7						
	0.75		75	80	90		81.7						
	0.5		61.25	66.25	80		69.2						
276_01_F20_476	**Control (number of weeds/m²)**	7	7.5	8.25	9.75		8.1	**NOTOS 100 SC**					
	1.25		82.5	90	99.75		90.8	1.5	83.75	88.75	99.75		90.8
	1		81.25	86.25	100		89.2						

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m^2 or % surface coverage**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy, % surface coverage or number of weeds/m^2**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
	0.75		77.5	83.75	91.25		84.2						
	0.5		61.25	67.5	80		69.6						

A total of 6 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of GERPU in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha, 1.0 L/ha, 0.75 L/ha and 0.5 L/ha in 2020. In the next years (2021 and 2022) the number of doses was reduced, 3 doses were tested: 1.25 L/ha, 1.0 L/ha and 0.75 L/ha. The dose 0.5 L/ha was eliminated due to the low effectiveness of the control the weeds in maize cultivation. As a standards were used NOTOS 100 SC at dose 1.5 L/ha, OSORNO SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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 3.2-81a: Average efficacy of MEZOFLOR 103 SC (GERPU)

Avarage efficacy					
Name of product	**dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	77.9	84.2	90.8	82.7
	1	75.2	80.0	88.3	77.3
	0.75	71.7	76.0	81.2	72.7
	0.5	61.3	66.3	80.0	
OSORNO SC	1				
OSORNO SC	1.5	0.0	0.0	0.0	0.0
NOTOS 100 SC	1.5	83.8	88.8	99.9	
MUSTANG 306 SL	0.6	65.0	73.3	75.0	72.7

Table 3.2-91b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (GERPU)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
84.1	**80.6**	75.8	69.3	0.0		90.8	71.5

Summary and conclusion (GERPU)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of GERPU in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 84.1%. At dose 1L/ha average efficacy 7-112 DAT reached 80.6% There was no significant different between MEZOFLOR 103 SC and standard herbicides (NOTOS 100 SC). The statistical differences were detected for MEZOFLOR 103 SC and standard herbicides MUSTANG 306 SL and OSORNO SC. To reduce GERPU recommended dose of MEZOFLOR 103 SC is 1.0 L/ha to 1.25 L/ha (moderate susceptible).

Maize / MATIN (MATMA)

Table 3.2-102: Efficacy of MEZOFLOR 103 SC in all trials (MATIN/MATMA)

MEZOFLOR 103 SC							Reference product						
Number of trial	**Dose [L/ha]**	**Number of weeds/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface cover-age or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU103W	**Control (number of weeds/m²)**	24	20	18	30	28	24.0	**OSORNO SC**					
	1.25		65	70	80	85	75.0	1.5	55	60	70	75	65.0
	1		60	65	75	80	70.0	**MUSTANG 306 SL**					
	0.75		55	60	70	75	65.0	0.6	65	65	60	60	62.5
SH21KU104W	**Control (number of weeds/m²)**	13	9	16	6	13	11.4	**OSORNO SC**					
	1.25		85	90	100	95	92.5	1.5	85	85	70	75	78.8
	1		80	85	98	90	88.3	**MUSTANG 306 SL**					
	0.75		70	80	85	85	80.0	0.6	80	70	95	100	86.3
SH21KU105W	**Control (number of weeds/m²)**	7	8	6	6	7	6.8	**OSORNO SC**					
	1.25		80	90	95	95	90.0	1.5	78	80	85	85	82.0
	1		78	88	90	90	86.5	**MUSTANG 306 SL**					
	0.75		75	85	85	85	82.5	0.6	80	70	70	70	72.5
SH21KU108Z	**Control (number of weeds/m²)**	7	8	9	7	10	8.2	**OSORNO SC**					
	1.25		91.3	92.5	91.3	86.3	90.4	1.5	93.8	92.5	88.8	86.3	90.4
	1		75	81.3	80	71.3	76.9	**MUSTANG 306 SL**					
	0.75		55	60	60	62.5	59.4	0.6	93.8	95	91.3	87.5	91.9
SGS/2021/073/PL01	**Control (number of weeds/m²)**	7.5	11.3	18.8	18.8		14.1	**NOTOS 100 SC**					
	1.25		88.8	93.8	88.8		90.5	1.5	91.3	92.5	90		91.3
	1		76.3	80	80		78.8	**MUSTANG 306 SL**					
	0.75		68.8	73.8	73.8		72.1	0.6	78.8	92.5	92.5		87.9
112/2022	**Control (number of weeds/m²)**	6.00	4	6.00	8.00		6.0	**OSORNO SC**					
	1.25		87.5	92.5	91.3		90.4	1	92.5	93.8	90		92.1
	1		72.5	70	77.5		73.3	**MUSTANG 306 SL**					
	0.75		55	56.3	57.5		56.3	0.6	92.5	88.8	87.5		89.6
SH21KU103W	**Control (number**	11	19	10	7	9	11.2	**OSORNO SC**					

MEZOFLOR 103 SC							Reference product						
Number of trial	**Dose [L/ha]**	**Number of weeds/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface cover-age or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
	of weeds/m²)												
	1.25		80	80	85	85	82.5	1.5	85	85	90	90	87.5
	1		70	70	75	75	72.5	**MUSTANG 306 SL**					
	0.75		60	60	65	65	62.5	0.6	25	45	40	30	35
SH21KU104W	**Control (number of weeds/m²)**	7	7	7	6	7	6.8	**OSORNO SC**					
	1.25		85	88	90	90	88.3	1.5	95	95	98	98	96.5
	1		75	80	85	85	81.3	**MUSTANG 306 SL**					
	0.75		55	70	70	70	66.3	0.6	25	50	40	40	38.75
SH21KU105W	**Control (number of weeds/m²)**	7	7	5	8	7	6.8	**OSORNO SC**					
	1.25		80	90	92	92	88.5	1.5	85	90	95	95	91.25
	1		75	85	85	85	82.5	**MUSTANG 306 SL**					
	0.75		68	78	78	78	75.5	0.6	25	50	40	40	38.75
276_01_F20_472	**Control (number of weeds/m²)**	8	7.5	7.5	7.75		7.7	**NOTOS 100 SC**					
	1.25		83.25	97.25	100		93.5	1.5	83	93.5	96.25		90.9
	1		82.25	90.5	98.75		90.5						
	0.75		71.25	85.5	91.75		82.8						
	0.5		63.75	80.5	81.5		75.3						
276_01_F20_474	**Control (number of weeds/m²)**	7	7	7.25	7		7.1	**NOTOS 100 SC**					
	1.25		82.5	98.75	98.75		93.3	1.5	80	93.75	93.75		89.1
	1		85	98.75	98.75		94.2						
	0.75		81.25	91.25	95		89.2						
	0.5		71.25	81.25	82.5		78.3						
276_01_F20_475	**Control (number of weeds/m²)**	6	6.25	7	7.5		6.7	**NOTOS 100 SC**					
	1.25		95	100	100		98.3	1.5	96.25	100	100		98.75
	1		92.5	100	100		97.5						
	0.75		88.75	96.25	93.75		92.9						
	0.5		73.75	83.75	81.25		79.6						

A total of 12 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of MATIN (MATMA) in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha, 1.0 L/ha, 0.75 L/ha and 0.5 L/ha As a standards were used NOTOS 100 SC at dose 1.5 L/ha, MUSTANG 360 SL at rate 0.6 L/ha and OSORNO SC at rate 1.5 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. 3.2-12a and No. 3.2-12b).

Table 3.2-112a: Average efficacy of MEZOFLOR 103 SC (MATIN/MATMA)

Avarage efficacy					
Name of product	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	83.61	90.23	92.68	89.76
	1	76.80	82.80	86.92	82.33
	0.75	66.92	74.68	77.07	74.36
	0.5	69.58	81.83	81.75	
OSORNO SC	1	92.50	93.80		
OSORNO SC	1.5	82.40	83.93	85.26	86.33
NOTOS 100 SC	1.5	87.64	94.94	95.00	
MUSTANG 306 SL	0.6	62.79	69.59	68.48	61.07

Table 3.2-122b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (MATIN/MATMA)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
89.0	82.2	73.1	77.7	84.5	92.1	92.5	65.7

Summary and conclusion (MATIN/MATMA)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of MATIN(MATMA) in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 89.0 %. At dose 1L/ha average efficacy 7-112 DAT reached 82.2% There was no significant different between MEZOFLOR 103 SC and standard herbicides (NOTOS 100 SC, OSORNO SC). Statistical differences were detected between MEZOFLOR 103 SC at rate 1.25 L/ha and MUSTANG 360 SE. To reduce occurrence of MATIN (MATMA) recommended dose of MEZOFLOR 103 SC is 1.0 L/ha (moderate susceptible) to 1.25 L/ha.

Maize/GASPA

Table 3.2-133: Efficacy of MEZOFLOR 103 SC in all trials (GASPA)

MEZOFLOR 103 SC							Reference product						
Number of trial	**Dose [L/ha]**	**Number of weeds/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface coverage or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
276_01_F20_473	**Control (number of weeds/m²)**	9	8.75	8.75	8.75		8.8	**NOTOS 100 SC**					
	1.25		86	100	100		95.3	1.5	84.25	100	100		94.75
	1		84.25	100	100		94.8						
	0.75		78.75	89.5	100		89.4						
	0.5		72.5	85.5	90		82.7						
276_01_F20_474	**Control (number of weeds/m²)**	5	5	5.5	5.75		5.3	**NOTOS 100 SC**					
	1.25		87.5	100	100		95.8	1.5	85	98.75	98.75		94.17
	1		83.75	100	100		94.6						
	0.75		82.5	95	97.5		91.7						
	0.5		76.25	88.75	91.25		85.4						
276_01_F20_475	**Control (number of weeds/m²)**	6	7.5	8.25	9.75		7.9	**NOTOS 100 SC**					
	1.25		92.5	100	100		97.5	1.5	93.75	100	100		97.92
	1		91.25	100	100		97.1						
	0.75		87.5	91.25	90		89.6						
	0.5		71.25	81.25	80		77.5						
112/2022	**Control (number of weeds/m²)**	7.00	5	7.00	9.00		7.0	**OSORNO SC**					
	1.25		78.8	75	72.5		75.4	1	85	87.5	82.5		85
	1		66.3	66.3	61.3		64.6	**MUSTANG 306 SL**					
	0.75		47.5	52.5	47.5		49.2	0.6	75	73.8	67.5		72.1

A total of 4 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of GASPA in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha, 1.0 L/ha, 0.75 L/ha and 0.5 L/ha As a standards were used NOTOS 100 SC at dose 1.5 L/ha, OSORNO SC at rate 1.0 L/ha and MUSTANG 360 SE at rate 0.6 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 3.2-143a: Average efficacy of MEZOFLOR 103 SC (GASPA)

Avarage efficacy					
Name of product	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	86.20	93.75	93.13	
	1	81.39	91.58	90.33	
	0.75	74.06	82.06	83.75	
	0.5	73.75	85.00	85.63	
OSORNO SC	1	85.00	87.50	82.50	
OSORNO SC	1.5				
NOTOS 100 SC	1.5	87.67	99.58	99.58	
MUSTANG 306 SL	0.6	75.0	73.8	67.5	

Table 3.2-153b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (GASPA)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
91.0	87.8	80.0	81.9			95.6	72.1

Summary and conclusion (GASPA)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of GASPA in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 91.0 %. At dose 1L/ha average efficacy 7-112 DAT reached 87.8% There was no significant difference between MEZOFLOR 103 SC and standard herbicide (NOTOS 100 SC). There are significant difference between MEZOFLOR 103 SC and standard herbicide – MUSTANG 360 SE. To reduce occurrence of GASPA recommended dose of MEZOFLOR 103 SC is 1.0 L/ha to 1.25 L/ha.

Maize / VIOAR

Table 3.2-164: Efficacy of MEZOFLOR 103 SC in all trials (VIOAR)

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface cover-age or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU103W	**Control (number of weeds/m²)**	11	19	10	7	9	11.2	**OSORNO SC**					
	1.25		80	80	85	85	82.5	1.5	85	85	90	90	87.5
	1		70	70	75	75	72.5	**MUSTANG 306 SL**					
	0.75		60	60	65	65	62.5	0.6	25	45	40	30	35
SH21KU104W	**Control (number of weeds/m²)**	7	7	7	6	7	6.8	**OSORNO SC**					
	1.25		85	88	90	90	88.3	1.5	95	95	98	98	96.5
	1		75	80	85	85	81.3	**MUSTANG 306 SL**					
	0.75		55	70	70	70	66.3	0.6	25	50	40	40	38.75
SH21KU105W	**Control (number of weeds/m²)**	7	7	5	8	7	6.8	**OSORNO SC**					
	1.25		80	90	92	92	88.5	1.5	85	90	95	95	91.25
	1		75	85	85	85	82.5	**MUSTANG 306 SL**					
	0.75		68	78	78	78	75.5	0.6	25	50	40	40	38.75
276_01_F20_472	**Control (number of weeds/m²)**	9	10.25	11.75	12.75		10.9	**NOTOS 100 SC**					
	1.25		68.75	73.75	100		80.8	1.5	68.75	73.75	100		80.8
	1		63.75	68.75	100		77.5						
	0.75		61.25	66.25	93.75		73.8						
	0.5		45	50	81.75		58.9						
SGS/2021/073/PL01	**Control (number of weeds/m²)**	6	7	6	6		6.3	**NOTOS 100 SC**					
	1.25		87.5	90	90		89.2	1.5	88.8	92.5	92.5		91.3
	1		76.3	77.5	77.5		77.1	**MUSTANG 306 SL**					
	0.75		65	68	65		66.0	0.6	0	0	0		
SGS/2021/073/PL02	**Control (number of weeds/m²)**	9.5	11	11	11		10.6	**NOTOS 100 SC**					
	1.25		73.8	85	90.8		83.2	1.5	71.3	82.5	93.5		82.4
	1		70	81.3	85		78.8	**MUSTANG 306 SL**					
	0.75		66.3	75	77.5		72.9	0.6	40	61.3	66.3		

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface cover-age or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SGS/2021/073/PL03	**Control (number of weeds/m²)**	5	5	5	5		5.0	**NOTOS 100 SC**					
	1.25		87.5	93.8	86.3		89.2	1.5	87.5	90	75		84.2
	1		87.5	81.3	73.8		80.9	**MUSTANG 306 SL**					
	0.75		90	67.5	70		75.8	0.6	90	92.5	91.3		
7 H/2022	**Control (number of weeds/m²)**	8	1.7	1.70	1.30		3.2	**OSORNO SC**					
	1.25		93	96	97		95.3	1	92	96	95		94.3
	1		91	93	92		92.0	**MUSTANG 306 SL**					
	0.75		84	69	61		71.3	0.6	79	73	69		73.7
110/2022	**Control (number of weeds/m²)**	8	9	9.00			8.7	**OSORNO SC**					
	1.25		75	60			67.5	1	80	85			82.5
	1		70	55			62.5	**MUSTANG 306 SL**					
	0.75		65	50			57.5	0.6	40	30			35
111/2022	**Control (number of weeds/m²)**	11.00	10	11.00	13.00		11.3	**OSORNO SC**					
	1.25		78.8	81.3	78.8		79.6	1	81.3	87.5	91.3		86.7
	1		72.5	75	66.3		71.3	**MUSTANG 306 SL**					
	0.75		52.5	51.3	48.8		50.9	0.6	65	72.5	91.3		76.3

A total of 10 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of VIOAR in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha, 1.0 L/ha, 0.75 L/ha and 0.5 L/ha in 2020. In the next years (2021 and 2022) the number of doses was reduced, 3 doses were tested: 1.25 L/ha, 1.0 L/ha and 0.75 L/ha. The dose 0.5 L/ha was eliminated due to the low effectiveness of the control the weeds in maize cultivation. As a standards were used NOTOS 100 SC at dose 1.5 L/ha, OSORNO SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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 3.2-174a: Average efficacy of MEZOFLOR 103 SC (VIOAR)

Avarage efficacy					
Name of product	**dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	80.94	83.79	89.99	89.00
	1	75.11	76.69	82.18	81.67
	0.75	66.71	65.51	69.89	71.00
	0.5				
OSORNO SC	1	84.43	89.50	93.15	
OSORNO SC	1.5	88.33	90.00	94.33	94.33
NOTOS 100 SC	1.5	79.09	84.69	90.25	
MUSTANG 306 SL	0.6	43.22	52.70	54.74	36.67

Table 3.2-184b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (VIOAR)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
85.1	78.2	67.6	58.9	88.3	84.4	84.7	48.7

Summary and conclusion (VIOAR)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of VIOAR in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 85.1 %. At dose 1L/ha average efficacy 7-112 DAT reached 78.2% There was no significant difference between MEZOFLOR 103 SC (at rate 1.25 L/ha) and standard herbicides (NOTOS 100 SC, OSORNO SC). There was significant difference between MEZOFLOR 103 SC and MUSTANG 306 SE. To reduce occurrence of VIOAR recommended dose of MEZOFLOR 103 SC is 1.0 L/ha (moderate susceptible) to 1.25 L/ha.

Maize / CENCY

Table 3.2-195: Efficacy of MEZOFLOR 103 SC in all trials (CENCY)

MEZOFLOR 103 SC							Reference product						
Number of trial	**Dose [L/ha]**	**Number of weeds Dose [L/ha]/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface cover-age or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU103W	**Control (number of weeds/m²)**	19	17	21	20	17	18.8	**OSORNO SC**					
	1.25		75	70	70	70	71.3	1.5	100	100	100	100	100.0
	1		70	65	65	65	66.3	**MUSTANG 306 SL**					
	0.75		65	60	60	60	61.3	0.6	75	70	60	60	66.3
276_01_F20_473	**Control (number of weeds/m²)**	7	7.25	7.75	9.5		7.9	**NOTOS 100 SC**					
	1.25		81.25	86.25	100		89.2	1.5	81.25	86.25	100		89.2
	1		77.5	82.5	100		86.7						
	0.75		73.75	78.75	91.25		81.3						
	0.5		62.5	67.5	81.25		70.4						
SGS/2021/073/PL02	**Control (number of weeds/m²)**	5.3	5	5	5		5.1	**NOTOS 100 SC**					
	1.25		55	73.8	83.8		70.9	1.5	52.5	63.8	72.5		62.9
	1		50	65	73.8		62.9	**MUSTANG 306 SL**					
	0.75		42.5	60	67.5		56.7	0.6	63.8	82.5	90.8		79.0

A total of 3 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of CENCY in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha, 1.0 L/ha, 0.75 L/ha and 0.5 L/ha in 2020. In the next year (2021) the number of doses was reduced, 3 doses were tested: 1.25 L/ha, 1.0 L/ha and 0.75 L/ha. The dose 0.5 L/ha was eliminated due to the low effectiveness of the control the weeds in maize cultivation. As a standards were used NOTOS 100 SC at dose 1.5 L/ha, OSORNO SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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 3.2-205a: Average efficacy of MEZOFLOR 103 SC (CENCY)

Avarage efficacy					
Name of product	**dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	70.42	76.68	84.60	70.00
	1	65.83	70.83	79.60	65.00
	0.75	60.42	66.25	72.92	60.00
	0.5	62.50	67.50	81.25	
OSORNO SC	1				
OSORNO SC	1.5	100.00	100.00	100.00	100.00
NOTOS 100 SC	1.5	66.88	75.03	86.25	
MUSTANG 306 SL	0.6	69.40	76.25	75.40	60.00

Table 3.2-215b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (CENCY)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
76.5	71.4	65.9	70.4	100.0		76.1	71.7

Summary and conclusion (CENCY)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of CENCY in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 76.5%. At dose 1L/ha average efficacy 7-112 DAT reached 71.4% There was no significant difference between MEZOFLOR 103 SC and standard herbicides (NOTOS 100 SC, MUSTANG 306 SE). Statistical difference was detected between MEZOFLOR 103 SC and standard product – OSORNO SC. To reduce occurrence of CENCY recommended dose of MEZOFLOR 103 SC is 1.0 L/ha (moderate susceptible) to 1.25 L/ha (moderate susceptible).

Maize / THLAR

Table 3.2-226: Efficacy of MEZOFLOR 103 SC in all trials (THLAR)

MEZOFLOR 103 SC							Reference product						
Number of trial	**Dose [L/ha]**	**Number of weeds/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface coverage or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU103W	**Control (number of weeds/m²)**	7	9	6	6	7	7.0	**OSORNO SC**					
	1.25		90	95	100	100	96.3	1.5	95	100	100	100	98.75
	1		88	92	100	100	95.0	**MUSTANG 306 SL**					
	0.75		85	90	100	100	93.8	0.6	85	95	100	100	95
SH21KU105W	**Control (number of weeds/m²)**	4	4	4	4	4	4.0	**OSORNO SC**					
	1.25		90	100	100	100	97.5	1.5	95	100	100	100	98.75
	1		88	100	100	100	97.0	**MUSTANG 306 SL**					
	0.75		85	100	100	100	96.3	0.6	85	100	100	100	96.25
SH21KU108Z	**Control (number of weeds/m²)**	10	13	14	11	15	12.6	**OSORNO SC**					
	1.25		87.5	92.5	91.3	92.5	91.0	1.5	88.8	96.3	95	95	93.8
	1		82.5	82.5	81.3	82.5	82.2	**MUSTANG 306 SL**					
	0.75		72.5	72.5	72.5	73.8	72.8	0.6	92.5	96.3	95	96.3	95.0
276_01_F20_473	**Control (number of weeds/m²)**	6	6.25	7	12.5		7.9	**NOTOS 100 SC**					
	1.25		68.75	73.75	100		80.8	1.5	68.75	73.75	100		80.8
	1		63.75	68.75	100		77.5						
	0.75		56.25	61.25	93.75		70.4						
	0.5		45	50	81.25		58.8						
SGS/2021/073/PL05	**Control (% surface coverage)**	3	4.5	5.50	5.50		4.6	**NOTOS 100 SC**					
	1.25		88.8	96.3	96.3		93.8	1.5	83.8	92.5	97		91.1
	1		78.8	86.3	86.3		83.8	**MUSTANG 306 SL**					

MEZOFLOR 103 SC							Reference product						
Number of trial	**Dose [L/ha]**	**Number of weeds/m^2**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface cover-age or number of weeds/m^2**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
	0.75		75	77.5	81.3		77.9	0.6	88.8	95.5	96.3		93.5
112/2022	**Control (num-ber of weeds/m^2)**	9.00	11	9.00	7.00		9.0	**OSORNO SC**					
	1.25		85	83.8	77.5		82.1	1	87.5	87.5	82.5		85.8
	1		78.8	77.5	73.8		76.7	**MUSTANG 306 SL**					
	0.75		71.3	70	65		68.8	0.6	93.8	90	82.5		88.8

A total of 6 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of THLAR in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha, 1.0 L/ha, 0.75 L/ha and 0.5 L/ha in 2020. In the next years (2021 and 2022) the number of doses was reduced, 3 doses were tested: 1.25 L/ha, 1.0 L/ha and 0.75 L/ha. The dose 0.5 L/ha was eliminated due to the low effectiveness of the control the weeds in maize cultivation. As a standards were used NOTOS 100 SC at dose 1.5 L/ha, OSORNO SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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 3.2-236a: Average efficacy of MEZOFLOR 103 SC (THLAR)

Avarage efficacy					
Name of product	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	85.01	90.23	94.18	97.50
	1	79.98	84.51	90.23	94.17
	0.75	74.18	78.54	85.43	91.27
	0.5	45.00	50.00	81.25	
OSORNO SC	1	87.50	87.50	82.50	
OSORNO SC	1.5	92.93	98.77	98.33	98.33
NOTOS 100 SC	1.5	76.28	83.13	98.50	
MUSTANG 306 SL	0.6	89.0	95.4	94.8	98.8

Table 3.2-246b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (THLAR).

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
90.9	86.2	86.2	58.8	97.1	85.8	91.1	94.0

Summary and conclusion (THLAR)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of THLAR in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 90.9 %. At dose 1L/ha average efficacy 7-112 DAT reached 86.2% There was no significant different between MEZOFLOR 103 SC and standard herbicides (NOTOS 100 SC, OSORNO SC, MUSTANG 306 SE). To reduce occurrence of THLAR recommended dose of MEZOFLOR 103 SC is 1.0 L/ha. To significantly reduce occurrence of THLAR recommended dose of MEZOFLOR 103 SC is 1.25 L/ha.

Maize/AMARE

Table 3.2-257: Efficacy of MEZOFLOR 103 SC in all trials (AMARE)

MEZOFLOR 103 SC							Reference product						
Number of trial	**Dose [L/ha]**	**Number of weeds/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface cover-age or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU108Z	**Control (num-ber of weeds/m²)**	5	6	7	6	8	6.8	**OSORNO SC**					
	1.25		87.5	95	91.3	91.3	91.3	1.5	90	93.8	95	91.3	92.5
	1		77.5	83.8	78.8	75	78.8	**MUSTANG 306 SL**					
	0.75		71.3	71.3	66.3	65	68.5	0.6	95	97.5	97.5	96.3	96.6
276_01_F20_474	**Control (num-ber of weeds/m²)**	7	6.5	6.75	7.25		6.8	**NOTOS 100 SC**					
	1.25		81.25	98.75	98.75		92.9	1.5	80	96.25	96.25		90.8
	1		77.5	91.25	97.25		88.7						
	0.75		71.25	81.25	81.25		77.9						
	0.5		58.75	72.5	72.5		67.9						

A total of 2 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of AMARE in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha, 1.0 L/ha, 0.75 L/ha and 0.5 L/ha in 2020. In the next year (2021) the number of doses was reduced, 3 doses were tested: 1.25 L/ha, 1.0 L/ha and 0.75 L/ha. The dose 0.5 L/ha was eliminated due to the low effectiveness of the control the weeds in maize cultivation. As a standards were used NOTOS 100 SC at dose 1.5 L/ha, OSORNO SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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 3.2-267a: Average efficacy of MEZOFLOR 103 SC (AMARE)

Avarage efficacy					
Name of product	**dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	84.38	96.88	95.03	91.30
	1	77.50	87.53	88.03	75.00
	0.75	71.28	76.28	73.78	65.00
	0.5	58.75	72.50	72.50	
OSORNO SC	1				
OSORNO SC	1.5	90.00	93.80	95.00	91.30
NOTOS 100 SC	1.5	80.00	96.25	96.25	
MUSTANG 306 SL	0.6	95.0	97.5	97.5	96.3

Table 3.2-277b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (AMARE)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
92.0	83.0	72.5	67.9	92.5		90.8	96.6

Summary and conclusion (AMARE)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of AMARE in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 92.0 %. At dose 1L/ha average efficacy 7-112 DAT reached 83.0% There was no significant different between MEZOFLOR 103 SC and standard herbicides (NOTOS 100 SC, OSORNO SC, MUSTANG 306 SE). To reduce occurrence of AMARE recommended dose of MEZOFLOR 103 SC is 1.0 L/ha (moderate susceptible) to 1.25 L/ha.

MAIZE/POLCO

Table 3.2-288: Efficacy of MEZOFLOR 103 SC in all trials (POLCO)

MEZOFLOR 103 SC							Reference product						
Number of trial	**Dose [L/ha]**	**Number of weeds/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface cover-age or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU103W	**Control (num-ber of weeds/m²)**	6	6	6	6	6	6.0	**OSORNO SC**					
	1.25		85	100	100	100	96.3	1.5	75	65	60	60	65
	1		75	95	98	100	92.0	**MUSTANG 306 SL**					
	0.75		65	90	95	98	87.0	0.6	65	85	95	98	85.75
SH21KU104W	**Control (num-ber of weeds/m²)**	6	7	7	6	6	6.4	**OSORNO SC**					
	1.25		100	100	100	100	100.0	1.5	62	70	70	75	69.25
	1		88	95	98	100	95.3	**MUSTANG 306 SL**					
	0.75		65	85	85	90	81.3	0.6	60	90	95	100	86.25
SH21KU106Z	**Control (num-ber of weeds/m²)**	6	8	7	9	7	7.4	**OSORNO SC**					
	1.25		95	97.5	91.3	92.5	94.1	1.5	96.3	95	97.5	93.8	95.65
	1		78.8	83.8	81.3	82.5	81.6	**MUSTANG 306 SL**					
	0.75		71.3	71.3	66.3	62.5	67.9	0.6	96.3	97.5	98.8	98.8	97.85
276_01_F20_474	**Control (num-ber of weeds/m²)**	6	5.75	5.75	6		5.9	**NOTOS 100 SC**					
	1.25		85	97.5	97.5		93.3	1.5	78.75	91.25	92.5		87.5
	1		81.25	97.5	97.5		92.1						
	0.75		77.5	92.5	93.75		87.9						
	0.5		70	82.5	83.75		78.8						
SGS/2021/073/PL03	**Control (num-ber of weeds/m²)**	5	5	5	5		5.0	**NOTOS 100 SC**					
	1.25		86.3	85	90		87.1	1.5	87.5	81.3	95		87.93
	1		85	81.3	85		83.8	**MUSTANG 306 SL**					
	0.75		87.5	75	77.5		80.0	0.6	90	91.3	90		

MEZOFLOR 103 SC							Reference product						
Number of trial	**Dose [L/ha]**	**Number of weeds/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface coverage or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SGS/2021/073/PL04	**Control (% surface coverage)**	5	9.3	13.80	18.80		11.7	**NOTOS 100 SC**					
	1.25		81.3	94.8	96.5		90.9	1.5		91.3	96.5		93.9
	1		72.5	78.8	81.3		77.5	**MUSTANG 306 SL**					
	0.75		62.6	71.3	71.3		68.4	0.6		91.3	95.8		
SGS/2021/073/PL06	**Control (number of weeds/m²)**	8	8	8.00	8.00		8.0	**NOTOS 100 SC**					
	1.25		81.3	88.8	88.8		86.3	1.5	83.8	92.5	86.3		87.53
	1		57.7	68.8	68.8		65.1	**MUSTANG 306 SL**					
	0.75		47.5	62.5	28.8		46.3	0.6	82.5	88.8	99		
7 H/2022	**Control (number of weeds/m²)**	5	0.7	1.00	1.00		1.9	**OSORNO SC**					
	1.25		91	80	69		80.0	1	93	82	74		83
	1		87	77	64		76.0	**MUSTANG 306 SL**					
	0.75		69	62	45		58.7	0.6	86	83	77		82
112/2022	**Control (number of weeds/m²)**	14.00	12	16.00	15.00		14.3	**OSORNO SC**					
	1.25		93.8	92.5	88.8		91.7	1	98.8	93.8	93.8		95.5
	1		81.3	78.8	81.3		80.5	**MUSTANG 306 SL**					
	0.75		72.5	68.8	63.8		68.4	0.6	93.8	88.8	90		90.9

A total of 9 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of POLCO in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha, 1.0 L/ha, 0.75 L/ha and 0.5 L/ha in 2020. In the next years (2021 and 2022) the number of doses was reduced, 3 doses were tested: 1.25 L/ha, 1.0 L/ha and 0.75 L/ha. The dose 0.5 L/ha was eliminated due to the low effectiveness of the control the weeds in maize cultivation. As a standards were used NOTOS 100 SC at dose 1.5 L/ha, OSORNO SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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 3.2-298a: Average efficacy of MEZOFLOR 103 SC (POLCO)

Avarage efficacy					
Name of product	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	88.7	92.9	91.3	97.5
	1	78.5	84.0	83.9	94.2
	0.75	68.7	75.4	69.6	83.5
	0.5	70.0	82.5	83.8	
OSORNO SC	1	95.9	87.9	83.9	
OSORNO SC	1.5	77.8	76.7	75.8	76.3
NOTOS 100 SC	1.5	83.4	89.1	92.6	
MUSTANG 306 SL	0.6	81.9	89.2	92.1	98.9

Table 3.2-308b: Summary of average efficacy 12 – 112 DAT of MEZOFLOR 103 SC (POLCO).

Average efficacy							
MEZOFLOR 103SC .	**MEZOFLOR 103 .SC**	**MEZOFLOR 103 SC.**	**MEZOFLOR 103 .SC**	**OSORNO SC.**	**OSORNO SC.**	**NOTOS 100 SC.**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
91.6	83.3	72.4	78.8	76.6	89.2	88.8	89.5

Summary and conclusion (POLCO)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of POLCO in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 91.6 %. At dose 1L/ha average efficacy 7-112 DAT reached 83.3% There was no significant different between MEZOFLOR 103 SC and standard herbicides (NOTOS 100 SC, OSORNO SC, MUSTANG 306 SE). To reduce occurrence of POLCO recommended dose of MEZOFLOR 103 SC is 1.0 L/ha (moderate susceptible) to 1.25 L/ha.

Maize / POLPE

Table 3.2-19: Efficacy of MEZOFLOR 103 SC in all trials (POLPE)

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m^2 or % surface cover-age**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. for control % surface cover-age or number of weeds/m^2**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
276_01_F20_475	Control (number of weeds/m^2)	7	7.25	7.5	9.5		7.8	**NOTOS 100 SC**					
	1.25		91.25	100	100		97.1	1.5	91.25	100	100		97.1
	1		88.75	100	100		96.3						
	0.75		86.25	92.5	91.25		90.0						
	0.5		71.25	82.5	81.25		78.3						
SGS/2021/073/PL05	Control (% surface covera-ge)	3	6	10.00	13.80		8.2	**NOTOS 100 SC**					
	1.25		86.3	96	97		93.1	1.5	81.3	91.3	96.3		89.6
	1		81.3	82.5	82.5		82.1	**MUSTANG 306 SL**					
	0.75		71.3	73.8	73.8		73.0	0.6	82.5	86.3	92.5		87.1

A total of 2 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of POLPE in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha, 1.0 L/ha, 0.75 L/ha. As a standards were used NOTOS 100 SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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 MEZOFLOR 103 SC (POLPE)

Avarage efficacy					
Name of product	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	88.78	98.00	98.50	
	1	85.03	91.25	91.25	
	0.75	78.78	83.15	82.53	
	0.5	71.25	82.50	81.25	
OSORNO SC	1				
OSORNO SC	1.5				
NOTOS 100 SC	1.5	86.28	95.65	98.15	
MUSTANG 306 SL	0.6	82.5	86.3	92.5	

Table 3.2-19b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (POLPE)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	1.5 L/ha
95.1	89.2	81.5	78.3			93.4	87.1

Summary and conclusion (POLPE)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of POLPE in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 91.6 %. At dose 1L/ha average efficacy 7-112 DAT reached 95.1% There was no significant different between MEZOFLOR 103 SC and standard herbicides (NOTOS 100 SC, MUSTANG 306 SE). To reduce occurrence of POLPE recommended dose of MEZOFLOR 103 SC is 1.0 L/ha. To significantly reduce occurrence of POLPE recommended dose of MEZOFLOR 103 SC is 1.25 L/ha.

Maize / BRSNW

Table 3.2-20: Efficacy of MEZOFLOR 103 SC in all trials (BRSNW)

MEZOFLOR 103 SC							Reference product						
Number of trial	**Dose [L/ha]**	**Number of weeds/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy, % surface coverage or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU103W	**Control (number of weeds/m²)**	4	4	4	4	4	4,0	**OSORNO SC**					
	1.25		70	75	75	85	76.3	1.5	95	100	100	100	98.75
	1		65	70	70	80	71.3	**MUSTANG 306 SL**					
	0.75		60	65	65	75	66.3	0.6	55	60	60	78	63.25
SH21KU104W	**Control (number of weeds/m²)**	8	20	5	5	8	9.2	**OSORNO SC**					
	1.25		100	85	85	100	92.5	1.5	95	100	100	100	98.75
	1		90	80	80	95	86.3	**MUSTANG 306 SL**					
	0.75		85	75	75	90	81.3	0.6	68	75	80	90	78.25
SH21KU105W	**Control (number of weeds/m²)**	4	4	4	4	7	4.6	**OSORNO SC**					
	1.25		75	85	85	92	84.3	1.5	85	90	95	95	91.25
	1		70	80	80	85	78.8	**MUSTANG 306 SL**					
	0.75		65	75	75	78	73.3	0.6	25	50	40	40	38.75
276_01_F20_476	**Control (number of weeds/m²)**	7	7.5	7.5	7.5		7.4	**NOTOS 100 SC**					
	1.25		87.5	90	98.5		92.0	1.5	81.25	82.5	97.25		87
	1		85	87.5	97.25		89.9						
	0.75		78.75	82.5	83.75		81.7						
	0.5		77.5	77.5	81.25		78.8						
SGS/2021/073/PL02	**Control (number of weeds/m²)**	5.3	5	5	5		5.1	**NOTOS 100 SC**					
	1.25		52.5	76.3	86.3		71.7	1.5	50	67.5	75		64.2
	1		45	63.8	77.5		62.1	**MUSTANG 306 SL**					

MEZOFLOR 103 SC							Reference product						
Number of trial	**Dose [L/ha]**	**Number of weeds/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy, % surface coverage or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
	0.75		40	52.5	66.3		52.9	0.6	67.5	80	91.5		79.7
SGS/2021/073/PL05	**Control (% surface coverage)**	5	8.5	10.00	10.00		8.4	**NOTOS 100 SC**					
	1.25		82.5	92.5	93.8		89.6	1.5	82.5	91.3	94		89.3
	1		77.5	82.5	82.5		80.8	**MUSTANG 306 SL**					
	0.75		71.3	73.8	71.3		72.1	0.6	88.8	96.5	99.3		94.9
110/2022	**Control (number of weeds/m²)**	6	6	6.00			6.0	**OSORNO SC**					
	1.25		80	95			87.5	1	80	75			77.5
	1		75	90			82.5	**MUSTANG 306 SL**					
	0.75		70	85			77.5	0.6	85	95			90

A total of 8 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of BRSNW in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha. 1.0 L/ha. 0.75 L/ha and 0.5 L/ha in 2020. In the next years (2021 and 2022) the number of doses was reduced. 3 doses were tested: 1.25 L/ha. 1.0 L/ha and 0.75 L/ha. The dose 0.5 L/ha was eliminated due to the low effectiveness of the control the weeds in maize cultivation. As a standards were used NOTOS 100 SC at dose 1.5 L/ha. OSORNO SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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 MEZOFLOR 103 SC (BRSNW)

Avarage efficacy					
Name of product	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	78.2	85.5	87.3	92.3
	1	72.5	79.1	81.2	86.7
	0.75	67.2	72.7	72.7	81.0
	0.5	77.5	77.5	81.3	
OSORNO SC	1	80.0	75.0		
OSORNO SC	1.5	91.7	96.7	98.3	98.3
NOTOS 100 SC	1.5	71.3	80.4	88.8	
MUSTANG 306 SL	0.6	71.2			

Table 3.2-20b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (BRSNW)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
84.6	78.6	72.1	78.8	96.3	77.5	80.1	71.2

Summary and conclusion (BRSNW)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of BRSNW in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 84.6 %. At dose 1L/ha average efficacy 7-112 DAT reached 78.6% There was no significant different between MEZOFLOR 103 SC and standard herbicides (NOTOS 100 SC. OSORNO SC. MUSTANG 306 SE). To reduce occurrence of BRSNW recommended dose of MEZOFLOR 103 SC is 1.0 L/ha (moderate susceptible) to 1.25 L/ha (moderate susceptible).

Maize / MATCH

Table 3.2-21: Efficacy of MEZOFLOR 103 SC in all trials (MATCH)

MEZOFLOR 103 SC							Reference product						
Number of trial	**Dose [L/ha]**	**Number of weeds/m^2**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy,% surface cover-age or number of weeds/m^2**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SGS/2021/073/PL01	**Control (num-ber of weeds/m^2)**	5.3	5	6	6		5.6	**NOTOS 100 SC**					
	1.25		95.8	95.8	95.8		95.8	1.5	92.5	92.5	92.5		92.5
	1		88.8	91.3	91.3		90.5	**MUSTANG 306 SL**					
	0.75		75	75	75		75.0	0.6	93.8	95	95		94.6
SGS/2021/073/PL04	**Control (% surface cove-rage)**	3.00	5.00	6.50	6.50		5.3	**NOTOS 100 SC**					
	1.25		83.8	97.3	97.3		92.8	1.5	83.8	93.5	96.5		91.3
	1		75	88.8	90		84.6	**MUSTANG 306 SL**					
	0.75		67.5	80	80		75.8	0.6	81.3	93.8	95		90.0
SGS/2021/073/PL06	**Control (num-ber of weeds/m^2)**	7	7	7.00	7.00		7.0	**NOTOS 100 SC**					
	1.25		87.5	93	100		93.5	1.5	82.5	93	100		91.8
	1		78.8	91.3	91.3		87.1	**MUSTANG 306 SL**					
	0.75		47.5	62.5	73.8		61.3	0.6	87.5	91.3	98		92.3

A total of 3 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of MATCH in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha. 1.0 L/ha and 0.75 L/haAs a standards were used NOTOS 100 SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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 MEZOFLOR 103 SC (MATCH)

Avarage efficacy					
Name of product	**dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	89.03	95.37	97.70	
	1	80.87	90.47	90.87	
	0.75	63.33	72.50	76.27	
	0.5				
OSORNO SC	1				
OSORNO SC	1.5				
NOTOS 100 SC	1.5	86.27	93.00	96.33	
MUSTANG 306 SL	0.6	87.5	93.4	96.0	

Table 3.2-21b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (MATCH)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
94.0	87.4	70.7				91.9	92.3

Summary and conclusion (MATCH)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of MATCH in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 94.0 %. At dose 1L/ha average efficacy 7-112 DAT reached 87.4% There was no significant different between MEZOFLOR 103 SC and standard herbicides (NOTOS 100 SC. MUSTANG 306 SE). To reduce occurrence of MATCH recommended dose of MEZOFLOR 103 SC is 1.0 L/ha (susceptible) to 1.25 L/ha (susceptible).

Maize / LYCAR

Table 3.2-22: Efficacy of MEZOFLOR 103 SC in all trials (LYCAR)

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m^2**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy, % surface cover-age or number of weeds/m^2**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU105W	Control (number of weeds/m^2)	4	5	4	4	4		**OSORNO SC**					
	1.25		100	100	100	100		1.5	100	100	100	100	100
	1		100	100	100	100		**MUSTANG 306 SL**					
	0.75		100	100	100	100		0.6	100	100	100	100	100
SGS/2021/073/PL02	Control (number of weeds/m^2)	5	5	5	5			**NOTOS 100 SC**					
	1.25		57.5	76.3	85			1.5	52.5	62.5	72.5		62.5
	1		47.5	67.5	73.8			**MUSTANG 306 SL**					
	0.75		42.5	60	63.8			0.6	45	63.8	68.8		59.2

A total of 2 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of LYCAR in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha. 1.0 L/ha and 0.75 L/ha. As a standards were used NOTOS 100 SC at dose 1.5 L/ha. OSORNO SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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 MEZOFLOR 103 SC (LYCAR)

Avarage efficacy					
Name of product	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	78.75	88.15	92.50	100.00
	1	73.75	83.75	86.90	100.00
	0.75	71.25	80.00	81.90	100.00
	0.5				
OSORNO SC	1				
OSORNO SC	1.5	100.00	100.00	100.00	100.00
NOTOS 100 SC	1.5	52.50	62.50	72.50	
MUSTANG 306 SL	0.6	72.5	81.9	84.4	100.0

Table 3.2-22b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (LYCAR)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
88.4	84.1	80.9		100.0		62.5	82.5

Summary and conclusion (LYCAR)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of LYCAR in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 88.4 %. At dose 1L/ha average efficacy 7-112 DAT reached 84.1% There was no significant difference between MEZOFLOR 103 SC and standard herbicides (OSORNO SC. MUSTANG 306 SE). Statistical difference was detected between MEZOFLOR 103 SC and NOTOS 100 SC. To reduce occurrence of LYCAR recommended dose of MEZOFLOR 103 SC is 1.0 L/ha (moderate susceptible) to 1.25 L/ha.

Maize / SOLNI

Table 3.2-23: Efficacy of MEZOFLOR 103 SC in all trials (SOLNI)

MEZOFLOR 103 SC							Reference product						
Number of trial	**Dose [L/ha]**	**Number of weeds/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface cover-age or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU107Z	**Control (number of weeds/m²)**	5	6	7	8	8	7.3	**OSORNO SC**					
	1.25		81.3	87.5	87.5	85	85.3	1.5	77.5	80	81.3	77.5	79.1
	1		71.3	72.5	70	68.8	70.7	**MUSTANG 306 SL**					
	0.75		58.8	61.3	63.8	61.3	61.3	0.6	90	91.3	96.3	95	93.2
SH21KU108Z	**Control (number of weeds/m²)**	9	11	12	10	11	11.0	**OSORNO SC**					
	1.25		81.3	87.5	87.5	88.8	86.3	1.5	85	93.8	96.3	92.5	91.9
	1		73.8	78.8	76.3	78.8	76.9	**MUSTANG 306 SL**					
	0.75		65	63.8	58.8	51.3	59.7	0.6	91.3	98.8	97.5	93.8	95.4
SGS/2021/073/PL06	**Control (number of weeds/m²)**	6	6	6.00	6.00		6.0	**NOTOS 100 SC**					
	1.25		90	96	100		95.3	1.5	91.3	97	100		96.1
	1		77.5	88.8	94.3		86.9	**MUSTANG 306 SL**					
	0.75		55	65	82.5		67.5	0.6	83.8	91.3	98		91.0
7 H/2022	**Control (number of weeds/m²)**	40	17	25.70	29.70		24.1	**OSORNO SC**					
	1.25		98	100	99		99.0	1	95	98	90		94.3
	1		94	97	95		95.3	**MUSTANG 306 SL**					
	0.75		96	94	93		94.3	0.6	92	88	87		89
111/2022	**Control (number of weeds/m²)**	7	7	7.00	8.00		7.3	**OSORNO SC**					
	1.25		81.3	85	85		83.8	1	87.5	91.3	86.3		88.4
	1		71.3	75	72.5		72.9	**MUSTANG 306 SL**					
	0.75		60	60	57.5		59.2	0.6	88.8	92.5	91.3		90.9

A total of 5 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of SOLNI in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha. 1.0 L/ha and 0.75 L/ha As a standards were used NOTOS 100 SC at dose 1.5 L/ha. OSORNO SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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. 3.2-23a and No. 3.2-23b).

Table 3.2-23a: Average efficacy of MEZOFLOR 103 SC (SOLNI)

Avarage efficacy					
Name of product	**dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	86.38	91.20	91.80	86.90
	1	77.58	82.42	81.62	73.80
	0.75	66.96	68.82	71.12	56.30
	0.5				
OSORNO SC	1	91.25	94.65	88.15	
OSORNO SC	1.5	81.25	86.90	88.80	85.00
NOTOS 100 SC	1.5	91.30	97.00	100.00	
MUSTANG 306 SL	0.6	89.2	92.4	94.0	94.4

Table 3.2-23b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (SOLNI)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
88.6	78.9	66.7		84.6	91.4	96.1	92.2

Summary and conclusion (SOLNI)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of SOLNI in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 88.6 %. At dose 1L/ha average efficacy 7-112 DAT reached 78.9% There was no significant different between MEZOFLOR 103 SC and standard herbicides (NOTOS 100 SC. OSORNO SC. MUSTANG 306 SE). To reduce occurrence of SOLNI recommended dose of MEZOFLOR 103 SC is 1.0 L/ha (moderate susceptible) to 1.25 L/ha.

Maize / CAPBP

Table 3.2-24: Efficacy of MEZOFLOR 103 SC (CAPBP)

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface cover-age or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU103W	**Control (num-ber of weeds/m²)**	18	23	9	20	18	17.6	**OSORNO SC**					
	1.25		85	90	100	100	93.8	1.5	85	100	100	100	96.25
	1		80	85	100	100	91.3	**MUSTANG 306 SL**					
	0.75		75	80	95	95	86.3	0.6	65	80	100	100	86.25
SH21KU104W	**Control (num-ber of weeds/m²)**	25	33	26	15	25	24.8	**OSORNO SC**					
	1.25		95	100	100	100	98.8	1.5	90	100	100	100	97.5
	1		90	100	100	100	97.5	**MUSTANG 306 SL**					
	0.75		85	90	95	95	91.3	0.6	70	90	100	100	90
SH21KU105W	**Control (num-ber of weeds/m²)**	9	9	12	6	9	9.0	**OSORNO SC**					
	1.25		95	100	100	100	98.8	1.5	90	100	100	100	97.5
	1		90	100	100	100	97.5	**MUSTANG 306 SL**					
	0.75		85	100	100	100	96.3	0.6	70	85	100	100	88.75
SH21KU106Z	**Control (num-ber of weeds/m²)**	7	6	7	8	7	7.0	**OSORNO SC**					
	1.25		80	93.8	88.8	91.3	88.5	1.5	73.8	88.8	96.3	93.8	88.175
	1		73.8	77.5	78.8	80	77.5	**MUSTANG 306 SL**					
	0.75		67.5	72.5	66.3	71.3	69.4	0.6	80	95	93.8	93.8	90.65
SH21KU107Z	**Control (num-ber of weeds/m²)**	10	12	10	11	12	11.0	**OSORNO SC**					
	1.25		82.5	88.8	91.3	88.8	87.9	1.5	87.5	93.8	95	92.5	92.2
	1		75	75	80	78.8	77.2	**MUSTANG 306 SL**					
	0.75		68.8	73.8	73.8	72.5	72.2	0.6	90	93.8	92.5	92.5	92.2
7 H/2022	**Control (num-**	5	1	1.30	1.00		2.1	**OSORNO SC**					

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m^2**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface cover-age or number of weeds/m^2**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
	ber of weeds/m^2)												
	1.25		98	100	100		99.3	1	97	100	100		99
	1		96	99	100		98.3	**MUSTANG 306 SL**					
	0.75		93	91	100		94.7	0.6	90	98	100		96

A total of 6 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of CAPBP in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha. 1.0 L/ha and 0.75 L/ha As a standards were used OSORNO SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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 MEZOFLOR 103 SC (CAPBP)

Avarage efficacy					
Name of product	**dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	94.27	95.64	71.11	68.64
	1	89.52	91.02	91.58	90.74
	0.75	84.59	86.14	64.24	61.41
	0.5				
OSORNO SC	1	97.00	100.00	100.00	
OSORNO SC	1.5	85.26	96.52	98.26	97.26
NOTOS 100 SC	1.5				
MUSTANG 306 SL	0.6	77.5	90.3	97.7	97.3

Table 3.2-24b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (CAPBP)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
94.3	89.5	84.6		94.3	99.0		90.4

Summary and conclusion (CAPBP)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of CAPBP in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 94.3 %. At dose 1L/ha average efficacy 7-112 DAT reached 89.5% There was no significant different between MEZOFLOR 103 SC and standard herbicides (OSORNO SC. MUSTANG 306 SE). To reduce occurrence of CAPBP recommended dose of MEZOFLOR 103 SC is 1.0 L/ha to 1.25 L/ha.

Maize / ANTAR

Table 3.2-26: Efficacy of MEZOFLOR 103 SC in all trials (ANTAR)

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface coverage or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU103W	**Control (number of weeds/m²)**	6	7	6	5	6	6	**OSORNO SC**					
	1.25		75	100	100	100	93.75	1.5	100	100	100	85	96.25
	1		70	100	100	100	92.5	**MUSTANG 306 SL**					
	0.75		65	100	100	100	91.25	0.6	100	100	100	75	93.75
SH21KU104W	**Control (number of weeds/m²)**	5	5	5	5	5	5	**OSORNO SC**					
	1.25		90	100	100	100	97.5	1.5	85	100	100	100	96.25
	1		85	100	100	100	96.25	**MUSTANG 306 SL**					
	0.75		75	100	100	100	93.75	0.6	95	100	100	100	98.75
SH21KU105W	**Control (number of weeds/m²)**	4	4	4	5	4	4.2	**OSORNO SC**					
	1.25		85	100	100	100	96.25	1.5	95	100	100	100	98.75
	1		80	100	100	100	95	**MUSTANG 306 SL**					
	0.75		78	100	100	100	94.5	0.6	85	100	100	100	96.25

A total of 3 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of ANTAR in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha. 1.0 L/ha and 0.75 L/ha As a standards were used OSORNO SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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 3.2-26b: Average efficacy of MEZOFLOR 103 SC (ANTAR)

Avarage efficacy					
Name of product	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	83.33	100.00	100.00	100.00
	1	78.33	100.00	100.00	100.00
	0.75	72.67	100.00	100.00	100.00
	0.5				
OSORNO SC	1				
OSORNO SC	1.5	93.33	100.00	100.00	95.00
NOTOS 100 SC	1.5				
MUSTANG 306 SL	0.6	93.33	100.00	100.00	91.67

Table 3.2-26b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (ANTAR)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
95.8	94.6	93.2		97.1			96.3

Summary and conclusion (ANTAR)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of ANTAR in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 95.8 %. At dose 1L/ha average efficacy 7-112 DAT reached 94.6% There was no significant different between MEZOFLOR 103 SC and standard herbicides (OSORNO SC. MUSTANG 306 SE). To significantly reduce occurrence of ANTAR recommended dose of MEZOFLOR 103 SC is 1.0 L/ha to 1.25 L/ha.

Maize / STEME

Table 3.2-27: Efficacy of MEZOFLOR 103 SC in all trials (STEME)

MEZOFLOR 103 SC								Reference product					
Number of trial	**Dose [L/ha]**	**Number of weeds/m²**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average (% of efficacy. % surface cover-age or number of weeds/m²**	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**	**Average efficacy (%)**
SH21KU103W	**Control (num-ber of weeds/m²)**	6	4	4	8	7	5.8	**OSORNO SC**					
	1.25		85	100	100	100	96.25	1.5	100	100	**100**	100	100.0
	1		75	100	100	100	93.75	**MUSTANG 306 SL**					
	0.75		65	100	100	100	91.25	0.6	65	100	100	100	91.3
SH21KU106Z	**Control (num-ber of weeds/m²)**	12	11	13	12	10	11.6	**OSORNO SC**					
	1.25		82.5	81.3	81.3	82.5	81.9	1.5	91.3	86.3	85	85	86.9
	1		68.8	72.5	73.8	72.5	71.9	**MUSTANG 306 SL**					
	0.75		61.3	62.5	61.3	61.3	61.6	0.6	91.3	91.3	93.8	93.5	92.5
7 H/2022	**Control (num-ber of weeds/m²)**	6	4.7	7.00	5.70		5.85	**OSORNO SC**					
	1.25		93	92	94		93	1	95	88	90		91.0
	1		92	90	88		90	**MUSTANG 306 SL**					
	0.75		88	87	80		85	0.6	92	92	93		92.3

A total of 3 trials were carried out to evaluate the efficacy of MEZOFLOR 103 SC for the control of STEME in maize. Trials were conducted in different regions in Poland where maize grown commercially. 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. MEZOFLOR 103 SC was applied at dose rates: 1.25 L/ha. 1.0 L/ha and 0.75 L/ha As a standards were used OSORNO SC at dose 1.5 L/ha and MUSTANG 306 SE at dose 0.6 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 MEZOFLOR 103 SC (STEME)

Avarage efficacy					
Name of product	**Dose [L/ha]**	**Efficacy 7-14 DAT**	**Efficacy 24-32 DAT**	**Efficacy 37-85 DAT**	**Efficacy 98-112 DAT**
MEZOFLOR 103 SC	1.25	86.8	91.1	91.8	91.3
	1	78.6	87.5	87.3	86.3
	0.75	71.4	83.2	80.4	80.7
	0.5				
OSORNO SC	1	95.0	88.0	90.0	
OSORNO SC	1.5	95.7	93.2	92.5	92.5
NOTOS 100 SC	1.5				
MUSTANG 306 SL	0.6	82.8	94.4	95.6	96.8

Table 3.2-27b: Summary of average efficacy 7 – 112 DAT of MEZOFLOR 103 SC (STEME)

Average efficacy							
MEZOFLOR 103 SC	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**MEZOFLOR 103 SC**	**OSORNO SC**	**OSORNO SC**	**NOTOS 100 SC**	**MUSTANG 306 SL**
1.25 L./ha	1.0 L/ha	0.75 L/ha	0.5 L/ha	1.5 L/ha	1.0 L/ha	1.5 L/ha	0.6 L/ha
90.1	84.8	78.8		93.5	91.0		92.0

Summary and conclusion (STEME)

MEZOFLOR 103 SC at dose 1.25 L/ha and 1.0 L/ha reduced occurrence of STEME in maize. At dose 1.25 L/ha average efficacy 7-112 DAT reached 90.1 %. At dose 1L/ha average efficacy 7-112 DAT reached 84.8% There was no significant different between MEZOFLOR 103 SC and standard herbicides (NOTOS 100 SC. OSORNO SC. MUSTANG 306 SE). To reduce occurrence of STEME recommended dose of MEZOFLOR 103 SC is 1.0 L/ha (moderate susceptible) to 1.25 L/ha.

Summary and conclusion: maize

In the Table 3.2-28 are summarised all efficacy results for weeds control with MEZOFLOR 103 SC.

Table 3.2-28: Summary of efficacy 12-112 DAT of MEZOFLOR 103 SC in maize.

Efficacy of MEZOFLOR 103 SC assessed 7-112 DAT							
No of trials where weed occurred	**EPPO code**	**Scientific name**	**Common name**	**Dose of MEZOFLOR 103 SC [L/ha]**			
				1.25	**1.0**	**0.75**	**0.5**
19	CHEAL	*Chenopodium album*	Komosa biała	85.6	77.0	65.1	76.3
17	ECHCG	*Echinochloa crus-galli*	Chwastnica jednostronna	71.7	59.9	49.1	71.1
6	GALAP	*Galium aparine*	Przytulia czepna	87.5	80.7	69.1	77.6
5	SOLNI	*Solanum nigrum*	Psianka czarna	88.6	78.9	66.7	-
6	CAPBP	*Capsella bursa-pastoris*	Tasznik pospolity	94.3	89.5	84.6	-
4	GASPA	*Galinsoga parviflora*	Żółtlica drobnokwiatowa	91.0	87.8	80.0	81.9
6	THLAR	*Thlaspi arense*	Tobołki polne	90.9	86.2	86.2	58.8
3	MATCH	*Matricaria chamomilla*	Rumianek pospolity	94.0	87.4	70.7	-
12	MATMA/ MATIN	*Matricaria martima or Tripleurospermum maritimum/Matricaria inodora or Tripleurospermum inodorum*	Maruna bezwonna/ maruna nadmorska	89.0	82.2	73.1	77.7
3	ANTAR	*Anthemis arvensis*	Rumian polny	95.8	94.6	93.2	0.0
10	VIOAR	*Viola arvensis*	Fiołek polny	85.1	78.2	67.6	58.9
3	CENCY	*Centaurea cyanus*	Chaber bławatek	76.5	71.4	65.9	70.4
3	STEME	*Stellaria media*	Gwiazdnica pospolita	90.1	84.8	78.8	0.0
6	GERPU	*Geranium pusillum*	Bodziszek drobny	84.1	80.6	75.8	69.3
9	POLCO	*Polygonum convolvulus*	Rdestówka powojowata/ rdest powojowaty	91.6	83.3	72.4	78.8
8	BRSNW	*Brassica napus*	Samosiewy rzepaku	84.6	78.6	72.1	78.8
2	POLPE	*Persicaria maculosa*	Rdest plamisty	95.1	89.2	81.5	78.3
2	AMARE	*Amaranthus retroflexus*	Szarłat szorstki	92.0	83.0	72.5	67.9
2	LYCAR	*Anchusa arvensis*	Farbownik polny	88.4	84.1	80.9	-

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

MEZOFLOR 103 SC at dose 1.0 L/ha significantly reduced occurrence of CAPBP,GASPA, THLAR, MATCH, ANTAR and POLPE. MEZOFLOR 103 SC was medium effective to reduce CHEAL, GALAP,

SOLNI, MATIN (MATMA), VIOAR, CENCY, STEME, GERPU, POLCO, BRSNW, AMARE and LYCAR at dose 1.0 L/ha. ECHCG was classified as medium resistant after applicate MEZOFLOR 103 SC at dose 1.0 L/ha. In most cases, there was no significantly difference between MEZOFLOR 103 SC and standard herbicide (NOTOS 100 SC, OSORNO SC, MUSTANG 306 SE) in the case of sensitive weeds.

MEZOFLOR 103 SC at dose 1.25 L/ha significantly reduced occurrence CHEAL, GALAP, SOLNI, CAPBP, GASPA, THLAR, MATCH, MATMA (MATIN), ANTAR, VIOAR, STEME, POLCO, POLPE, AMARE and LYCAR . MEZOFLOR 103 SC was medium effective to reduce ECHCG, CENCY, GERPU and BRSNW at dose 1.25 L/ha. In most cases, there was no significantly difference between MEZOFLOR 103 SC and standard herbicide (NOTOS 100 SC, OSORNO SC, MUSTANG 306 SE) in the case of sensitive weeds.

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

A total of 21 trials were carried out in 2020, 2021 and 2022 in Poland. The objective was to confirm the yield response of MEZOFLOR 103 SC in the presence of *Chenopodium album, Echinochloa crus-galli, Galium aparine, Solanum nigrum, Capsella bursa-pastoris, Galinsoga parviflora, Thlaspi arense , Matricaria chamomilla, Matricaria martima or Tripleurospermum maritimum/Matricaria inodora or Tripleurospermum inodorum, Anthemis arvensis, Viola arvensis, Centaurea cyanus, Stellaria media, Geranium pusillum, Polygonum convolvulus, Brassica napus, Persicaria maculosa, Amaranthus retroflexus, Anchusa arvensis.*
MEZOFLOR 103 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- MEZOFLOR 103 SC showed high efficacy reduced occurrence of *Chenopodium album, Echinochloa crus-galli, Galium aparine, Solanum nigrum, Capsella bursa-pastoris, Galinsoga parviflora, Thlaspi arense , Matricaria chamomilla, Matricaria martima or Tripleurospermum maritimum/Matricaria inodora or Tripleurospermum inodorum, Anthemis arvensis, Viola arvensis, Centaurea cyanus, Stellaria media, Geranium pusillum, Polygonum convolvulus, Brassica napus, Persicaria maculosa, Amaranthus retroflexus, Anchusa arvensis*.
The recommended doses in maize are:

- 1.0 L/ha to reduce:
  - susceptible weeds: *Capsella bursa-pastoris, Galinsoga parviflora, Thlaspi arense, Matricaria chamomilla, Anthemis arvensis, Persicaria maculosa*
  - moderate susceptible weeds: *Chenopodium album, Galium aparine, Solanum nigrum, Matricaria martima or Tripleurospermum maritimum/Matricaria inodora or Tripleurospermum inodorum, Viola arvensis, Centaurea cyanus, Stellaria media, Geranium pusillum, Polygonum convolvulus, Brassica napus, Amaranthus retroflexus, Anchusa arvensis*
  - medium resistance: *Echinochloa crus-galli*
- 1.25 L/ha to reduce:
  - susceptible weeds: *Chenopodium album, Galium aparine, Solanum nigrum, Capsella bursa-pastoris, Galinsoga parviflora, Thlaspi arense, Matricaria chamomilla, Matricaria martima or Tripleurospermum maritimum/Matricaria inodora or Tripleurospermum inodorum, Anthemis arvensis, Viola arvensis, Stellaria media, Polygonum convolvulus, Persicaria maculosa, Amaranthus retroflexus, Anchusa arvensis*

- moderate susceptible weeds*: Echinochloa crus-galli, Centaurea cyanus, Geranium pusillum, Brassica napus*

Comments of zRMS:

All details about efficacy methodology used during efficacy trials are presented above by Applicant. Submitted reports from field trials (21 in total) carried out on maize include a detailed data on soil and field conditions, agro-technological procedures, fore-crop as well as meteorological conditions and technical details of the spraying etc.

Applicant properly presented efficacy results. Applicant wish to register Mezoflor 103 SC / Flocorn 103 SC in PL (product code: Mezoflor 103 SC) in Poland (N-E EPPO zone).

Only trials with greater than 4-5 weeds/m^2 or over 2% ground cover should be taken for assessment. According to EPPO PP 1/226 at least 6 fully supportive results for major weeds and 2 trials for minor weeds should be required. Therefore, based on knowledge of major/minor status of weeds in each country, weeds with insufficient results should be excluded. In Poland, no PPP with mesotrione and florasulam is registered. Mezoflor 103 SC / Flocorn 103 SC will be the first on the Polish market in this formulation and composition. So, acording to Polish rules for major weeds – at least 6 trials are required and for minor weeds – at least 3 weeds.

Submitted efficacy trials are correctly performed according to appropriate EPPO standards. Accepted weed species for Poland (N-E EPPO zone) should be presented to following scale of sensitivity: S (susceptible) > 85%; MS (moderately susceptible) 70-85%; MT (moderately tolerant) 60-70%; T (tolerant) < 60%.

Applicant submitted trials carried out in 2020, 2021 and 2022. Those studies were carried out by testing unit mandated to conduct research in the field of efficacy of plant protection products by the Chief Inspector of Plant Health and Seed Inspection and are officially GEP recognized. Appropriate window application, number of applications and water volume was studied during those trials.

In the opinion of ZRMs number of trials for maize is accepted for Poland.

Below, ZRMs presented the assessment for studied weed species in maize:
It is an average efficacy from all assessments made at 7-14 DAT; 24-32 DAT; 37-85 DAT and 98-112 DAT.

Weed	Number of trials	Mezoflor 103 SC at 1,0 l/ha	Mezoflor 103 SCat 1,25 l/ha	Standard reference product			
				Osorno SC at 1,0 l/ha	Osorno SC at 1,5 l/ha	Notos 100 S.C. at 1,5 l/ha	Mustang 306 SL at 0,6 l/ha
AMARE	2	83,0%	92,0%	-	92,5%	90,8%	96,6%
ANTAR	3	94,6%	95,8%	-	97,1%	-	96,3%
BRSNW	8	78,6%	84,6%	77,5%	96,3%	80,1%	71,2%
CAPBP	6	89,5%	94,3%	99,0%	94,3%	-	90,4%
CENCY	3	71,4%	76,5%	-	100%	76,1%	71,7%
CHEAL	19	77,0%	85,6%	95,3%	95,2%	89,7%	82,0%
ECHCG	17	59,9%	71,7%	63,2%	63,8%	87,8%	0,4%
GALAP	6	80,7%	87,5%	72,1%	75,0%	89,7%	90,1%
GASPA	4	87,8%	91,0%	-	-	95,6%	72,1%
GERPU	6	80,6%	84,1%	-	0%	90,8%	71,5%
LYCAR	2	84,1%	88,4%	-	100%	62,5%	82,5%

MATCH	3	87,4%	94,0%	-	-	91,9%	92,3%
MATIN/ MATMA	12	82,2%	89,0%	92,1%	84,5%	92,5%	65,7%
POLCO	9	83,3%	91,6%	89,2%	76,6%	88,8%	89,5%
POLPE	2	89,2%	95,1%	-	-	93,4%	87,1%
SOLNI	5	78,9%	88,6%	91,4%	84,6%	96,1%	92,2%
STEME	3	84,8%	90,1%	91,0%	93,5%	-	92,0%
THLAR	6	86,2%	90,9%	85,8%	97,1%	91,1%	94,0%
VIOAR	10	78,2%	85,1%	84,4%	88,3%	84,7%	48,7%

Some of studied weed species were not characterized by sufficient number of trials and should be deleted from GAP table and label project: ANTAR (major weed: at least 6 trials should be presented, Applicant submitted only 2); **LYCAR** (minor weed: at least 3 trials should be presented, Applicant submitted only 2), **POLPE** (major weed so at least 6 trials should be preented, Applicant submitted only 2), **SOLNI** (major weed, so 6 trials should be presented, Applicant submitted only 5 trials).

Following weed species can be accepted in the GAP table and label project: CHEAL, **ECHCG**, **POLCO** as a major weeds in maize and **ANTAR**, **BRSNW**, **CAPBP**, **CENCY**, **GALAP**, **GASPA**, **GERPU**, **MATCH**, **MATIN/MATMA**, **STEME**, **THLAR** and **VIOAR** as a minor weeds in maize.

Summary: Obtained results were comparable to standard reference product (in most cases, in some cases – were characterized by better or worse efficiency than standards).

The most effective for most studied weed species for post-emergence use on maize was dose 1,0 L/ha (should be use in condition of lower infestation) and dose 1.25 L/ha.

ECHCG – due to long lasting low temperature conditions in the spring, the emergence of this weed was observed later than usually, which translated into the lack of efficacy of the preparations against ECHCG. In this report, the ZRMs only mentioned the low effectiveness or its lack in a few trials (for ex. SH21KU103W; SH21KU104W; SH21KU105W), which was not due to any resistance to herbicide, but rather to the weather conditions.

In Polish label following weeds species can be included:

– ***for maize***

- **Dose 1,0 L/ha**: *Susceptible weeds*: ANTAR, CAPBP, GASPA, MATCH, THLAR; *Moderately susceptible weeds*: BRSNW, CENCY, CHEAL, GALAP, GERPU, MATIN/MATMA, POLCO, STEME, VIOAR; *Tolerant weeds*: ECHCG.
- **Dose 1.25 L/ha:** *Susceptible weeds:* ANTAR, CAPBP, CHEAL, GALAP, GASPA, MATCH, MATIN/MATMA, POLCO, STEME, THLAR, VIOAR-*Moderately susceptible weeds:* BRSNW, CENCY, ECHCG, GERPU.

This plant protection product ‘Mezoflor 103 SC / Flocorn 103 SC’ can be used on maize against weed species included in GAP table and label project. Product can be use post-emergence at BBCH 12-18.

During trials different varietes were studied: **for grain:** Farmueller (2 trials),

	Farmgigant (1 trial), SY-BOOST (2 trials), P8400 (1 trial); **for silage:** Opoka (2 trials), Konkurent (1 trial), Hulk (1 trial), Kurant (1 trial); **and universal varieties both for grain, silage and bioethanol:** LG 31.256 (1 trial), Baobi (1 trial) and **univerasal varieties for grain and silage:** Rosomak (1 trial), P9027 (1 trial), Farmorite (1 trial), Ricardinio (1 trial), Ronaldinio (2 trials), Kentos (1 trial), P8329 (1 trial). **In the opinion of ZRMs, in the label should be put an antry: maize grown for grain, silage and bioethanol.** **ZRMs accepted proposed by Applicant water volume: 200-300 l/ha.** During 20 eff. trials Applicant studied 200 l/ha of water but in one trial (7H-2022_HPwKu-22-50) was studied 300 l/ha. **ZRMs accepted application window: BBCH 12-18.** During trials following stage of crop development at application was studied: BBCH 13-16. So, Mezoflor 103 SC / Flocorn 103 SC is recommended for use at the stage of leaf developing (till the stage og 8 leaf developed).

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

Tested product – MEZOFLOR 103 SC contains two active ingredients: mesotrione and florasulam. According to HRAC (Herbicide Resistance Action Committee) classification mesotrione belongs to group 27, which inhibit phydroxyphenyl pyruvate dioxygenase (HPPD) in the plastoquinone biosynthesis pathway, which converts p-hydroxymethyl pyruvate to homogenisate. Mesotrione competes with, and is structurally similar to the substrate of the target enzyme HPPD. The disruption of carotenoid biosynthesis leads to a disruption of chlorophyll synthesis causing bleaching and death in susceptible species.

According to HRAC classification. florasulam belongs to group 2, which inhibit acetolactate synthase (ALS), also called acetohydroxyacid synthase (AHAS), a key enzyme in the biosynthesis of the branched – chain amino acids isoleucine, leucine and valine.

A. Mechanism of resistance

Mesotrione

Due to very low number of resistance weeds reported to HRAC group 27, reports of resistance are currently limited, and the mechanism of resistance for these biotypes is unknown and as yet unclassified.

Florasulam

The mechanism of resistance in herbicide belongs to HRAC group 2 (ALS resistance) in dicotyledonous weeds is mainly due to Target Site Resistance (TRS), which results from changes in the ALS enzyme. So far, evolved resistance to ALS inhibitors has been associated principally to TSR by one or more point mutations in the nuclear ALS gene, that disrupt herbicide binding and then reduce the sensitivity of the target enzyme to herbicides. Nowadays, 29 amino acid substitutions at eight different positions, namely $AL_{122,}$ $Pro_{197,}$ $AL_{205,}$ $Asp_{376,}$ $Arg_{377,}$ $Trp_{574,}$ Ser_{653} and Gly_{654} have been documented in 165 weed species around the world. These amino acid substitutions results in various cross-resistance patterns among the five chemical families of ALS-inhibiting herbicides depending on weed species.[1]

[1] Hada Z, Menchari Y, Rojano-Delgado AM, Torra J, Menendez J, Palma-Bautista C, de Prado R and Souissi T (2021) Point Mutations as Main Resistance Mechanism Together With P450-Based Metabolism Confer Broad Resistance to Different ALS-Inhibiting Herbicides in Glebionis coronaria From Tunisia. Front. Plant. Sci. 12:626702.

B. Evidence of resistance

Mesotrione

According to The International Survey of Herbicide Resistand Weeds (http://www.weedscience.com) there are only three species that show resistance to mesotrione worldwide: *Raphanus raphanistrum. Amaranthus tuberculatus* and *Amaranthus palmeri*. At the time of writing this dossiere there were 13 reported cases of resistance to mesotrione: 5 of *Amaranthus palmeri,* 6 of *Amaranthus tuberculatus* and 2 of *Raphanus raphanistrum*. Nine of these cases occurred in the United States between 2009 to 2020, and last two in Australia between 2015 to 2020. In 3 of these cases there were also resistance to other members of 27 class of herbicides (tembotrione, topramezone). In 10 of these cases there was also resistance to other groups of herbicides: auxin mimics (HRAC Group 4), inhibition of acetolactate synthase (HRAC Group 2). inhibition of enolpyruvyl shikimate phosphate synthase (HRAC Group 9), PSII inhibitiors-serine 264 binders (HRAC Group 5), very long-chain fatty acid synthesis inhibitors (HRAC Group 15), phytoene desaturase inhibitors (HRAC Group 12), inhibition of hydrohyphenyl pyruvate dioxygenase (HRAC Group 27).

Florasulam

Resistant weed populations against HRAC group 2 herbicides have been documented worldwide. The majority of cases of resistance have been documented in Northern America. In Poland, about 10 resistance case have been documented. Among these weeds, the following species can be mentioned: *Conyza canadensis, Aspera spica-venti, Alopecurus myosuroides, Centaurea cyanus, Aspera spica-venti, Avena fatua, Alopecurus myosuroides, Tripleurospermum perforatum, Papever rhoeas, Matricaria recutita*. Resistance cases associated with the active ingredient florasulam has been found in *Alopecurus myosuroides* (Netherlands and Denmark), *Amaranthus retroflexus* (Canada and Ukraine), *Aspera spica-venti* (Germany and Denmark). *Capsella bursa-pastoris* (Denmark). *Diplotaxis erucoides* (Israel). *Eucaria hispanica* (Israel), *Lithospermum arvense* (China), *Lolium perenne ssp. Multiflorum* (Denmark), *Lolium rigidum* (Israel), *Matricaria recutita* (Sweden), *Paper rhoeas* (Belgium, Italy, Greece, Denmark, Germany). Polygonum convolvulus (Canada). Rapistrum rugosum (Iran). Rumex dentatus (Indie). *Rumex obtusifolius* (France), *Senecio vulgaris* (France), *Sinapis arvensis* (Italy), *Spergula arvensis* (Norway), *Stellaria media* (United Kingdom, Denmark, France, Sweden, Germany). *Tripleurospermum perforatum / T. inodorum* (Sweden, Denmark, Czech Republic).
According to the HRAC database, worldwide cases of resistance against herbicides of HRAC class 2 are recorded for 169 different weed species. In the case of the GAP use of MEZOFLOR 103 SC there is only one species of monocotyledonous weeds - *Echinochloa crus-galli*. The rest of the proposed weeds in GAP use of MEZOFLOR 103 SC belongs to dicotyledonous weeds. Although monocotyledonous weeds are believed not to be susceptible to florasulam, the monocotyledonous weed identified in GAP is susceptible to the second active ingredient - mesotrione. Resistance case in monocotyledonous weeds are mainly relevant for other chemical groups including imidazolinone, sulfonylurea, sulfonylaminocarbonyltriazolinone and imidazolinone pyrimidinyl(thio)benzoate.

C. Cross resistance

Cross-resistance is defined as the ability of a weed population to express resistance to more than one herbicide. There are two type of cross resistance: across herbicide subgroups – this occurs when a weed population is resistant to more than one herbicide subgroup within a specific mode of action group. and second type – across herbicide mode of action groups - this occurs when a weed population is resistant to herbicides from within more than one mode of action group.

Mesotrione

As it was mentioned in chapter "Evidence of resistance", cross-resistance has occurred within 11 of the 13 reported cases of resistance to mesotrione and within the biotypes of all classified weed species (*Amaranthus palmeri, Amaranthus tuberculatus and Raphanus raphanistrum*). Therefore, there is some slight potential within weed populations for cross-resistance to occur to other modes of action, including the inhibition of acetolactate synthase of which florasulam (second active substance of MEZOFLOR 103 SC) is a member. Cross – resistance for inhibition of acetolactate synthase has also been reported, however no cases have been found in Europe of cross-resistance to either florasulam or mesotrione.

Florasulam

ALS resistance which is the major resistance mechanism in HRAC group 2 is mainly due to Target Site Resistance (TSR), ensuing from changes in the ALS enzyme conferred to a point mutation. As it was mentioned. with respect to the active substance florasulam worldwide 33 resistance cases have been reported for 20 different weed species. In the majority of cases cross resistance has been reported to ALS inhibitors (HRAC Group 2) herbicides. In four cases multiple site of action resistance was reported in the HRAC database for *Alopecurus myosuroides* (Denmark), *Apera spica-venti* (Denmark), *Lolium perenne ssp. multiflorum* (Denmark), *Lolium rigidum* (Israel). However, as monocotyledons species usually are not sensitive to florasulam the conclusions for multi-site resistance in this grass weed are considered to be of low relevance.

D. Multiple resistance

Multiple resistance is a term used to describe weed populations that exhibit more than one resistant mechanism, allowing the plant to withstand herbicides from different subgroups. This type of resistance is more important than cross resistance from the practical point of view.

Mesotrione

In the case of all the listed species, the phenomenon of multiple resistance also occurred. However, all these cases have so far occurred outside the European Union. Nevertheless, every effort should be made to prevent the phenomenon from occurring.

Florasulam

According to weedscience.org there are few cases of multiple weeds resistance to ALS inhibitors (HRAC Group 2): *Alopecurus aequalis, Alopecurus japonicus, Alopecurus myosuroides, Amaranthus blitoides, Amaranthus hybridus, Amaranthus palmeri, Amaranthus powellii, Amaranthus retroflexus, Amaranthus tuberculatus, Amaranthus viridis, Ambrosia artemisiifolia, Ambrosia trifida, Apera spica-venti, Arctotheca calendula, Avena fatua, Avena sterilis, Avena sterilis ssp, Ludoviciana. Bidens Pilosa, Bidens subalternans, Brassica rapa (=B. campestris), Chloris radiata, Conyza canadensis, Conyza sumatrensis, Cynosurus echinatus. Digitaria sanguinalis . Echinochloa colona. Echinochloa crus-galli var. crus-galli. Echinochloa crus-galli var. formosensis, Echinochloa oryzoides, Echinochloa phyllopogon (=E. oryzicola), Euphorbia heterophylla, Galium aparine, Galium spurium, Hirschfeldia incana, Ischaemum rugosum, Kochia scoparia, Limnocharis flava, Limnophila erecta, Lolium perenne, Lolium perenne ssp. Multiflorum, Lolium rigidum, Papaver rhoeas, Phalaris brachystachys, Phalaris minor, Phalaris paradoxa, Poa annua, Ranunculus acris, Raphanus raphanistrum, Sagittaria montevidensis, Senecio vernalis, Sinapis arvensis, Sisymbrium orientale, Sorghum halepense.*

Out of these, there are some species of weeds with the indicated multiple resistance of potential interest in this submission*: Echinochloa crus-galli, Galium aparine, Amaranthus retroflexus, Sinapis sp.* However, the most important things is to notify that there are no cases of multiple resistance relative to ALS inhibitors (HRAC Group 2) group founds in Poland up to date.

Due to the fact, that the cross resistance and multiple resistance. as well as resistance is a very dynamic ongoing process, and the major prevention strategy is this – included in Good Agricultural Practise and Integrated Pest Management strategies with avoidance of sequential use of herbicides belonging to the same SOAs and cross resistant groups.

E. Sensitivity data

It is obvious that pests vary in their sensitivity both between and within populations, and this natural variation occurs and may have an influence on the weeds sensitivity assessment.

Mesotrione

Mesotrione is existing active substance and have been used for many years across the EU, baseline sensitivity of MEZOFLOR 103 SC to weeds cannot be established beyond the data provided in this dossier. In the supporting effectiveness studies many of the target weeds were shown to be moderately tolerant to highly sensitive to MEZOFLOR 103 SC with no large variations in levels of control that could suggest the occurrence of resistant biotypes.

Florasulam

For the active substances: florasulam - 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. Moreover, submission of sensitivity data is not considered to be required due to the following reasons:

- the long time of using herbicides from the HRAC 2 group makes it impossible to obtain real data on the sensitivity of weeds to substances from this group.
- limited number of florasulam resistance within in the Central EU Zone despite more than ten years of use.

In addition, basic data on the sensitivity of weeds to substances from the HRAC 2 group can be inferred from product registration within Central EU Zone. Herbicidal products based on the active ingredient florasulam have been introduced to the market in 1999. However, despite the lack of data on the sensitivity of weeds to the active substance florasulam obtained prior to the use of this substance, it can be concluded that the levels of sensitivity and variability are well documented in the field trials provided in the registration dossiers submitted to obtain registration of the first products in the EU.

Sensitivity data should be generated and available in the future to measure sensitivity shift and resistance development.
The presented dossier included summary of efficacy data of mesotrione and florasulam product for herbicidal use. These data can be considered as baseline sensitivity data, which also can be helpful to understanding of the variation in sensitivity of target populations.

F. Use pattern

For the control of weeds in maize the application of MEZOFLOR 103 SC at rate 1.25L/ha to 1.0 L/ha is recommended. Application is limited to one application per season on early post-emergence time (BBCH-12-18) in spring.
Because of this simple – in fact the only possible use pattern, no alternative use patterns are suggested that would be a modification required from weed resistance management point of view. Therefore, the pattern described above can be considered “the unrestricted use pattern”.

G. Resistance risk assessment of unrestricted use pattern

In the case of inherent factors proposed herbicide – MEZOFLOR 103 SC represents an herbicidal product, which contain two active ingredient – florasulam and mesotrione. In the case of mesotrione, there are only three cases of resistance weeds that have been recorded for HRAC Group 27 herbicides in worldwide. In the case of florasulam – the cases of resistance have been recorded for HRAC Group 2 more often, however changes in sensitivity are unlikely to occur, which provided that the product is applied at the registered GAP use and alternation of herbicides is conducted. Taking into account the values of DT_{50} of florasulam, which is 4.29 days, the selection pressure towards less sensitive biotypes is short. For this reason, it can be conclude, that the risk for development of resistant weed populations is significantly smaller.

The potential risk for weed species to develop resistance could be represented by the biological characteristic of each target weed species. The inherent risk of target weeds. in accordance with EPPO 1/213 (4) "Resistance risk analysis", for the species AMARE (*Amaranthus retroflexus),* CHEAL *(Chenopodium album),* ECHCG *(Echinochloa crus-galli),* and STEME *(Stellaria media)* a high inherent resistane risk was concluded.

For this reason, in order to minimize the risk of the spread of resistance of typified weeds, and to exclude the phenomenon of cross resistance or multiple resistance, number of active substance / herbicide especially from group 2 and some from:

- 1 group (inhibition of acetyl CoA Carboxylase)
- 3 group (inhibition of microtubule assembly
- 9 group (inhibition of enolpyruvyl shikimate phosphate synthase)

Should be excluded from the use with or after application of MEZOFLOR 103 SC.
Though unrestricted use pattern is applied for, weed management practices – especially use of Group 2 herbicides - and within this group especially triazolopyrimidine herbicides class, and to less extend Group 2, 1, 3 and 9 groups – should be avoided when controlling weeds in maize.
Reasonable crop rotation and use of herbicides of different SOAs in the same season or in subsequent season will have to be taken into account to mitigate future risk of weed resistance build-up.

H. Test methods

The EPPO guideline PP 1/213(4) "*Resistance risk analysis*" envisages under this point the description of specific test methods used to determine the resistance risk. However, 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 MEZOFLOR 103 SC.

I. Acceptability of the resistance risk

The resistance risk of herbicide MEZOFLOR 103 SC with two active compounds: florasulam and mesotrione for herbicidal control for weeds in maize, when used with according to the envisaged GAP uses, could be considered to be medium. Taking into account the inherent factors of the herbicide and the target weeds the resistance risk of MEZOFLOR 103 SC in the unrestricted use is classified to be acceptable. Therefore, the unrestricted use is not to be restricted further and hence is identical to the applied for.

To minimize resistance risk. the following label recommendation should be included: avoid using herbicides with single mode of action (such as ALS inhibitor herbicides) with different modes of action or use sequences or tank mixes where two or more components are active against the target weeds.

J. Management strategy for the prevention of herbicide resistance

Since the resistance risk of the uses of MEZOFLOR 103 SC could be considered to be medium, the implementation of a special management strategy is required. General principles of 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 landscape management programs. For example, crop rotation and cultivation or in non-crop areas such as roadsides, road and pavement sweepers. minimize 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 maximize 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.

K. Monitoring. reporting and reaction to changes in performance

The continuing observation of field performance and/or evaluation of the sensitivity of target weeds is imperative to the management of resistance.
It is in the best interest of applicant to develop collaboration with users. extension service and scientist to monitor and prevent development of resistance. A relevant program will be realized through the applicant's field force and product development team during and after launch of MEZOFLOR 103 SC.

Comments of zRMS:	„Resistance" is defined as the naturally occurring, inheritable adjustment in the ability of individuals in a population to survive a plant protection product treatment that would normally give effective control. Resistance to crop protection chemicals is a common biological phenomenon that occurs in insects, fungi and weeds. It usually becomes evident after the repeated use of a particular pesticide selected the naturally occurring resistant biotypes allowing them to multiply over several seasons until they become an obvious problem. Although resistance can often be demonstrated in the laboratory this does not necessarily mean that pest control in the field is reduced. "Practical resistance" is the term used for loss of field control due to a shift in sensitivity (OEPP/EPPO, 1988).

The applicant has provided a resistance risk assessment according to the standard: EPPO PP1 PP 1/213 (4) resistance risk analysis.

Weeds are one of the most important reducing factors for crop yield reduction. Yield loss by weeds is reported to be higher than 30% in some cases depending on the different climatic conditions and management practices [Zand et al., 2003]. In particular, potential crop losses due to weeds are estimated to be 32% on average (range 26%–40%), exceeding potential losses due to pests (18%) and pathogens (15%) [Royal Society, 2009].

There are currently 523 unique cases of herbicide resistant weeds globally, with 269 species (154 dicots and 115 monocots). Weeds have evolved resistance to 21 of the 31 known herbicide sites of action and to 167 different herbicides. Herbicide resistant weeds have been reported in 99 crops in 72 countries. The website has 3264 registered users and 696 weed scientists have contributed new cases of herbicide resistant weeds. Resistance events have been reported in Europe for the two active substances and weed species target of Mezoflor 103 SC / Flocorn 103 SC (product code: Mezoflor 103 SC).

- **Florasulam**

The applicant has correctly highlighted that florasulam belongs to HRAC group B (ALS inhibitors – Inhibition of acetolactate synthase) and is part of the triazolopyrimidine chemical family. Inherent resistance risk for the active: high. There are many cases of resistance to ALS inhibitors. In the WSSA resistance classification system, the callistemones are classified as group 2.

The following table shows the current worldwide resistance cases specifically to the herbicide florasulam:

#	Year	Species	Country	MOAs	Actives	Situations
1	2014	*Papaver rhoeas*	Belgium	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	metsulfuron-methyl, florasulam	Wheat
2	2007	*Polygonum convolvulus (=Fallopia convolvulus)*	Canada (Alberta)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	thifensulfuron-methyl, tribenuron-methyl, florasulam	Wheat, Peas
3	2002	*Amaranthus retroflexus*	Canada (Manitoba)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	florasulam	Wheat
4	2019	*Lithospermum arvense*	China	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	imazethapyr, pyrithiobac-sodium, tribenuron-methyl, florasulam, pyroxsulam	Wheat
5	2021	*Tripleurospermum perforatum (=T. inodorum)*	Czech Republic	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, florasulam	Wheat
6	1991	*Stellaria media*	Denmark	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	chlorsulfuron, tribenuron-methyl, florasulam, iodosulfuron-methyl-Na	Spring Barley, Wheat

	7	2001	*Alopecurus myosuroides*	Denmark	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A), Inhibition of Microtubule Assembly HRAC Group 3 (Legacy K1)	clodinafop-propargyl, fenoxaprop-ethyl, cycloxydim, flupyrsulfuron-methyl-Na, pendimethalin, florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Winter wheat
	8	2003	*Papaver rhoeas*	Denmark	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, florasulam, iodosulfuron-methyl-Na	Wheat
	9	2010	*Tripleurospermum perforatum (=T. inodorum)*	Denmark	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, florasulam, iodosulfuron-methyl-Na	Spring Barley, Winter wheat
	10	2010	*Lolium perenne ssp. multiflorum*	Denmark	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	clodinafop-propargyl, florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Winter wheat
	11	2012	*Capsella bursa-pastoris*	Denmark	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, florasulam	Spring Barley
	12	2016	*Apera spica-venti*	Denmark	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	fenoxaprop-ethyl, florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, pinoxaden	Wheat
	13	2009	*Senecio vulgaris*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, prosulfuron, metsulfuron-methyl, flazasulfuron, imazamox, florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, thiencarbazone-methyl	Grapes, Wheat
	14	2012	*Stellaria media*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	thifensulfuron-methyl, metsulfuron-methyl, florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl	Wheat
	15	2017	*Rumex obtusifolius*	France	Inhibition of Acetolactate Synthase HRAC Group	thifensulfuron-methyl, metsulfuron-methyl, florasulam	Wheat

					2 (Legacy B)		
	16	2005	*Apera spica-venti*	Germany	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	sulfosulfuron, chlorsulfuron, flupyrsulfuron-methyl-Na, sulfometuron-methyl, florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Wheat
	17	2011	*Stellaria media*	Germany	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	thifensulfuron-methyl, amidosulfuron, triflusulfuron-methyl, tribenuron-methyl, nicosulfuron, imazamox, florasulam, iodosulfuron-methyl-Na, tritosulfuron, mesosulfuron-methyl, pyroxsulam	Spring Barley, Wheat, Rapeseed
	18	2012	*Papaver rhoeas*	Germany	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	imazamox, florasulam	Cereals, Rapeseed
	19	2017	*Anthriscus caucalis*	Germany	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	thifensulfuron-methyl, tribenuron-methyl, metsulfuron-methyl, florasulam	Winter wheat
	20	1998	*Papaver rhoeas*	Greece	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	pyrithiobac-sodium, thifensulfuron-methyl, chlorsulfuron, tribenuron-methyl, triasulfuron, imazamox, florasulam	Winter wheat
	21	2014	*Rumex dentatus*	India	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Wheat
	22	2010	*Rapistrum rugosum*	Iran	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	bispyribac-sodium, tribenuron-methyl, florasulam, flucarbazone-Na	Winter wheat
	23	2007	*Lolium rigidum*	Israel	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A), Inhibition of Enolpyruvyl Shikimate Phosphate Synthase HRAC Group 9 (Legacy G)	clodinafop-propargyl, imazapyr, chlorsulfuron, tribenuron-methyl, sulfometuron-methyl, flumetsulam, metosulam, glyphosate, florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, pinoxaden, propoxycarbazone-Na	Wheat
	24	2012	*Diplotaxis erucoides*	Israel	Inhibition of Acetolactate Synthase HRAC Group	imazethapyr, tribenuron-methyl, flumetsulam, imazamox, florasulam	Wheat

				2 (Legacy B)		
25	2012	*Erucaria hispanica*	Israel	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, flumetsulam, florasulam	Wheat
26	1998	*Papaver rhoeas*	Italy	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, florasulam, iodosulfuron-methyl-Na	Durum wheat
27	2006	*Sinapis arvensis*	Italy	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, florasulam, iodosulfuron-methyl-Na	Durum wheat
28	2010	*Alopecurus myosuroides*	Netherlands	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Winter wheat
29	2006	*Spergula arvensis*	Norway	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, florasulam	Winter wheat, Winter barley
30	1995	*Stellaria media*	Sweden	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	chlorsulfuron, tribenuron-methyl, florasulam	Spring Barley, Spring wheat, Winter wheat
31	2014	*Matricaria recutita (= M. chamomilla)*	Sweden	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, florasulam	Wheat
32	2015	*Tripleurospermum perforatum (=T. inodorum)*	Sweden	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, florasulam	Wheat
33	2020	*Amaranthus retroflexus*	Ukraine	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	imazethapyr, thifensulfuron-methyl, tribenuron-methyl, flumetsulam, imazamox, florasulam, iodosulfuron-methyl-Na, foramsulfuron, thiencarbazone-methyl	Corn (maize), Sunflower
34	2022	*Chenopodium album*	Ukraine	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	thifensulfuron-methyl, tribenuron-methyl, flumetsulam, imazamox, florasulam, iodosulfuron-methyl-Na, thiencarbazone-methyl	Corn (maize), Soybean, Wheat, Sunflower
35	2000	*Stellaria media*	United Kingdom	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	metsulfuron-methyl, florasulam	Cereals

The table above highlights the cross resistance within ALS inhibiting herbicides, as in most cases where there is florasulam resistance there is also resistance to other ALS inhibitors.

Florasulam: high resistance risk. Globally, herbicide resistance to the Group 2 herbicide mode of action has been confirmed and documented in more than 170 grass and broadleaf weed species across more than 40 countries. Resistance to Group 2 is extensive and prolific, with tens of millions of hectares affected, in fact it is the most likely herbicide mode of action to develop resistance.

Research has shown that as few as four applications to the same population of annual ryegrass can result in the selection of resistant individuals and as few as six applications for wild radish. A population can go from an apparently small number of resistant individuals to a whole paddock failure in one season. Group 2 herbicides are presently the only post emergent herbicides that provide effective control of these grass weeds and this poses a severe risk of Group 2 resistance for growers with cereal dominant rotations.

- **Mesotrione**

Mesotrione, with the chemical name 2-(4-mesyl-2-nitrobenzoyl)cyclohexane-1,3-dione (IUPAC), belongs to the chemical group of Triketones. Mesotrione is a selective herbicide for pre- and post emergence applications against weeds in mainly maize across all climatic zones of Europe.

Mesotrione acts by the inhibition of 4-hydroxyphenyl-pyruvate-dioxygenase which in turn inhibits carotenoid biosynthesis. Due to its primary target site and its chemical family, in the HRAC mode of action classification, it is classified as group F2 herbicide (4-hydroxyphenyl-pyruvate-dioxygenase (4-HPPD) inhibition). In the WSSA resistance classification system, the callistemones are classified as group 27.

Based on the HRAC resistance classification, cross resistance should be expected to be likely between mesotrione and other HRAC group 27 herbicides. Thus, the analysis of the risk for the development of weed resistance to mesotrione is made under the assumption that cross resistance exists between all herbicides classified as HRAC group 27. Currently, there are no reported cases of weed resistance to mesotrione reported from within the EU (Heap, 2019).

#	Year	Species	Country	MOAs	Actives	Situations
1	2015	*Raphanus raphanistrum*	Australia (Western Australia)	Auxin Mimics HRAC Group 4 (Legacy O), Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Hydroxyphenyl Pyruvate Dioxygenase HRAC Group 27 (Legacy F2), Phytoene Desaturase inhibitors HRAC Group 12 (Legacy F1), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	chlorsulfuron, atrazine, diflufenican, fluridone, isoxaflutole, 2,4-D, mesotrione, tembotrione	Wheat
2	2020	*Raphanus raphanistrum*	Australia (Western Australia)	Auxin Mimics HRAC Group 4 (Legacy O), Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B),	metsulfuron-methyl, dicamba, 2,4-D, mesotrione, pyrasulfotole,	Wheat

					Inhibition of Hydroxyphenyl Pyruvate Dioxygenase HRAC Group 27 (Legacy F2)	topramezone	
	3	2021	*Amaranthus tuberculatus (=A. rudis)*	Canada (Ontario)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Enolpyruvyl Shikimate Phosphate Synthase HRAC Group 9 (Legacy G), Inhibition of Hydroxyphenyl Pyruvate Dioxygenase HRAC Group 27 (Legacy F2), Inhibition of Protoporphyrinogen Oxidase HRAC Group 14 (Legacy E), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	imazethapyr, atrazine, metribuzin, lactofen, glyphosate, mesotrione	Corn (maize), Soybean, Dry, bean, edible
	4	2009	*Amaranthus tuberculatus (=A. rudis)*	United States (Illinois)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Hydroxyphenyl Pyruvate Dioxygenase HRAC Group 27 (Legacy F2), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	imazethapyr, chlorimuron-ethyl, atrazine, mesotrione, tembotrione, topramezone	Seed corn
	5	2016	*Amaranthus tuberculatus (=A. rudis)*	United States (Illinois)	Auxin Mimics HRAC Group 4 (Legacy O), Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Hydroxyphenyl Pyruvate Dioxygenase HRAC Group 27 (Legacy F2), Inhibition of Protoporphyrinogen Oxidase HRAC Group 14 (Legacy E), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	imazethapyr, chlorimuron-ethyl, atrazine, fomesafen, lactofen, acifluorfen, dicamba, 2,4-D, mesotrione, tembotrione, topramezone	Corn (maize), Soybean
	6	2009	*Amaranthus tuberculatus (=A. rudis)*	United States (Iowa)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Hydroxyphenyl Pyruvate Dioxygenase HRAC Group 27 (Legacy F2), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	thifensulfuron-methyl, rimsulfuron, atrazine, mesotrione, tembotrione, topramezone	Seed corn
	7	2011	*Amaranthus tuberculatus (=A. rudis)*	United States (Iowa)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Enolpyruvyl Shikimate	imazamethabenz-methyl, thifensulfuron-methyl, chlorimuron-	Corn (maize), Soybean

					Phosphate Synthase HRAC Group 9 (Legacy G), Inhibition of Hydroxyphenyl Pyruvate Dioxygenase HRAC Group 27 (Legacy F2), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	ethyl, atrazine, isoxaflutole, glyphosate, mesotrione	
	8	2009	*Amaranthus palmeri*	United States (Kansas)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Hydroxyphenyl Pyruvate Dioxygenase HRAC Group 27 (Legacy F2), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	thifensulfuron-methyl, atrazine, mesotrione, pyrasulfotole, tembotrione, topramezone	Corn (maize), Sorghum
	9	2015	*Amaranthus palmeri*	United States (Kansas)	Auxin Mimics HRAC Group 4 (Legacy O), Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Enolpyruvyl Shikimate Phosphate Synthase HRAC Group 9 (Legacy G), Inhibition of Hydroxyphenyl Pyruvate Dioxygenase HRAC Group 27 (Legacy F2), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	chlorsulfuron, atrazine, glyphosate, 2,4-D, mesotrione	Sorghum
	10	2021	*Amaranthus palmeri*	United States (Kansas)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Enolpyruvyl Shikimate Phosphate Synthase HRAC Group 9 (Legacy G), Inhibition of Hydroxyphenyl Pyruvate Dioxygenase HRAC Group 27 (Legacy F2), Inhibition of Protoporphyrinogen Oxidase HRAC Group 14 (Legacy E), PSII inhibitors - Histidine 215 Binders HRAC Group 6 (Legacy C3), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	imazethapyr, thifensulfuron-methyl, chlorsulfuron, atrazine, metribuzin, bromoxynil, fomesafen, lactofen, glyphosate, imazamox, mesotrione, pyrasulfotole, tembotrione	Sorghum
	11	2011	*Amaranthus tuberculatus (=A. rudis)*	United States (Nebraska)	Inhibition of Hydroxyphenyl Pyruvate Dioxygenase HRAC Group 27 (Legacy F2)	mesotrione, tembotrione, topramezone	Corn (maize)
	12	2011	*Amaranthus palmeri*	United States	Inhibition of Hydroxyphenyl Pyruvate Dioxygen-	mesotrione, tembotrione,	Corn (maize)

			(Nebraska)	ase HRAC Group 27 (Legacy F2)	topramezone	
13	2014	*Amaranthus palmeri*	United States (Nebraska)	Inhibition of Hydroxyphenyl Pyruvate Dioxygenase HRAC Group 27 (Legacy F2), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	atrazine, mesotrione, tembotrione, topramezone	Corn (maize)
14	2016	*Amaranthus palmeri*	United States (North Carolina)	Inhibition of Hydroxyphenyl Pyruvate Dioxygenase HRAC Group 27 (Legacy F2)	mesotrione	Corn (maize)
15	2020	*Amaranthus tuberculatus (=A. rudis)*	United States (North Carolina)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Enolpyruvyl Shikimate Phosphate Synthase HRAC Group 9 (Legacy G), Inhibition of Hydroxyphenyl Pyruvate Dioxygenase HRAC Group 27 (Legacy F2), Inhibition of Protoporphyrinogen Oxidase HRAC Group 14 (Legacy E), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	imazethapyr, atrazine, fomesafen, glyphosate, mesotrione	Soybean
16	2022	*Amaranthus retroflexus*	United States (North Carolina)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Hydroxyphenyl Pyruvate Dioxygenase HRAC Group 27 (Legacy F2), Inhibition of Protoporphyrinogen Oxidase HRAC Group 14 (Legacy E)	imazamethabenz-methyl, thifensulfuron-methyl, fomesafen, lactofen, mesotrione	Soybean

Mesotrione: moderate reistance risk. Resistance to the Group 27 (HPPD inhibitors) herbicide mode of action is known for a number of populations of *Amaranthus* species in the United States, which demonstrates the potential for weeds to develop resistance to this mode of action. Continuous usage of Group 27 herbicides in the United States has resulted in resistance in *Amaranthus* species in a relatively short time.

Where Group 27 (HPPD inhibitors) herbicides are used post emergent it's important to target small weeds with robust rates. Always mix Group 27 herbicides with an effective alternate mode of action herbicide, such as Group 6 products like bromoxynil, which are synergistic, Group 4 products, such as MCPA, or other alternate mode of action herbicides.

The maize crop is naturally tolerant of mesotrione due to rapid metabolism into inactive compounds mediated by cytochrome-P450-oxygenase whilst sensitive weed species cannot metabolise mesotrione in this way. Despite widespread use of herbicides containing mesotrione for control of weeds in maize and also other herbicides in HRAC mode of action group F2 in other crops for a number of

	years, cases of resistance to this mode of action are relatively low. Herbicide resistance has caused serious problems in weed control programs. Many researchers do not advise continuous applications of one herbicide or even a limited number of herbicides [Beckie et al., 2009]. Therefore, control of weeds should be based on a combination of several agronomic and cultural practices along with chemical solutions. One of the best alternative tactics to inhibit evolution of herbicide-resistant weeds is the rotational application of herbicides with different modes of action and the use of herbicide mixtures [Travlos et al., 2012]. Florasulam inhibits proto-porphyrinogen oxidase (PPO protox) and is used for broadleaf weed control. Mesotrione, a member of the benzoylcyclohexanone-1,3-dione family, is a HPPD inhibitor. Taking into account that the use of two chemicals with different modes of action may enhance efficacy and increase the weed control spectrum, there is a clear need for evaluation of several new herbicide mixtures against serious weeds. Such a new tank mixture herbicide on the Polish market will be Mezoflor 103 SC / Flocorn 103 SC. Use of anti-resistant strategies is one of these principles and certainly, mixtures of herbicides can reduce the costs, lower the selection pressure, and prevent or delay herbicide-resistance issues especially when combined with several agronomic practices. In the opinion of ZRMs due to the different mode of action of both active substances: mesotrione and florasulam, the occurrence of resistance to this herbicide is medium. **For the use of Mezoflor 103 SC / Flocorn 103 SC (product code: Mezoflor 103 SC) against target weeds it can be concluded, that:** • The product has a low to medium inherent and agronomical risk for resistance weed development. • To decrease the risk of selecting resistant weeds, the application of an additional herbicide belonging to a different mode of action and having high efficacy on the species to be controlled is recommendable. • It is recommended to use the product in alternation or in combinations with compounds having a different mode of action. • To avoid the selection of resistance it is recommended to perform one application of Mezoflor 103 SC / Flocorn 103 SC at the recommended dose(s) per season. Also, for minimize the risk of occurrence and development of herbicide weed resistance we should follow Good Agricultural Practice. **In our opinion the risk for florasulam nad mesotrione in Mezoflor 103 SC / Flocorn 103 SC (product code: Mezoflor 103 SC) can be defined as medium.** Applicant submitted detailed information's about possibilities of development the resistance or cross-resistance. Evaluator accepted the strategy management about possible development of resistance or cross-resistance proposed by Applicant **The abidance of the requirements within the good agricultural practice is necessary. The resistance management is coordinated by HRAC recommendations. Applying the anti-resistance use recommendations, development of resistance can be considerably decreased or avoided. The restriction should be put on the label.**

3.4 Adverse effects on treated crops (KCP 6.4)

Table 3.4-1: Presentation of trials (selectivity trials)

Crop*	Country	Type of trial**	Number of trials	Years	GEP, non-GEP, official***	Comments (any other relevant information)
			Central zone			
Maize	Poland	S + Y + Q	6	2021,2020	GEP	
TOTAL	-	-	**6**	-	-	

* According to the GAP table

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

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

3.4.1 Phytotoxicity to host crop (KCP 6.4.1)

A total of 6 phytotoxicity trials were carried out in 2020 and 2021 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%.

Phytotoxicity of product

No phytotoxicity symptom caused by MEZOFLOR 103 SC at the highest dose rate of 2.5 L/ha was recorded in all trials. No signs of phytotoxicity effects were observed in all trials. Phytotoxicity in all test-ed samples was 0%.

Table 3.4-2: Results of selectivity experiment

Number of trials		Selectivity trials (6 trials)			
		MEZOFLOR 103 SC		OSORNO SC	
		N (1.25 L/ha)	2N (2.5 L/ha)	N (1.5 L/ha)	2N (3.0 L/ha))
Maximum of phytotoxicity recorded during the trials	0% to 5%	0	0	0	0
	>5% to 10%	0	0	0	0
	>10% to 15%	0	0	0	0
	>15 %	0	0	0	0
Level of symptoms at the last assessments	0% to 5%	0	0	0	0
	>5% to 10%	0	0	0	0
	>10% to 15%	0	0	0	0
	>15 %	0	0	0	0

Comments of zRMS:	In the evaluation process the fact that the active ingredients – mesotrione and florasulam are used in many plant protection products and has been commonly used in crop protection were taken into consideration by Evaluator. However, in Poland – no PPP with both of those a.s. is already registered. The Applicant submitted in total 6 selectivity studies carried out on maize. Those trials were performed in one EPPO zone – N-E in Poland during two growing seasons (2020 and 2021) on different varietes (Farmoso, Farmezzo, KWS Kwintus, Hulk, Opoka, SY Talisman). Two of studied vatietes of maize are for grain (SY talisman and KWS Kwintus) and four for silage (Farmoso, Farmezzo, Hulk. Opokoa). Studies were condacted in different provinces: wielkopolskie (4 trials), pomorskie (1 trial) and dolnośląskie (1 trial). Methodology was in line to EPPO standard. Valid plot area was used ($21m^2$ – 3 trials, 24 m^2 – 1 trial and $33m^2$ -2 trials). **In the opinion of ZRMs submitted documentation is sufficient for N-E for Poland in line to GAP table.** The selectivity evaluation of the herbicide is to be performed according to listed below 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. Phytotoxicity assessment was carried out with the use of different cultivars (commercially grown varieties). Dosages N (recommended) and 2N (doubled recommended) were studied during selectivity trials. Experimental details and assessments methods were in accordance to EPPO standards. No phytotoxicity symptom caused by MEZOFLOR 103 SC at the highest dose rate of 2.5 L/ha was recorded in all trials. No signs of phytotoxicity effects were observed in all trials. Phytotoxicity in all tested samples was 0%. All results were comparable to standard reference product. **In the opinion of ZRMs it can be concluded that Mezoflor 103 SC / Flocorn 103 SC is safe for use on maize at recommended dose.**

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

MEZOFLOR 103 SC in rates 1.0 L/ha and 1.25 L/ha caused no changes in plant vigour and on quantity of grain. During the selectivity experiment, the content of moisture, protein, starch, oil as well as thousand grain weight was determined. In all these parameters, there were no statistical difference between control as well as MEZOFLOR 103 SC in 1N (1.25 L/ha) and 2N (2.5 L/ha) doses. The reference product (OSORNO SC) used in 1N (1.5 L/ha) and 2N (3.0 L/ha) don't affect any negative effect for measured parameters.

Comments of zRMS:	Effects of Mezoflor 103 SC / Flocorn 103 SC on yield of maize were assessed during 6 selectivity trials. In those studies yield was assessed after application of single, highest rate (1,25 L/ha for Mezoflor 103 SC) of above product as well as twice the highest rate (2,50 l/ha). Statistical analysis of yield and its parameters was done. All results were comparable to standard reference product (Osorno SC – 2 trials and Notos 100 SC – 4 trials).Yield was assessed at BBCH 85-87 in 2 trials and BBCH 99 in 4 trials. **No significant adverse effect on maize was observed after application of Mezoflor 103 SC / Flocorn 103 SC in comparison to the control.**

Below, ZRMS presented detailed results for yield:

– ***maize***

Report No.		119-SYNT-FH21KU109W	120-SYNT-FH21KU110W	277-01-F20-477	277-02-F20-478	SGS/2021/074/PL01	SGS/2021/074/PL02
Product	**Dose per h**	***t/ha***	***t/ha***	***t/ha***	***t/ha***	***t/ha***	***t/ha***
Control	-	10,970 a*	11,215 a*	11,03 a	7,61 a	7,98 a	9,77 a
Mezoflor 103 SC	1,25 l	10,853 a	9,880 a	10,88 a	7,63 a	8,29 a	9,72 a
Mezoflor 103 SC	2,50 l	11,265 a	10,813	10,79 a	7,71 a	8,16 a	9,86 a
Osorno SC	1,50 l	10, 903 a	10,550	-	-	-	-
Osorno SC	3,00 l	11,790 a	11,143	-	-	-	-
Notos 100 SC	1,50 l	-	-	11,07 a	7,72 a	8,19 a	9,87 a
Notos 100SC	3,00 l	-	-	11,09 a	7,46 a	8,14 a	9,84 a

* Values in columns followed by the same letter do not differ significantly at p=0,05

In field trials on maize Mezoflor 103 SC was used in single rate of 1,25 L/ha and doubled rate of 2,5 L/ha, did not have significant adverse effect on yield. Phytotoxicity effects were not observed, even on the plots where double rate was used. No statistical differences in yield were observed between plots treated with Mezoflor 103 SC as well as on control plots.

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

MEZOFLOR 103 SC in rates 1.0 L/ha and 1.25 L/ha (and 2.5 L/ha) had no influence on marketable and unmarketable yield quality. Influence of MEZOFLOR 103 SC on quantity and quality of yield was evaluated during selectivity field trials. The evaluation was carried out in accordance with EPPO guidelines. Following parameters were studies: yield, thousand-grain weight (TGW), moisture content, starch content, oil and protein content as well as plant vigour. In all trials no negative effects on the quality of yield was recorded at the proposed dose rate and at the double dose rate. No statistical differences were observed between untreated and treated fields and also between the tested product and the standard products.

Comments of zRMS:

No significant adverse effect on maize was observed after application of Mezoflor 103 SC in comparison to the control. **It can be concuded that Mezoflor 103 SC have no negative impact on the quality of maize yield.**

Below, ZRMS presented detailed results for quality of yield:

– ***moisture [%]***

Report No.		119-SYNT-FH21KU109W	120-SYNT-FH21KU110W	277-01-F20-477	277-02-F20-478	SGS/2021/074/PL01	SGS/2021/074/PL02
Product	**Dose per h**	***Moisture [%]***	***Moisture [%]***	***Moisture [%]***	***Moisture [%]***	***Moisture [%]***	***Moisture [%]***
Control	-	24.80 ab	25,40 a	22,05 a	30,75 a	31,1 a	36,7 a
Mezoflor 103 SC	1,25 l	24,53 b	28,20 a	22,45 a	30,75 a	31,6 a	36,6 a
Mezoflor 103 SC	2,50 l	26,93 a	27,68 a	22,83 a	30,53 a	31,5 a	36,4 a
Osorno SC	1,50 l	26,30 ab	27,43 a	-	-	-	-
Osorno SC	3,00 l	25,50 ab	26,43 a	-	-	-	-
Notos 100 SC	1,50 l	-	-	22,63 a	30,78 a	31,8 a	36,2 a
Notos 100SC	3,00 l	-	-	22,68 a	30, 88 a	31,3 a	36,5 a

* Values in columns followed by the same letter do not differ significantly at p=0,05

In all trials no negative effects on the moisture [%] was recorded at the proposed dose rate and at the double dose rate. No statistical differences were observed between untreated and treated fields and also between the tested product and the standard products. Only in one trial (119-SYNT-FH21KU109W) significant differences were recorded. During this trial the lowest moisture was noted in the control and Mezoflor 103 SC used at N dose (1,25 l/ha). The highest moisture was at 2N dose of Mezoflor 103 SC.

– ***protein [%]***

Report No.		119-SYNT-FH21KU109W	120-SYNT-FH21KU110W	277-01-F20-477	277-02-F20-478	SGS/2021/074/PL01	SGS/2021/074/PL02
Product	**Dose per h**	***Protein [%]***	***Protein [%]***	***Protein [%]***	***Protein [%]***	***Protein [%]***	***Protein [%]***
Control	-	12,03 a	11,65 a	-	-	-	-
Mezoflor 103 SC	1,25 l	12,08 a	12,28 a	-	-	-	-
Mezoflor 103 SC	2,50 l	12,33 a	12,35 a	-	-	-	-
Osorno SC	1,50 l	12,75 a	12,23 a	-	-	-	-
Osorno SC	3,00 l	12,33 a	11,70 a	-	-	-	-
Notos 100 SC	1,50 l	-	-	-	-	-	-
Notos 100SC	3,00 l	-	-	-	-	-	-

* Values in columns followed by the same letter do not differ significantly at p=0,05

In all trials no negative effects on the protein content [%] was recorded at the proposed dose rate and at the double dose rate. No statistical differences were observed between untreated and treated fields and also between the tested product and the standard products.

– ***starch [%]***

Report No.		119-SYNT-FH21KU109W	120-SYNT-FH21KU110W	277-01-F20-477	277-02-F20-478	SGS/2021/074/PL01	SGS/2021/074/PL02
Product	**Dose per h**	***Starch [%]***	***Starch [%]***	***Starch [%]***	***Starch [%]***	***Starch [%]***	***Starch [%]***
Control	-	67,85 a	68,93 a	44,40 a	44,63 a	-	-
Mezoflor 103 SC	1,25 l	68,06 a	68,55 a	44,75 a	45,03 a	-	-
Mezoflor 103 SC	2,50 l	67,88 a	68,40 a	44,40 a	43,58 a	-	-
Osorno SC	1,50 l	67,83 a	68,35 a	-	-	-	-
Osorno SC	3,00 l	67,65 a	68,80 a	-	-	-	-
Notos 100 SC	1,50 l	-	-	44,38 a	43,70 a	-	-
Notos 100SC	3,00 l	-	-	44,28 a	43,68 a	-	-

* Values in columns followed by the same letter do not differ significantly at p=0,05

In all trials no negative effects on the starch content [%] was recorded at the proposed dose rate and at the double dose rate. No statistical differences were observed between untreated and treated fields and also between the tested product and the standard products.

– ***oil [%]***

Report No.		119-SYNT-FH21KU109W	120-SYNT-FH21KU110W	277-01-F20-477	277-02-F20-478	SGS/2021/074/PL01	SGS/2021/074/PL02
Product	**Dose per h**	***oil [%]***	***oil [%]***	***oil [%]***	***oil [%]***	***oil [%]***	***oil [%]***
Control	-	4,15 ab	4,40 a	-	-	-	-
Mezoflor 103 SC	1,25 l	3,93 b	4,48 a	-	-	-	-
Mezoflor	2,50 l	4,23 a	4,53 a	-	-	-	-

103 SC							
Osorno SC	1,50 l	4,20 ab	4,43 a	-	-	-	-
Osorno SC	3,00 l	4,28 a	4,38 a	-	-	-	-
Notos 100 SC	1,50 l	-	-	-	-	-	-
Notos 100SC	3,00 l	-	-	-	-	-	-

* Values in columns followed by the same letter do not differ significantly at p=0,05

Oil content [%] was studied during two trials. In one trial – 119-SYNT-FH21KU109W significant differences were noted. The highest oil content [%] was reported in maize treated by Mezoflor 103 SC at 2N dose and st. ref. product at 2N dose. Sligtly lower content of oil was noted in the control and maize treated by st. ref. product at N dose. The lowest oil content was in maize treated by Mezoflor 103 SC at N dose. In the second trial – 120-SYNT-FH21KU110W no differences were noted.

– ***thousand grain weight [g]***

Report No.		**119-SYNT-FH21KU109W**	**120-SYNT-FH21KU110W**	**277-01-F20-477**	**277-02-F20-478**	**SGS/2021/074/PL01**	**SGS/2021/074/PL02**
Product	**Dose per h**	***TGW [g]***	***TGW [g]***	***TGW [g]***	***TGW [g]***	***TGW [g]***	***TGW [g]***
Control	-	325,435 a	336,965 a	-	-	341,12 a	346,36 a
Mezoflor 103 SC	1,25 l	340,875 a	311,693 a	-	-	341,05 a	346,42 a
Mezoflor 103 SC	2,50 l	347,885 a	329,718 a	-	-	340,91 a	346,15 a
Osorno SC	1,50 l	323,986 a	334,380 a	-	-	-	-
Osorno SC	3,00 l	345,598 a	332,290 a	-	-	-	-
Notos 100 SC	1,50 l	-	-	-	-	353,67 a	345,97 a
Notos 100SC	3,00 l	-	-	-	-	341,10 a	346,21 a

* Values in columns followed by the same letter do not differ significantly at p=0,05

In all trials no negative effects on the thousand grain weight [g] was recorded at the proposed dose rate and at the double dose rate. No statistical differences were observed between untreated and treated fields and also between the tested product and the standard products.

3.4.3 Effects on transformation processes (KCP 6.4.4)

Details concerning the remains of the active substance mesotrione and florasulam are contained in Part B section 7.

Comments of zRMS:	<u>In the section B7 is presented following information:</u> • *The level of florasulam residue in cobs and grains is below the limit of quantificatiin (< 0,01 mg/kg). Further ivestigation on florasulam residues in processed commodities is not required.* • *The level of mesotrione residues in forage, silage and grain is below the limit of quantification (< 0.01 mg/kg). Further investigation on mesotrione residues in processed commodities is not required.* The applicant presented no data on effects on transformation processes taking note that there are no major transformation processes applicable to forage or grain maize, products containing mesotrione or florasulam as the sole active substance

	or together in co-formulations have been approved and extensively used as herbicides in maize across EU countries for many years and are well proven to have no negative impact on any relevant processing procedures. So, lack of data can be acceptable. **No negative effects on transformation processes are expected.**

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

6 studies conducted in 2020 and 2021 in Poland on maize revealed no negative impact of MEZOFLOR 103 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 6 phytotoxicity trials were carried out in 2020 and 2021 in different regions of Poland. No signs of phytotoxicity effects were observed in all trials. Phytotoxicity in all tested samples was 0%. In all trials there was no changes in plant vigour or no influence on marketable and unmarketable yield quantity or no influence on starch 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:	ZRMS accepted Applicant statement for lack of trials against propagation. Mezoflor 103 SC / Flocorn 103 SC (product code: Mezoflor 103 SC), similarly, to the references products to which was compared, has shown to be selective to treated crops, showing negligible phytotoxicity symptoms and with no effect on yield at the N dose. Therefore, no further data is deemed to be necessary in the opinion of Evaluator. Also, products containing mesotrione or florasulam have been using for many years and have been proven not to have a negative effect on the viability of progeny seed. So, it can be stated that **no negtive effect on propagating purposes is expected.**

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

3.5.1 Impact on succeeding crops (KCP 6.5.1)

According to intended GAP, MEZOFLOR 103 SC will be apply at the latest in BBCH 18 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 mesotrione and florasulam 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 maize. However, some additional security steps need to be taken in accordance with information obtained in ecotoxicological studies (see section below).

Comments of zRMS:	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 ac-

	tive 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 Mezoflor 103 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. 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. Components of Mezoflor 103 SC are old active ingredients (florasulam, mesotrione) authorised for maize production for long time ago. So, restrictions on rotational crops are well-known. According to the scientific data half dissipation time (DT_{50}) of mesotrione is 4.5 to 32 days (related to soil pH, getting shorter as soil pH rose) and DT_{50} for florasulam is 2-18 days. So, it can be assumed that the herbicide Mezoflor 103 SC / Flocorn 103 SC (product code: Mezoflor 103 SC) is degraded in the soil during the growing season to a level that does not pose a risk to succeeding crops. ZRMs agree with Applicant that According to intended GAP, MEZOFLOR 103 SC will be apply at the latest in BBCH 18 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 mesotrione and florasulam 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 maize. However, in line to Ecotoxicilogy section, some security steps should be added to label. What is improtant this step is already included in registered PPPs with mesotrione, so to the opinion of zRMS this label information must be retained: *„Under extremely unfavourable conditions (sandy soils, soils that dry out easily, soils with a low pH [<6.0], soils with a high organic matter content [>4.0%], low biological activity, exceptionally low winter temperatures, exceptionally low soil moisture in summer and/or autumn and/or winter, overlapping of the sprayed area, excessively compacted soil), temporary bleaching, stunted growth and reduced plant populations may occur in sensitive crops (beets, legumes, sunflowers and vegetables). It is therefore not recommended to grow the above crops as follow-on crops if the soil pH is significantly below 6.0 or if there has been a prolonged drought following the previous season's application. Ploughing to a minimum depth of 15 cm after maize and a soil pH above 6.0 will significantly reduce the risk of damage to these crops.* *If a treated field has to be ploughed beforehand (due to crop damage by frost, disease or pests), only maize or perennial ryegrass may be grown on the same field after pre-sowing. After ploughing to a depth of min. after ploughing to a depth of at least 15 cm, sorghum may be grown in addition to the above crops.* *Winter rape can only be sown in the autumn of the following year, as can sugar beet (in the spring of the year following the last application).* *After harvesting maize grown for grain and silage under normal growing conditions, cereals can be grown:* *- in autumn, winter cereals and winter oilseed rape and Brassica vegetables.*

	Plough to a minimum depth of 15 cm before sowing winter oilseed rape and brassica vegetables. 15 cm. *- in spring - maize (grain and silage) and spring wheat and barley"*

Impact on other plants including adjacent crops (KCP 6.5.2)

A GLP study was conducted in 2021 using MEZOFLOR 103 SC (nominally containing 100 g/L mesotrione and 3 g/L florasulam) aimed at evaluating the effect of product on seedling emergence and seedling growth of 6 terrestrial plants [according to OECD 208 (2006), seedling emergence and seedling growth test].

The test was conducted on six plant species (three dicotyledonous species and three monocotyledonous species): pea (*Pisum saticum*) var. Cud Kelvedonu, cabbage (*Brassica oleracea* var. capitata), carrot (*Daucus carota*) var. AMSTERDAM, onion (*Allium cepa*) var. Stuttgater Riesen, perennial ryegrass (*Lolium perenne*) var. Gagat, oats (*Avena sativa*) var. Romulus.

There were the following number of seeds in each pot:

- Pea: 3 seeds/pot – 21 seeds/application rate (7 pots/application rate);
- Cabbage: 3 seeds /pot – 21 seeds /application rate (7 pots/application rate);
- Onion: 5 seeds /pot – 20 seeds /application rate (4 pots/application rate);
- Carrot: 5 seeds /pot – 20 seeds /application rate (4 pots/application rate);
- Perennial ryegrass: 5 seeds /pot – 20 seeds /application rate (4 pots/application rate);
- Oats: 5 seeds /pot – 20 seeds /application rate (4 pots /application rate).

MEZOFLOR 103 SC in defined concentrations was sprayed onto the soil surface with calibrated spraying equipment. Eight rated of the MEZOFLOR 103 SC were used in this experiment: These were:

- 0.46 mL of the MEZOFLOR 103 SC/ha (0.046 g of mesotrione + 0.001 g of florasulam/ha),
- 1.37 mL of the MEZOFLOR 103 SC/ha (0.139 g of mesotrione + 0.004 g of florasulam/ha),
- 4.12 mL of the MEZOFLOR 103 SC/ha (0.418 g of mesotrione + 0.012 g of florasulam/ha),
- 12.35 mL of the MEZOFLOR 103 SC/ha (1.254 g of mesotrione + 0.037 g of florasulam/ha),
- 37.04 mL of the MEZOFLOR 103 SC/ha (3.763 g of mesotrione + 0.111 g of florasulam/ha),
- 111.11 mL of the MEZOFLOR 103 SC/ha (11.289 g of mesotrione + 0.333 g of florasulam/ha),
- 333.33 mL of the MEZOFLOR 103 SC/ha (33.867 g of mesotrione + 1.000 g of florasulam/ha),
- 1000.00 mL of the MEZOFLOR 103 SC/ha (101.600 g of mesotrione + 3.000 g of florasulam/ha).

The volume of deionized water used to prepare the working solution with MEZOFLOR 103 SC at the highest rate corresponded to 200 L of spraying liquid/ha.

During the experiment, During the experiment, the plants were observed for emergence (every day until the emergence of 50% of the control seedlings and then every 1 – 3 days) and visual phytotoxicity (after 7 and 14 days). The experiment finished 14 days after the emergence of 50% of the control seedlings. At the end of the experiment, the number of surviving plants was determined. Next, the plants were cut down, measured, dried to a constant weight at 60ºC, and weighed.

The results concerning the emergence, the dry weight, and shoot length t were statistically analyzed to determine the ER_{25}, ER_{50} and NOER.

On the basis of the obtained results it was proved that the test item i.e. **MEZOFLOR 103 SC** had an impact on the process of growth of pea, cabbage, carrot and onion. In cultivation of perennial ryegrass and oats no impact on the process of growth was observed. The delayed seedling emergence was noticed in cultivation of pea, carrot, onion. In cultivation of pea no emergence of

plants was observed in some replicates at the rate equal to 333.33 mL/ha and 1000.00 mL/ha highest rate. The death of plants was observed in cultivation of carrot and onion. On the basis of ER_{25}, ER_{50} and NOER values determined from final number of plants it was proved that the test item inhibited the seedling emergence of pea, carrot and onion. On the basis of ER_{25}, ER_{50} and NOER values determined from the shoot length it was proved that the test item had an impact on the process of growth of pea, cabbage, carrot and onion and had no impact on the process of growth of perennial ryegrass and oats. On the basis of ER_{25}, ER_{50} and NOER values determined from the shoot dry weight it was proved that the test item had an impact on the process of growth of pea, cabbage, carrot and onion and had no impact on the process of growth of perennial ryegrass and oats. During the experiment the plant damages were noticed in cultivation of pea, cabbage, carrot and onion. Among plant damages, these were stunted growth (pea, cabbage, carrot, onion), chlorosis (pea, cabbage, carrot, onion), wilting (pea, cabbage, onion) and deformations (pea)

The ER_{50} and NOER values determined on the basis of plants number at the end of the experiment, shoot length and shoot dry weight measurement expressed as mL of the test item (MEZOFLOR 103 SC) for all test species are given in Table 3.4-3.

Table 3.5-3: ER_{50} and NOER value obtained for plants

	Pea	**Cabbage**	**Carrot**	**Onion**	**Perennial ryegrass**	**Oats**
Plant number at the end of the experiment						
ER_{50}	331.95	>1000.00	>100.0	>1000.00	>1000.00	>1000.00
NOER	37.04	≥1000.00	333.33	111.11	>1000.00	≥1000.00
Shoot length (plants without roots)						
ER_{50}	211.65	94.14	366.29	520.07	>1000.00	>1000.00
NOER	12.35	12.35	111.11	111.11	≥1000.00	≥1000.00
Plant dry weight (plants without roots)						
ER_{50}	118.21	68.24	377.49	531.79	>1000.00	>1000.00
NOER	12.35	12.35	111.11	111.11	≥1000.00	≥1000.00

Based on the obtained result the most sensitive plant is cabbage. For this reason, the risk assessment was performed based on this value.

The results of the assessment of the risk for non-target plants due to the use of MEZOFLOR 103 SC in maize for the most sensitive plant – cabbage are presented in Table 3.4-4.

Table 3.5-4: Calculation of the risk assessment for MEZOFLOR 103 SC

Intended use	Maize
Active substance/product	MEZOFLOR 103 SC
Application rate (g/ha)	1 × 1328
MAF	1

Test species	**ER_{50} (g/ha)**	**Drift rate**	**$PEC_{off\text{-}field}$ (g/ha)**	**TER criterion: TER ≥ 5**
Brassica oleracea	68.24	2.77	36.8	**1.85**

As it was mention, the most sensitive species is cabbage, therefore the risk mitigation is necessary.

Table 3.5-5: The risk mitigation for MEZOFLOR 103 SC

Intended use		Maize			
Active substance/product		MEZOFLOR 103 SC			
Application rate (g/ha)		1 × 1328			
MAF		1			
Buffer strip (m)	**Drift rate (%)**	**$PEC_{off-field}$ (g/ha)**	**$PEC_{off-field}$ 50 % drift red. (g/ha)**	**$PEC_{off-field}$ 75 % drift red. (g/ha)**	**$PEC_{off-field}$ 90 % drift red. (g/ha)**
1	0.37	0.74	1.5	3.7	1
5	1.8	3.6	**7.2**	**18**	5
10	3.5	**7.0**	**14.0**	**35**	10
15	**5.1**	**10**	**20**	**51**	15
Brassica oleracea- seedling emergence					
Toxicity value		**TER**			
ER_{50} = 68.24 g/ha		**criterion: TER ≥ 5**			
1		1.9	3.7	**7.1**	**18.5**
5		**8.9**	**17.9**	35.9	89.7

Based on the predicted rates of MEZOFLOR 103 SC in off-field areas, the TER values describing the risk for non-target plants following exposure to MEZOFLOR 103 SC according to the GAP of the formulation MEZOFLOR 103 SC achieve the acceptability criteria TER ≥ 5, with applying:

- 5 m buffer zone and 50 % drift reduction nozzle,
- 1 m buffer zone and 75 % drift reduction nozzle,
- 5 m buffer zone

Taking into account the results obtained for vegetative vigour, following risk mitigation measures should be applied for vegetative vigour:

- 5 m buffer zone and 75 % drift reduction nozzle,
- 10 m buffer zone and 50 % drift reduction nozzle,
- 15 m buffer zone

Due to the fact, that buffer zones adopted in risk mitigation for vegetative vigour test are the worst case, these records were adopted in the label.

Comments of zRMS:	The Mezoflor 103 SC / Flocorn 103 SC (product code Mezoflor 103 SC) is effective against some mono- and dicotyledonous weeds. In this situation, this plant protection product may also cause discoloration and damage to non-target foliage plants, including adjacent crops. The information in this registration report and label warns against overlapping and drift of the spray liquid should be presented. Therefore, warnings to avoid spray drift on adjacent crops should appear on the label. For example: *During spraying, maintain a safety zone of at least 5 m from residential buildings/habitats and members of the public. When spraying, use drift reduction techniques (drift resistant nozzles, low vehicle speed, stable weather, etc.).*

3.5.2 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).

Comments of zRMS:	Detailed studies on the possible adverse effects to beneficial organisms are submitted and summarised in Ecotoxicology section. However, accordingly to documentation submitted by Applicant (efficacy and selectivity trials) – none negative effect was observed on non-target organisms during all trials.

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 neighbouring 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.

3.6 Other/special studies

No additional information is considered relevant.

Comments of zRMS:	Statement accepted.

3.7 List of test facilities including the corresponding certificates

Table 3.7-1: List of test facilities

Test facility	Address	Certificate (Yes or No)
Fertico Sp. z o.o.	Goliany 43. 05-620 Błędów. Poland	Yes
SGS Polska Sp. z o.o.	Jana Kazimierza 3. 01-248 Warszawa. Poland	Yes
Institute of Plant Protection-National Research Institute. Research Centre for Registration of Agrochemicals Herbicide Research Team.	Władysława Węgorka 20. 60 – 318 Poznań. Poland	Yes

Appendix 1 Lists of data considered in support of the evaluation

Tables considered not relevant can be deleted as appropriate.

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

List of data submitted by the applicant and relied on

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 6.2; 6.4	Adam Szemandera	2020	Efficacy of MEZOFLOR 103 SC on weed control in maize. Poland 2020. 276 01 F20 472 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Adam Szemandera	2020	Efficacy of MEZOFLOR 103 SC on weed control in maize. Poland 2020. 276 01 F20 473 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Adam Szemandera	2020	Efficacy of MEZOFLOR 103 SC on weed control in maize. Poland 2020. 276 01 F20 474 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2;	Adam Szemandera	2020	Efficacy of MEZOFLOR 103 SC on weed control in maize. Poland 2020.	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
6.4			276 01 F20 475 Fertico Sp. z o.o. GEP Unpublished		Sp. z o. o.
KCP 6.2; 6.4	Adam Szemandera	2020	Efficacy of MEZOFLOR 103 SC on weed control in maize. Poland 2020. 276 01 F20 476 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Mateusz Krawczuk	2021	Efficacy evaluation of MEZOFLOR 103 SC applied into maize for the control of weeds. SGS/2021/073/PL01 SGS Polska Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Mateusz Krawczuk	2021	Efficacy evaluation of MEZOFLOR 103 SC applied into maize for the control of weeds. SGS/2021/073/PL02 SGS Polska Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Mateusz Krawczuk	2021	Efficacy evaluation of MEZOFLOR 103 SC applied into maize for the control of weeds. SGS/2021/073/PL03 SGS Polska Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2;	Mateusz Krawczuk	2021	Efficacy evaluation of MEZOFLOR 103 SC applied into maize for the control of weeds.	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
6.4			SGS/2021/073/PL04 SGS Polska Sp. z o.o. GEP Unpublished		Sp. z o. o.
KCP 6.2; 6.4	Mateusz Krawczuk	2021	Efficacy evaluation of MEZOFLOR 103 SC applied into maize for the control of weeds. SGS/2021/073/PL05 SGS Polska Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Mateusz Krawczuk	2021	Efficacy evaluation of MEZOFLOR 103 SC applied into maize for the control of weeds. SGS/2021/073/PL06 SGS Polska Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Adrian Luboiński	2021	Registration expertise in the scope of testing efficacy of herbicide MEZOFLOR 103 SC applied in maize. SH21KU103W Institute of Plant Protection-National Research Institute. Research Centre for Registration of Agrochemicals Herbicide Research Team. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Adrian Luboiński	2021	Registration expertise in the scope of testing efficacy of herbicide MEZOFLOR 103 SC applied in maize. SH21KU104W Institute of Plant Protection-National Research Institute. Research Centre for Registration of Agrochemicals Herbicide Research Team. GEP	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			Unpublished		
KCP 6.2; 6.4	Adrian Luboiński	2021	Registration expertise in the scope of testing efficacy of herbicide MEZOFLOR 103 SC applied in maize. SH21KU105W Institute of Plant Protection-National Research Institute. Research Centre for Registration of Agrochemicals Herbicide Research Team. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Łukasz Siekaniec	2021	Registration expertise in the scope of testing efficacy of herbicide MEZOFLOR 103 SC applied in maize. SH21KU106Z Institute of Plant Protection-National Research Institute. Research Centre for Registration of Agrochemicals Herbicide Research Team. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Łukasz Siekaniec	2021	Registration expertise in the scope of testing efficacy of herbicide MEZOFLOR 103 SC applied in maize. SH21KU107Z Institute of Plant Protection-National Research Institute. Research Centre for Registration of Agrochemicals Herbicide Research Team. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Łukasz Siekaniec	2021	Registration expertise in the scope of testing efficacy of herbicide MEZOFLOR 103 SC applied in maize. SH21KU108Z Institute of Plant Protection-National Research Institute. Research Centre for Registration of Agrochemicals Herbicide Research Team. GEP Unpublished	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCP 6.2; 6.4	Adam Szemandera	2020	Selectivity of MEZOFLOR 103 SC applied on weed control in maize. Poland 2020. 276 01 F20 477 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Adam Szemandera	2020	Selectivity of MEZOFLOR 103 SC applied on weed control in maize. Poland 2020. 276 01 F20 478 Fertico Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Mateusz Krawczuk	2021	Field study to evaluate the selectivity of MEZOFLOR 103 SC applied to maize. SGS/2021/074/PL01 SGS Polska Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Mateusz Krawczuk	2021	Field study to evaluate the selectivity of MEZOFLOR 103 SC applied to maize. SGS/2021/074/PL02 SGS Polska Sp. z o.o. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Adrian Luboiński	2021	Registration expertise in the scope of testing phytotoxicity of herbicide MEZOFLOR 103 SC applied in maize. FH21KU109W Institute of Plant Protection-National Research Institute. Research Centre for Registration of Agrochemicals Herbicide Research Team.	N	Synthos Agro Sp. z o. o.

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
			GEP Unpublished		
KCP 6.2; 6.4	Adrian Luboiński	2021	Registration expertise in the scope of testing phytotoxicity of herbicide MEZOFLOR 103 SC applied in maize. FH21KU110W Institute of Plant Protection-National Research Institute. Research Centre for Registration of Agrochemicals Herbicide Research Team. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Sławomir Drzewiecki	2022	Biological efficacy expertise of herbicide Mezoflor 103 SC for mono and dicotyledonous weeds control in maize. 7 H/2022 Institute of Plant Protection – National Research Institute, Sosnicowice Branch. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Jacek Rogowski	2022	Expertise of the efficacy of herbicide Mezoflor 103 SC in the control of weeds in maize. (Registration study) 110/2022 Institute of Plant Protection-National Research Institute. Research Centre for Registration of Agrochemicals Herbicide Research Team. GEP Unpublished	N	Synthos Agro Sp. z o. o.
KCP 6.2; 6.4	Łukasz Siekaniec	2022	Expertise of the efficacy of herbicide Mezoflor 103 SC in the control of weeds in maize. (Registration study) 111/2022	N	Synthos Agro Sp. z o. o.

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The following tables are to be completed by MS

List of data submitted by the applicant and not relied on

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

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
			Published/Unpublished		

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

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