|  |
| --- |
| FINAL REGISTRATION REPORT  Part B  Section 3  Efficacy Data and Information  Concise summary |
| Product code: CHR/H/IZOXACYP 250 SC  Product name(s): Metida Plus 250 SC/ Taizza Plus 250 SC  Chemical active substance(s):  Isoxaflutole, 250 g/L |
| Central Zone  Zonal Rapporteur Member State: Poland |
| CORE DOSSIER  (authorization) |
| Applicant: Innvigo Sp. z o.o.  Submission date: March 2022, November 2022  MS Finalisation date: December 2022, August 2023 |

Version history

|  |  |
| --- | --- |
| When | What |
| December 2022 | ZRMs evaluated dRR updated by Applicant in November 2022. |
| August 2023 | Final version of RR after commenting period. |
|  |  |
|  |  |

Table of Contents

[3 Efficacy Data and Information (including Value Data) on the Plant Protection Product (KCP 6) 6](#_Toc120484979)

[3.1 Summary and conclusions of zRMS on Section 3: Efficacy (KCP 6) 6](#_Toc120484980)

[3.2 Efficacy data (KCP 6) 10](#_Toc120484981)

[3.2.1 Preliminary tests (KCP 6.1) 17](#_Toc120484982)

[3.2.2 Minimum effective dose tests (KCP 6.2) 18](#_Toc120484983)

[3.2.3 Efficacy tests (KCP 6.2) 19](#_Toc120484984)

[PREEMERGENCE APPLICATION 25](#_Toc120484985)

[3.2.3-1.1 The efficacy of CHR/H/IZOXACYP 250 SC in control of CHEAL *Chenopodium album* 25](#_Toc120484986)

[3.2.3-1.2 The efficacy of CHR/H/IZOXACYP 250 SC in control of ANTAR *Anthemisa arvensis* 25](#_Toc120484987)

[3.2.3-1.3 The efficacy of CHR/H/IZOXACYP 250 SC in control of POLPE *Polygonum persicaria* 26](#_Toc120484988)

[3.2.3-1.4 The efficacy CHR/H/IZOXACYP 250 SC in control of THLAR *Thlaspi arvense* 26](#_Toc120484989)

[3.2.3-1.5 The efficacy of CHR/H/IZOXACYP 250 SC in control of VIOAR *Viola arvensis* 26](#_Toc120484990)

[3.2.3-1.6 The efficacy of CHR/H/IZOXACYP 250 SC in control of ECHCG *Echinochloa crus-galli* 26](#_Toc120484991)

[3.2.3-1.7 The efficacy of CHR/H/IZOXACYP 250 SC in control of CAPBP *Capsella bursa-pastoris* 27](#_Toc120484992)

[3.2.3-1.8 The efficacy of CHR/H/IZOXACYP 250 SC in control of MATIN *Tripleurospermum mar. inodorum* 27](#_Toc120484993)

[3.2.3-1.9 The efficacy of CHR/H/IZOXACYP 250 SC in control of STEME *Stellaria media* 27](#_Toc120484994)

[3.2.3-1.10 The efficacy of CHR/H/IZOXACYP 250 SC in control of BRSNW *Brassica napus* (self-plant sown) 28](#_Toc120484995)

[3.2.3-1.11 The efficacy of CHR/H/IZOXACYP 250 SC in control of AMARE *Amaranthus retroflexus* 28](#_Toc120484996)

[3.2.3-1.12 The efficacy of CHR/H/IZOXACYP 250 SC in control of SOLNI *Solanum nigrum* 28](#_Toc120484997)

[POSTEMERGENCE APPLICATION 28](#_Toc120484998)

[3.2.3-1.13 The efficacy of CHR/H/IZOXACYP 250 SC in control of CHEAL *Chenopodium album* 29](#_Toc120484999)

[3.2.3-1.14 The efficacy of CHR/H/IZOXACYP 250 SC in control of POLCO *Polygonum convolvulus* 29](#_Toc120485000)

[3.2.3-1.15 The efficacy of CHR/H/IZOXACYP 250 SC in control of ANTAR *Anthemis arvensis* 30](#_Toc120485001)

[3.2.3-1.16 The efficacy of CHR/H/IZOXACYP 250 SC in control of POLPE *Polygonum persicaria* 30](#_Toc120485002)

[3.2.3-1.17 The efficacy of CHR/H/IZOXACYP 250 SC in control of THLAR *Thlaspi arvense* 31](#_Toc120485003)

[3.2.3-1.18 The efficacy of CHR/H/IZOXACYP 250 SC in control of VIOAR *Viola arvensis* 31](#_Toc120485004)

[3.2.3-1.19 The efficacy of CHR/H/IZOXACYP 250 SC in control of SOLNI *Solanum nigrum* 32](#_Toc120485005)

[3.2.3-1.20 The efficacy of CHR/H/IZOXACYP 250 SC in control of ECHCG *Echinochloa crus-galli* 32](#_Toc120485006)

[3.2.3-1.21 The efficacy of CHR/H/IZOXACYP 250 SC in control of SINAR *Sinapsis arvensis* 33](#_Toc120485007)

[3.2.3-1.22 The efficacy of CHR/H/IZOXACYP 250 SC in control of CAPBP *Capsella bursa pastoris* 33](#_Toc120485008)

[3.2.3-1.23 The efficacy of CHR/H/IZOXACYP 250 SC in control of MATIN *Tripleurospermum inodorum* 34](#_Toc120485009)

[3.2.3-1.24 The efficacy of CHR/H/IZOXACYP 250 SC in control of VERHE *Veronica hederifolia* 34](#_Toc120485010)

[3.2.3-1.25 The efficacy of CHR/H/IZOXACYP 250 SC in control of STEME *Stellaria media* 35](#_Toc120485011)

[3.2.3-1.26 The efficacy of CHR/H/IZOXACYP 250 SC in control of BRSNW *Brassica napus* (self-plant sown) 35](#_Toc120485012)

[3.2.3-1.27 The efficacy of CHR/H/IZOXACYP 250 SC in control of AMARE *Amaranthus retroflexus* 36](#_Toc120485013)

[3.3 Information on the occurrence or possible occurrence of the development of resistance (KCP 6.3) 48](#_Toc120485014)

[3.4 Adverse effects on treated crops (KCP 6.4) 53](#_Toc120485015)

[3.4.1 Phytotoxicity to host crop (KCP 6.4.1) 54](#_Toc120485016)

[3.4.2 Effect on the yield of treated plants or plant product (KCP 6.4.2) 61](#_Toc120485017)

[3.4.3 Effects on the quality of plants or plant products (KCP 6.4.3) 66](#_Toc120485018)

[3.4.4 Effects on transformation processes (KCP 6.4.4) 74](#_Toc120485019)

[3.4.5 Impact on treated plants or plant products to be used for propagation (KCP 6.4.5) 74](#_Toc120485020)

[3.5 Observations on other undesirable or unintended side-effects (KCP 6.5) 81](#_Toc120485021)

[3.5.1 Impact on succeeding crops (KCP 6.5.1) 81](#_Toc120485022)

[3.5.2 Impact on other plants including adjacent crops (KCP 6.5.2) 83](#_Toc120485023)

[3.5.3 Impact on beneficial and other non-target organisms (KCP 6.5.3) 87](#_Toc120485024)

[3.6 Other/special studies 87](#_Toc120485025)

[3.7 List of test facilities including the corresponding certificates 88](#_Toc120485026)

[Appendix 1 Lists of data considered in support of the evaluation 89](#_Toc120485027)

[Appendix 2 Additional information provided by the applicant 98](#_Toc120485028)

[Appendix 3 Summary of data on trials site and application details per use 113](#_Toc120485029)

[Appendix 4 Summary of data on effectiveness trials per use 118](#_Toc120485030)

[Appendix 5 Summary of detailed data on herbicide effectiveness trials 125](#_Toc120485031)

[Appendix 6 Summary of phytotoxicity trials data in summary form 167](#_Toc120485032)

[Appendix 7 Summary of available studies: Adverse effects on beneficial organisms 187](#_Toc120485033)

[Appendix 8 Summary of data on succeeding crop 187](#_Toc120485034)

# 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). |

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

Abstract

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

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | |  | | | | | |  | | | GAP rev.      , date: 2020-12-16 | | | | |  | |
| PPP (product name/code): | | | | CHR/H/IZOXACYP 250 SC/ Metida Plus 250 SC/ Taizza Plus 250 SC | | | | | | Formulation type: | | | SC (a, b) | | | | |  | |
| Active substance 1: | | | | isoxaflutole | | | | | | Conc. of as 1: | | | 250 g/L (c) | | | | |  | |
| Active substance 2: | | | | - | | | | | | Conc. of as 2: | | | - (c) | | | | |  | |
| Active substance 3: | | | | - | | | | | | Conc. of as 3: | | | - (c) | | | | |  | |
| Safener: | | | | cyprosulfamide | | | | | | Conc. of safener: | | | - (c) | | | | |  | |
| Synergist: | | | | - | | | | | | Conc. of synergist: | | | - (c) | | | | |  | |
| Applicant: | | | | Innvigo Sp. z o.o. | | | | | | Professional use: | | |  | | | | |  | |
| Zone(s): | | | | Central (d) | | | | | | Non professional use: | | |  | | | | |  | |
| Verified by MS: | | | | no | | | | | |  | | |  | | | | |  | |
|  | | | |  | | | | | |  | | |  | | | | |  | |
| Field of use: | | | | herbicide | | | | | |  | | |  | | | | |  | |
| 1 | 2 | 3 | | 4 | 5 | 6 | 7 | 8 | | 9 | 15 | 11 | 12 | 13 | 14 | 15 | |
| **Use-No. (e)** | **Member state(s)** | **Crop and/ or situation  (crop destination / purpose of crop)** | | **F, Fn, Fpn G, Gn, Gpn or I** | **Pests or Group of pests controlled** (additionally: developmental stages of the pest or pest group) | **Application** | | | | | **Application rate** | | | **PHI** (days) | **Remarks:**   e.g. g safener/synergist per ha  (f) | ZRMs Conclusion | |
|  |  |  | |  |  | Method / Kind | Timing / Growth stage of crop & season | Max. number  a) per use  b) per crop/ season | | Min. interval between applications (days) | kg or L product / ha  a) max. rate per appl.  b) max. total rate per crop/season | g or kg as/ha  a) max. rate per appl.  b) max. total rate per crop/season | Water L/ha  min / max |  |  |  | |
| **Zonal uses (field or outdoor uses, certain types of protected crops)** | | | | | | | | | | | | | | | |  | |
| 1 | PL | Maize, ~~sweet corn~~ | | F | Mono- and dicots weeds | Spray | Pre-emergence BBCH 00-09 | a)1  b)1 | | N/A | a) 0.28 L product/ha  b) 0.28 L product/ha | a) 70 g as/ha  b) 70 g as/ha | 200-300 | N/A |  | Acceptable for maize, Sweet corn only according to Article 51 can be accepted. | |
| 2 | PL | Maize, ~~sweet corn~~ | | F | Mono- and dicots weeds | Spray | Post-emergence BBCH 11-13 | a)1  b)1 | | N/A | a) 0.30 L product/ha  b) 0.30 L product/ha | a) 75 g as/ha  b) 75 g as/ha | 200-300 | N/A |  | Acceptable fro maize. Sweet corn only according to Article 51 can be accepted | |
| **Interzonal uses (use as seed treatment, in greenhouses (or other closed places of plant production), as post-harvest treatment or for treatment of empty storage rooms)** | | | | | | | | | | | | | | | |  | |
| 3 |  |  | |  |  |  |  |  | |  |  |  |  |  |  |  | |
| 4 |  |  | |  |  |  |  |  | |  |  |  |  |  |  |  | |
| **Minor uses according to Article 51 (zonal uses)** | | | | | | | | | | | | | | | |  | |
| 5 |  |  | |  |  |  |  |  | |  |  |  |  |  |  |  | |
| 6 |  |  | |  |  |  |  |  | |  |  |  |  |  |  |  | |
| **Minor uses according to Article 51 (interzonal uses)** | | | | | | | | | | | | | | | |  | |
| 7 |  |  | |  |  |  |  |  | |  |  |  |  |  |  |  | |
| 8 |  |  | |  |  |  |  |  | |  |  |  |  |  |  |  | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Remarks**  **table heading:** | (a) e.g. wettable powder (WP), emulsifiable concentrate (EC), granule (GR)  (b) Catalogue of pesticide formulation types and international coding system CropLife  International Technical Monograph n°2, 6th Edition Revised May 2008  (c) g/kg or g/l |  | (d) Select relevant  (e) Use number(s) in accordance with the list of all intended GAPs in Part B, Section 0 should be given in column 1  (f) No authorization possible for uses where the line is highlighted in grey, Use should be crossed out when the notifier no longer supports this use. |
|  |  |  |  |
| **Remarks**  **columns:** | 1 Numeration necessary to allow references  2 Use official codes/nomenclatures of EU Member States  3 For crops, the EU and Codex classifications (both) should be used; when relevant, the  use situation should be described (e.g. fumigation of a structure)  4 F: professional field use, Fn: non-professional field use, Fpn: professional and non-professional field use, G: professional greenhouse use, Gn: non-professional greenhouse use, Gpn: professional and non-professional greenhouse use, I: indoor application  5 Scientific names and EPPO-Codes of target pests/diseases/ weeds or, when relevant, the common names of the pest groups (e.g. biting and sucking insects, soil born insects, foliar fungi, weeds) and the developmental stages of the pests and pest groups at the moment of application must be named.  6 Method, e.g. high volume spraying, low volume spraying, spreading, dusting, drench Kind, e.g. overall, broadcast, aerial spraying, row, individual plant, between the plants - type of equipment used must be indicated. |  | 7 Growth stage at first and last treatment (BBCH Monograph, Growth Stages of Plants, 1997, Blackwell, ISBN 3‑8263-3152-4), including where relevant, information on season at time of application  8 The maximum number of application possible under practical conditions of use must be provided.  9 Minimum interval (in days) between applications of the same product  10 For specific uses other specifications might be possible, e.g.: g/m³ in case of fumigation of empty rooms. See also EPPO-Guideline PP 1/239 Dose expression for plant protection products.  11 The dimension (g, kg) must be clearly specified. (Maximum) dose of a.s. per treatment (usually g, kg or L product / ha).  12 If water volume range depends on application equipments (e.g. ULVA or LVA) it should be mentioned under “application: method/kind”.  13 PHI - minimum pre-harvest interval  14 Remarks may include: Extent of use/economic importance/restrictions |

\* 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 |

## Efficacy data (KCP 6)

Introduction

This document summarizes the information related to the efficacy of the product CHR/H/IZOXACYP 250 SC containing active substances: isoxaflutole.

CHR/H/IZOXACYP 250 SC applies in the Central Registration Zone for the registration of in maize at BBCH 00-09 and BBCH 11-13 applied once per season at the maximum rate of 70 g a.s./ha (preemergence application) and 75 g a.s./ha (postemergence application) isoxaflutole per application for the control of mono- and dicotyledonous weeds.

**General information**:

**Description of the plant protection product**

Marketing name:

**product submitted to registration under three different marketing names:** Metida Plus 250 SC/ Taizza Plus 250 SC

Formulants content:

The information concerning ingredients of product CHR/H/IZOXACYP 250 SC are included in the confidential part of the registration dossier: Registration Report – Part C.

Formulation of use:

SC – Suspension concentrate

**General information on the plant protection product:**

CHR/H/IZOXACYP 250 SC is to be applied in spring:

Preemergence BBCH 00-09 and postemergence BBCH 11-13 in maize.

The suggested dose of the product:

Used solo:

0.28 L/ha – preemergence application once a season in maize, which are corresponding to 70 g a.s./ha (isoxaflutole),

0.30 L/ha – postemergence application once a season in maize, which are corresponding to 75 g a.s./ha (isoxaflutole).

CHR/H/IZOXACYP 250 SC containing isoxaflutole as the active substance is prepared for the use in agricultural practice as a herbicide in the form SC – Suspension concentrate.

Information on the composition of product CHR/H/IZOXACYP 250 SC are included in the confidential part of the registration dossier: Registration Report – Part C.

Description of active substances

The descriptions of active substances will be provided in Section 1,2 4 to 8 and Part C.

Mode of action

Active substances:

**Isoxaflutole 250 g/L**

CAS no 141112-29-0

CIPAC No.: 796

IUPAC name: (5-cyclopropyl-1,2-oxazol-4-yl)-[2-methylsulfonyl-4-(trifluoromethyl)phenyl]methanone

Isoxaflutole is a systemic herbicide belonging to HRAC group 27 – 4-HPPD inhibitors. Isoxaflutole was developed for agricultural use. The use evaluated for the first EU approval was for the control of broad leaved and annual grass weeds in maize (silage, grain, seed and sweet corn). In maize isoxaflutole is applied as a single application at the stage of growth of maize BBCH 00 – 13 i.e. pre-emergence of the maize up to the third true leaf. In sweet corn there is a single application at the stage of BBCH 00 – 09 i.e. pre-emergence only. Following uptake, isoxaflutole is very xylem mobile when taken up via the roots and phloem mobile when taken up via the shoots and it accumulates in the leaf margins and tips. Eventually lethal amounts of isoxaflutole accumulate in the foliage and meristem. Germinating seedlings that contact the product either do not emerge or emerge white and stop growing. Isoxaflutole may also be adsorbed by foliage and roots of already emerged weeds and will injure or control young weeds that are emerged at application.

Table 3.2‑1: Details of the active substances

| Active substance | Isoxaflutole |
| --- | --- |
| Concentration  (Unit: g/kg or g/L...) | 250 g/L |
| Chemical group | isoxazole |
| Mode of action | 4-HPPD inhibition |
| Biological action | It is a systemic herbicide that is readily absorbed through the plant roots and shoots. Laboratory studies indicate that uptake is more efficient via the roots than the shoots. Following uptake, isoxaflutole is very xylem mobile from root uptake and phloem mobile from shoot uptake and will accumulate in the leaf margins and tips. Germinating seedlings that contact the product either do not emerge or emerge white and stop growing. Isoxaflutole may also be adsorbed by foliage and roots of already emerged weeds and will injure or control young weeds that are emerged at application. |

Description of the plant protection product

Formulation of use:

SC – Suspension concentrate

CHR/H/IZOXACYP 250 SC containing 250 g/L isoxaflutole as the active substance is prepared for the use in agricultural practice as a herbicide in the form SC – Suspension concentrate.

CHR/H/IZOXACYP 250 SC is to be applied postemergence in spring:

Preemergence BBCH 00-09 and postemergence BBCH 11-13 in maize.

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

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Uses** | | **Member State** | **Currently registered rate(s)** | | **Requested rate(s)** | | **Comments / Other relevant details on GAPs** |
|
| **Crop(s)** | **Target(s)** | **max. rate per appl** | **max. total rate per crop/season** | **max. rate per appl** | **max. total rate per crop/season** |
| maize | Mono- and dicotyledones weeds | PL | - | - | 0.28 L/ha | 0.28 L/ha | Preemergence application |
| maize | Mono- and dicotyledones weeds | PL | - | - | 0.30 L/ha | 0.30 L/ha | Postemergence application |

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.

**Maize**

|  |  |  |
| --- | --- | --- |
| **EPPO code** | **Scientific name** | **Common name\*** |
| CHEAL | *Chenopodium album* | fat-hen |
| ANTAR | *Anthemis arvensis* | Mayweed |
| POLCO | *Polygonum convolvulus* | black bindweed |
| SOLNI | *Solanum nigrum* | black nightshade |
| SINAR | *Sinapsis arvensis* | charlock |
| CAPBP | *Capsella bursa-pastoris* | Shepherd's purse |
| VERHE | *Veronica hederifolia* | Ivy-leaved speedwell |
| POLPE | *Polygonum persicaria* | lady's thumb |
| THLAR | *Thlaspi arvense* | Fanweed |
| VIOAR | *Viola arvensis* | Field violet |
| ECHCG | *Echinochloa crus-galli* | one-sided barnyardgrass |
| CAPBP | *Capsella bursa-pastoris* | Shepherd's purse |
| MATIN | *Tripleurospermum inodorum* | False chamomille |
| STEME | *Stellaria media* | Common chickweed |
| BRSNW | *Brassica napus* (self-sown plant) | Rapeseed |
| AMARE | *Amaranthus retroflexus* | redroot pigweed |

\* optional

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Crop and/or situation** | **Crop status** | | **Pests or group of pests controlled** | **Pest status** | |
| **Major** | **minor** | **Major** | **minor** |
| maize | PL | - | *Chenopodium album* | PL | - |
| *Anthemis arvensis* | PL | - |
| *Polygonum convolvulus* | PL |  |
| *Solanum nigrum* | PL | - |
| *Sinapsis arvensis* | PL | - |
| *Capsella bursa-pastoris* | PL | - |
| *Veronica hederifolia* | PL | - |
| *Polygonum persicaria* | PL | - |
| *Thlaspi arvense* | PL | - |
| *Viola arvensis* | - | PL |
| *Veronica persica* | - | PL |
| *Geranium pusillum* | PL | - |
| *Echinochloa crus-galli* | PL | - |
| *Capsella bursa-pastoris* | PL | - |
| *Tripleurospermum inodorum* | - | PL |
| *Stellaria media* | - | PL |
| *Brassica napus* (self-sown plant) | - | PL |
| *Amaranthus retroflexus* | PL | - |

Compliance with the Uniform Principles

The overall assessment was performed according to the uniform principles. There were no deviations from the EPPO guidelines with the trials conducted in North-East EPPO zone.

Information on trials submitted (3.1 Efficacy data)

The 30 trials (preemergence application 14 trials, postemergence application 16 trials) have been carried out in 2020, 2021 and 2022 in the North-East EPPO zone within the Central registration zone to evaluate the efficacy of applied at the proposed label rate of 70 g a.s./ha isoxaflutole (preemergence application) and 75 g a.s./ha (postemergence application) for the weed control in maize (Table 3.2 6). Trials were conducted in the main maize growing areas in the North-East EPPO zone in Poland.

Table 3.2‑5: Presentation of trials efficacy trials

**Maize preemergence application**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop(s) \*** | **Target(s)\*** | **Country** | **Years** | **Type of trial\*\*** | **Number of trials** | | **GEP, non-GEP, official\*\*\*** | **Comments (any other relevant information)** |
| **(number of valid trials)** | |
| **North- East zone** | **-** |
| *Chenopodium album* | Poland | 2021 | E | 4(4) | - | GEP | - |
| Poland | 2022 | E | 8(8) |  | GEP |  |
| TOTAL | - | 2021-2022 | - | 12(12) | - | - | - |
| *Anthemis arvensis* | Poland | 2021 | E | 1(1) | - | GEP | - |
| Poland | 2022 | E | 5(5) |  | GEP |  |
| TOTAL | - | 2021-2022 | - | 6(6) | - | - | - |
| *Polygonum persicaria* | Poland | 2021 | E | 1(1) | - | GEP | - |
| Poland | 2022 | E | 5(5) |  | GEP |  |
| TOTAL | - | 2021-2022 | - | 6(6) | - | - | - |
| *Thlaspi arvense* | Poland | 2021 | E | 1(1) | - | GEP | - |
| Poland | 2022 | E | 5(5) |  | GEP |  |
| TOTAL | - | 2021-2022 | - | 6(6) | - | - | - |
| *Viola arvensis* | Poland | 2021 | E | 2(2) | - | GEP | - |
| Poland | 2022 | E | 6(6) |  | GEP |  |
| TOTAL | - | 2021-2022 | - | 8(8) | - | - | - |
| *Solanum nigrum* | Poland | 2022 | E | 6(6) |  | GEP |  |
| TOTAL | - | 2022 | - | 6(6) | - | - | - |
| *Echinochloa crus-galli* | Poland | 2021 | E | 2(2) | - | GEP | - |
| Poland | 2022 | E | 7(7) |  | GEP |  |
| TOTAL | - | 2021-2022 | - | 9(9) | - | - | - |
| *Capsella bursa-pastoris* | Poland | 2021 | E | 1(1) | - | GEP | - |
| Poland | 2022 | E | 5(5) |  | GEP |  |
| TOTAL | - | 2021-2022 | - | 6(6) | - | - | - |
| *Tripleurospermum mar. inodorum* | Poland | 2021 | E | 2(2) | - | GEP | - |
| Poland | 2022 | E | 2(2) |  | GEP |  |
| TOTAL | - | 2021-2022 | - | 4(4) | - | - | - |
| *Stellaria media* | Poland | 2021 | E | 2(2) | - | GEP | - |
| Poland | 2022 | E | 3(3) |  | GEP |  |
| TOTAL | - | 2021-2022 | - | 5(5) | - | - | - |
| *Brassica napus* (self-sown plant) | Poland | 2021 | E | 2(2) | - | GEP | - |
| Poland | 2022 | E | 3(3) |  | GEP |  |
| TOTAL | - | 2021-2022 | - | 2(2)  5 (5) | - | - | - |
| *Amaranthus retroflexus* | Poland | 2021 | E | 2(2) | - | GEP | - |
| Poland | 2022 | E | 4(4) |  | GEP |  |
| TOTAL | - | 2021-2022 | - | 6(6) | - | - | - |
| TOTAL | 14 | - | 2021-2022 | - | 14 (86 79) | - | - | - |

\* 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.

**Maize postemergence application**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop(s) \*** | **Target(s)\*** | **Country** | **Years** | **Type of trial\*\*** | **Number of trials** | | **GEP, non-GEP, official\*\*\*** | **Comments (any other relevant information)** |
| **(number of valid trials)** | |
| **North- East zone** | **-** |
| Maize postemergence BBCH 11-13 | *Chenopodium album* | Poland | 2020 | E | 2(2) | - | GEP | - |
| Poland | 2021 | E | 11(11) |  | GEP | - |
| TOTAL | - | 2020-2021 | - | 13(13) | - | - | - |
| *Polygonum convolvulus* | Poland | 2020 | E | 2(2) | - | GEP | - |
| Poland | 2021 | E | 6(6) |  | GEP | - |
| TOTAL | - | 2020-2021 | - | 8(8) | - | - | - |
| *Anthemis arvensis* | Poland | 2020 | E | 1(1) | - | GEP | - |
| Poland | 2021 | E | 5(5) |  | GEP | - |
| TOTAL | - | 2020-2021 | - | 6(6) | - | - | - |
| *Polygonum persicaria* | Poland | 2020 | E | 1(1) | - | GEP | - |
| Poland | 2021 | E | 7(7) |  | GEP | - |
| TOTAL | - | 2020-2021 | - | 8(8) | - | - | - |
| *Thlaspi arvense* | Poland | 2020 | E | 1(1) | - | GEP | - |
| Poland | 2021 | E | 5(5) |  | GEP | - |
| TOTAL | - | 2020-2021 | - | 6(6) | - | - | - |
| *Viola arvensis* | Poland | 2020 | E | 2(2) | - | GEP | - |
| Poland | 2021 | E | 5(5) |  | GEP | - |
| TOTAL | - | 2020-2021 | - | 7(7) | - | - | - |
| *Solanum nigrum* | Poland | 2020 | E | 1(1) | - | GEP | - |
| Poland | 2021 | E | 3(3) |  | GEP | - |
| Poland | 2022 | E | 2(2) |  | GEP |  |
| TOTAL | - | 2020-2021 | - | 4(4)  6 (6) | - | - | - |
| *Echinochloa crus-galli* | Poland | 2020 | E | 2(2) | - | GEP | - |
| Poland | 2021 | E | 7(7) |  | GEP | - |
| TOTAL | - | 2020-2021 | - | 9(9) | - | - | - |
| *Sinapsis arvensis* | Poland | 2020 | E | 1(1) | - | GEP | - |
| Poland | 2021 | E | 4(4) |  | GEP | - |
| Poland | 2022 | E | 1(1) |  | GEP |  |
| TOTAL | - | 2020-2021 | - | 6(6) | - | - | - |
| *Capsella bursa-pastoris* | Poland | 2020 | E | 1(1) | - | GEP | - |
| Poland | 2021 | E | 5(5) |  | GEP | - |
| TOTAL | - | 2020-2021 | - | 6(6) | - | - | - |
| *Tripleurospermum mar. inodorum* | Poland | 2020 | E | 1(1) | - | GEP | - |
| Poland | 2021 | E | 5(5) | - | GEP | - |
| TOTAL | - | 2020-2021 | - | 6(6) | - | - | - |
| *Veronica hederifolia* | Poland | 2020 | E | 1(1) | - | GEP | - |
| Poland | 2021 | E | 2(2) | - | GEP | - |
| Poland | 2022 | E | 3(3) |  | GEP |  |
| TOTAL | - | 2020-2021 | - | 6(6) | - | - | - |
| *Stellaria media* | Poland | 2020 | E | 1(1) | - | GEP | - |
| Poland | 2021 | E | 5(5) | - | GEP | - |
| TOTAL | - | 2020-2021 | - | 6(6) | - | GEP | - |
| *Brassica napus* (self-sown plant) | Poland | 2020 | E | 1(1) | - | GEP | - |
| Poland | 2021 | E | 2(2) | - | GEP | - |
| Poland | 2022 | E | 3(3) |  | GEP |  |
| TOTAL | - | 2020-2021 | - | 6(6) | - | GEP | - |
| *Amaranthus retroflexus* | Poland | 2020 | E | 0(0) | - | GEP | - |
| Poland | 2021 | E | 6(6) | - | GEP | - |
| TOTAL | - | 2020-2021 | - | 6(6) | - | GEP | - |
| TOTAL | 17 16 | - | 2020-2021- 2022 | - | 17 (96)  16 (105) | - | - | - |

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

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

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

Table 3.2‑6: Presentation of reference standards used in trials efficacy trials

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop(s)** | **Reference standard** | **Country(ies) where the product is registered (1)** | **Authorization number** | **Active substance(s)** | **Formulation** | | **Registered application** | **Application** | **Remark(4)** |
| **Type(2)** | **Concentration of a.s.** | **rate(3)** | **rate in trials (per treatment)** |
| maize | Adengo 315 SC | Poland | R – 14/2011,  R-44/2019b | isoxaflutole | SC – Suspension concentrate | 225 g/L | 0.33-0.44 L/ha | 0.33 L/ha | - |
| thiencarbazone-methyl | 90 g/L |

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

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

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

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

|  |  |
| --- | --- |
| Comments of zRMS: | This document summarises the information related to the efficacy of the plant protection product – Metida Plus 250 SC/ Taizza Plus 250 SC (product code: CHR/H/IZOXACYP 250 SC).  Metida Plus 250 SC/ Taizza Plus 250 SC (product code: CHR/H/IZOXACYP 250 SC) is characterized by a suspension concentrate (SC) formulation containing 250 grams per liter (g/L) isoxaflutole for use in maize.  Isoxaflutole is one of a class of chemicals called HPPD inhibitors that block the production of the enzyme 4-hydroxyphenylpyruvate dioxygenase, which plants use to break down the amino acid tyrosine into homogentisic acid. Weeds use homogentisic acid as a raw material to synthesize the yellow and orange carotenoids and tocopherols they use as sunscreen. Without that protection, green-pigmented chlorophyll in a plant’s chloroplasts quickly degrades in sunlight. The result is a bleached and soon dead weed.  Laboratory studies indicate that uptake is more efficient via the roots than the shoots. Following uptake, isoxaflutole is very xylem mobile from root uptake and phloem mobile from shoot uptake and will accumulate in the leaf margins and tips. Germinating seedlings that contact the product either do not emerge or emerge white and stop growing. Isoxaflutole may also be adsorbed by foliage and roots of already emerged weeds and will injure or control young weeds that are emerged at application.  Isoxaflutole has been used on corn since 1999. Although the herbicide is applied on less than 10% of corn grown in the US, it has left a large environmental footprint because of its persistence in the environment and ability to leach into groundwater.  Currently, in Poland 5 plant protection products with isoxaflutole are registered and commonly used for protection crops. However, no plant protection product with isoxaflutole as a single active compound are registered in Poland yet. On Polish market isoxaflutole is only sold as a mixture tank with other compounds, a.o. Jotamun 650 WG with mesotrione and terbuthylazine. So, maybe **Metida Plus 250 SC/ Taizza Plus 250 SC will be after registration the first plant protection products on Polish market with only one compound: isoxaflutole.**  Poland is a ZRMs. Applicant submitted in this dRR all needed information’s about plant protection product, standard reference, etc. |

### Preliminary tests (KCP 6.1)

Preliminary studies on product CHR/H/IZOXACYP 250 SC were not carried out because this herbicide contains isoxaflutole which are a well-known active substance that has been used for many years in agricultural practice.

According to EPPO PP1/225(2) lower doses have been tested in the efficacy studies, therefore no specific studies were conducted to fill this data point.

Table 3.2‑7: Efficacy of active substance components in test product – not applicable

Not applicable

Table 3.2‑8: Percentage of control of the different ratios at timing of assessment (e.g. 10 to 14 days after application).- not applicable

Not applicable

Summary and conclusions on the preliminary trials

Not applicable

|  |  |
| --- | --- |
| Comments of zRMS: | No results of the preliminary range-finding tests were submitted by the Applicant, however the active substance of ‘Metida Plus 250 SC/ Taizza Plus 250 SC’ (product code: CHR/H/IZOXACYP 250 SC) – isoxaflutole is registered (since 1999) and has been commonly used in agricultural practice for many years. So, preliminary range finding tests are deemed to not be necessary, since the efficacy values of isoxaflutole are well known for many years. The ratio cannot be compared to already launched and proven herbicides based upon this active compound in Poland. Because only mixture tanks with isoxaflutole are registered. However, MED dose was defined during efficacy trials. **Therefore, there was no need for preliminary range-finding tests in the opinion of Evaluator.** |

### Minimum effective dose tests (KCP 6.2)

No specific studies were conducted to fill this data point.

On the basis of information included in KCP point 3.2.3 the assessment of efficacy and phytotoxicity trials in KCP point 3.2.3 of herbicide CHR/H/IZOXACYP 250 SC in maize the minimum effective dose of product CHR/H/IZOXACYP 250 SC used is:

Used solo:

0.28 L/ha – preemergence application once a season in maize, which are corresponding to 70 g a.s./ha (isoxaflutole),

0.30 L/ha – postemergence application once a season in maize, which are corresponding to 75 g a.s./ha (isoxaflutole).

According to EPPO PP1/225(2) lower doses have been tested in the efficacy studies, therefore the minimum effective trials were not conducted.

Crop(s) 1 AND/OR Target(s) 1

Not applicable

Table 3.2‑9: Minimum effective dose. Efficacy of product at proposed label rate, at X% and Y% dose rates on target 1 at assessment timing against “Crop(s) 1 AND/OR Target(s) 1”.

No specific studies were conducted to fill this data point.

Crop(s) 2 AND/OR Target(s) 2

Not applicable

Summary and conclusions on the minimum effective dose

Not applicable

|  |  |
| --- | --- |
| Comments of zRMS: | The trials submitted to support the MED (minimum effective dose) of ‘Metida Plus 250 SC/ Taizza Plus 250 SC’ (product code: CHR/H/IZOXACYP 250 SC are the same as the efficacy trials described under section efficacy.  To provide information to establish the minimum effective dose, some of the trials conducted to demonstrate efficacy should include at least two lower dose(s) than recommended dose. In the appropriate research of efficacy were tested differ doses and to register was chosen the lowest effective, which is in accordance with EPPO 1/225 (2).  Applicant presented in total 30 efficacy trials to demonstrate the minimum effective dose for pre-emergence use (14) and post-emergence use (16). All trials were carried out in PL (N-E EPPO zone).  For pre-emergence application following doses were used: 0.16 L/ha (0.57N); 0.20 L/ha (0.71N); 0.24 L/ha (0.86N) and 0.28 L/ha (N-recommended). Standard ref, product (Adengo 315 SC) was used at dose 0,33 L/ha. Pre-emergence trials were carried out in different growing seasons: 2021 and 2022.  For post-emergence application following dose were studied: 0.20 L/ha (0.67N) - only in 2021); 0.25 L/ha (0.83N); 0.30 L/ha (N-recommended); 0.35 L/ha (1.17N) and 0.40 L/ha (1.33N -only in 2020). Standard ref, product (Adengo 315 SC) was used at dose 0,33 L/ha. Post-emergence trials were carried out in different growing seasons: 2020; 2021 and 2022.  **The conclusion is, therefore, that to obtain a satisfactory level of control against weeds claimed on the label, a dose 0.28 L/ha is necessary for control weeds in maize pre-emergence and dose 0.30 L/ha for post-emergence application.** |

### Efficacy tests (KCP 6.2)

Materials and methods

The applicant submitted 30 reports (in total) showing the results in research into product efficacy carried out in 2020, 2021 and 2022 in maize: preemergence application (14 trials) and postemergence application (16 trials). List of these reports is contained in Appendix 1.

Site

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

Testing units

Efficacy studies on herbicide CHR/H/IZOXACYP 250 SC were performed in 2020 and 2021 by:

- SynTech Research Poland Sp. z o.o., ul. Jagiellońska 69/1, 85-027 Bydgoszcz, Poland

- A.T Sp. z o.o., ul. Przemysłowa 3, 88-300 Mogilno, Poland

- Poznań University of Life Sciences, Research and Education Center Gorzyń, ul. Wojska Polskiego 28, 60-637 Poznań, Poland

Experimental details

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

- PP 1/135 (3) Phytotoxicity assessment

- PP 1/152 (3) Design and analysis of efficacy evaluation trials

- PP 1/181 (3) Conduct and reporting of efficacy evaluation trials including good experimental practice

They were carried out on the field in the conditions of natural agrofag infestation. The efficacy trials were concluded according to the EPPO standards:

- PP 1/50(3) Weeds in maize

- PP 1/50(4) Weeds in maize

Assessment methods

Statistical Analysis

The test results were statistically evaluated using the ARM 2020.1 statistical program. All assessment data was analyzed by analysis of variance (two-way analysis of variance). Significance of differences between the combinations was assessed using the Student-Newman-Keuls test at a significance level of p = 0.05 using "ARM 9" (version 9.1.5). All data were tested for homogeneity using the Bartlett test for homogeneity. for any data columns that did not pass this test, automatic data transformations were performed in the ARM (see ARM action codes below each scoreboard) Care should betaken when interpreting these data columns Efficacy was analyzed by Abbott's test (% of control).

Software for analysis of the results was ARM Revision 2017.4 from Gylling Data Management. Data were analysed using analysis of variance (ANOVA) on untransformed data and on transformed ones when the Bartlett's test indicated so. If transformation did not improve the distribution, original values were used and therefore significant differences reported should be interpreted with caution. The probability of no significant differences occurring between treatment means was calculated as the F probability value (Treatment Prob(F)). Student-Newman-Keuls (S-N-K) tests were applied when treatment differences were identified on the basis of the ANOVA test. Mean comparison performed only when AOV Treatment P(F) is significant at level selected. Results obtained where indicated by a letter-treatment means with no letters in common are significantly different in accordance with a S-N-K conducted at a 95% confidence level. Where data have been transformed, letters are included in the transformed data.

The treatment means of the assessment dates were calculated and compared using Student-Newman-Keuls test (P=0.05). The statistical procedures were applied using ARM 2020.1 software.

Assessment of efficacy

The effectiveness of the control of monocotyledonous and dicotyledonous weeds was assessed visually by comparing the condition of individual weeds on the herbicide-treated plots and on the untreated objects. Results were presented as percent damage using a 0-100 scale, where 0 - no efficacy, 100 - total weed control. Both before the application of the preparation and on each evaluation day, the number of individual weeds was determined on the control plots on the area of 1 m2.

An efficacy was evaluated through assessments of damage weeds on plots treated compared to untreated (check) plots. The results was presented in percentage of efficacy (%). On untreated plots estimated number of weeds on 1 square meter.

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

Assessment of phytotoxicity

Phytotoxicity (chlorosis and necrosis), stunting and thinning were assessed by visual estimation of the intensity on an overall plot basis on a percentage scale 0-100 % (0=no damage). The assessment date was determined by the speed of action and period of efficacy of the test substances.

The phytotoxicity assessment of the tested preparations was carried out by visually assessing the intensity of chlorosis, necrosis, leaf twisting, reduction of plant turgor, etc. on the surface of the entire plots and comparing each plot with the control plot. The assessment was made directly on the plantation. The results are presented on a 0-100 scale, where 0 - no phytotoxicity, 100 - complete destruction of plants.

Applications methods and rates

The applications were carried out by a T-BOOM – BACCAI and plot sprayer BICSPR.

**Tested herbicide was applied at the growth stage in maize:**

Preemergence BBCH 00-09

and postemergence BBCH 11-13.

The product CHR/H/IZOXACYP 250 SC has been used in maize at the following rates of:

0.16, 0.20, 0.24 and 0.28 L/ha – preemergence,

0.20, 0.25, 0.30, 0.35 and 0.40 L/ha – postemergence.

Adengo 315 SC was used as a reference product in maize.

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

**Experiment pattern:**

**PREEMERGENCE APPLICATION**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **Rate (L/ha)** | **other rate (g a.s./ha)** | **Appl code** | **Growth Stage BBCH** |
| 1 | Untreated Check |  |  |  |  |
| 2 | CHR/H/IZOXACYP 250 SC | 0.16 L/ha | 40 g a.s./ha | A | BBCH 00-09 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.20 L/ha | 50 g a.s./ha | A | BBCH 00-09 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.24 L/ha | 60 g a.s./ha | A | BBCH 00-09 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.28 L/ha | 70 g a.s./ha | A | BBCH 00-09 |
| 6 | Adengo 315 SC | 0.33 L/ha | 103.95 g a.s./ha | A | BBCH 00-09 |

**POSTEMERGENCE APPLICATION – 2020**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **Rate (L/ha)** | **other rate (g a.s./ha)** | **Appl code** | **Growth Stage BBCH** |
| 1 | Untreated Check |  |  |  |  |
| 2 | CHR/H/IZOXACYP 250 SC | 0.25 L/ha | 62.5 g a.s./ha | A | BBCH 11-13 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.30 L/ha | 75.0 g a.s./ha | A | BBCH 11-13 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.35 L/ha | 87.5 g a.s./ha | A | BBCH 11-13 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.40 L/ha | 100 g a.s./ha | A | BBCH 11-13 |
| 6 | Adengo 315 SC | 0.33 L/ha | 103.95 g a.s./ha | A | BBCH 11-13 |

**POSTEMERGENCE APPLICATION – 2021, 2022**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **Rate (L/ha)** | **other rate (g a.s./ha)** | **Appl code** | **Growth Stage BBCH** |
| 1 | Untreated Check |  |  |  |  |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 L/ha | 50.0 g a.s./ha | A | BBCH 11-13 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25L/ha | 62.5 g a.s./ha | A | BBCH 11-13 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 L/ha | 75.0 g a.s./ha | A | BBCH 11-13 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 L/ha | 87.5 g a.s./ha | A | BBCH 11-13 |
| 6 | Adengo 315 SC | 0.33 L/ha | 103.95 g a.s./ha | A | BBCH 11-13 |

Details of experiments

**MAIZE PREEMERGENCE APPLICATION**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Report code** | **SRPL21-433-336FE** | **SRPL21-434-336FE** | **SRPL21-435-336FE** | **SRPL21-436-336FE** | **A.T/2022/002/KK** | **A.T/2022/003/KK** | **A.T/2022/004/KK** | **A.T/2022/005/KK** | **A.T/2022/006/KK** | **AH/22/K/20/Br/01** | **AH/22/K/20/Zł/02** | **AH/22/K/20/Gr/03** | **AH/22/K/20/Ce/04** | **AH/22/K/20/Mr/05** |
| **Location** | Wąwolnica/ Poland | Jankowice Wielkie/ Poland | Jabłowo Pałuckie/ Poland | Gietrzwałd / Poland | Kocanowo/ Poland | Zielątkowo / Poland | Kopaszyn / Poland | Dąbrówka / Poland | Trzeciewnica / Poland | Brody / Poland | Złotniki / Poland | Gorzyń / Poland | Cerekwica / Poland | Kokoszczyn / Poland |
| **Plant /cultivar** | maize/ PIONEER P8307 | maize/ SY Calo | maize/ DKC 3595 | maize/ Cedro (FAO 200) | maize/ ES Faraday | maize/ DKC 3595 | maize/ ES Constellation | maize/ Baobi | maize/ DKC3079 | maize/ Farmfire | maize/ Farmfire | maize/ Farmodena | maize/ Pioneer P8255 | maize/ DKC 3350 |
| **Seeding date** | 26.05.2021 | 10.05.2021 | 08.05.2021 | 15.05.2021 | 25.04.2022 | 27.04.2022 | 01.05.2022 | 30.04.2022 | 06.05.2022 | 05.05.2022 | 25.04.2022 | 09.05.2022 | 27.04.2022 | 30.04.2022 |
| **Seeding rate** | 80 000 S/ha | 70 000 S/ha | 90 000 S/ha | 110 000 S/ha | 83 000 S/ha | 78 000 S/ha | 80 000 S/ha | 85 000 S/ha | 88 000 S/ha | 80 000 S/ha | 80 000 S/ha | 80 000 S/ha | 80 000 S/ha | 80 000 S/ha |
| **Forecrop** | maize | potato | maize | winter wheat | lucerne | maize | winter triticale | maize | sugar beet | winter triticale | potato | maize | winter wheat | maize |
| **Type of sprayer** | SPRBIC | BACCAI | BACCAI | BACCAI | BACCAI | BACCAI | BACCAI | BACCAI | BACCAI | SPRBIC | SPRBIC | SPRBIC | SPRBIC | SPRBIC |
| **Date of treatment** | 26.05.2021 | 13.05.2021 | 17.05.2021 | 17.05.2021 | 28.04.2022 | 06.05.2022 | 06.05.2022 | 12.05.2022 | 11.05.2022 | 06.05.2022 | 29.04.2022 | 10.05.2022 | 04.05.2022 | 11.05.2022 |
| **Plant development phase** | BBCH 00 | BBCH 00 | BBCH 03 | BBCH 00 | BBCH 03-06 | BBCH 03-06 | BBCH 05 | BBCH 07-09 | BBCH 07 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |
| **Soil type** | sandy clay loam | sandy loam | loamy sand | loamy sand | sandy loam | sandy loam | loamy sand | sandy loam | sandy loam | loamy sand | loamy sand | loamy sand | sandy loam | sandy loam |
| **pH** | 6.69 | 6.4 | 7.9 | 5.8 | 5.9 | 6.7 | 6.2 | 5.1 | 5.5 | 6.3 | 5.8 | 6.0 | 5.7 | 6.1 |
| **Water (L/ha)** | 300 L/ha | 300 L/ha | 300 L/ha | 200 L/ha | 200 L/ha | 200 L/ha | 200 L/ha | 200 L/ha | 200 L/ha | 230 L/ha | 200 L/ha | 300 L/ha | 200 L/ha | 230 L/ha |

**MAIZE POSTEMERGENCE APPLICATION**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Report code** | **A.T/2020/081/KK** | **A.T/2020/082/KK** | **A.T/2021/054/KK** | **A.T/2021/055/KK** | **A.T/2021/056/KK** | **A.T/2021/057/KK** | **A.T/2021/059/KK** | **A.T/2021/103/KK** | **SRPL21-437-336FE** | **SRPL21-438-336FE** | **SRPL21-439-336FE** | **SRPL21-440-336FE** | **SRPL21-441-336FE** | **AH/22/K/20/JAB/01** | **AH/22/K/20/MAŁ/02** | **AH/22/K/20/NW/03** |
| **Location** | Kocanowo/ Poland | Dąbrówka/ Poland | Wymysłowo / Poland | Batorowo/ Poland | Kopaszyn/ Poland | Nowy Dwór/ Poland | Stare Gralewo/ Poland | Borkowo Kościelne / Poland | Rąblów / Poland | Jankowice Wielkie/ Poland | Jabłowo Pałuckie / Poland | Naglady / Poland | Osowka / Poland | Jabłowo Pałuckie / Poland | Małujowice / Poland | Nowa Wieś / Poland |
| **Plant /cultivar** | maize/ LG 32.16 | maize/ SM Hubal | maize/ LG 3216 | maize/ ES Yakari | maize/ Luigi | maize/ Ambrosini | maize/ Sm Piast | maize/ Opoka | maize/ PIONEER P8307 | maize/ SY Talisman | maize/ DKC 3595 | maize/ Cedro | maize/ PIONEER | maize/ DKC3595 | maize/ Ułan | maize/ Subito |
| **Seeding date** | 22.04.2020 | 29.04.2020 | 19.04.2021 | 27.04.2021 | 01.05.2021 | 04.05.2021 | 27.05.2021 | 14.06.2021 | 31.05.2021 | 15.04.2021 | 08.05.2021 | 13.05.2021 | 15.05.2021 | 30.05.2022 | 30.05.2022 | 16.06.2022 |
| **Seeding rate** | 83 000 S/ha | 80 000 S/ha | 90 000 S/ha | 78 000 S/ha | 80 000 S/ha | 80 000 S/ha | 80 000 S/ha | 83 000 S/ha | 86 000 S/ha | 70 000 S/ha | 90 000 S/ha | 110 000 S/ha | 83 500 S/ha | 85 000 S/ha | 90 000 S/ha | 80 000 S/ha |
| **Forecrop** | maize | maize | maize | winter barley | winter triticale | potato | sugar beet | perennial ryegrass | maize | winter barley | maize | winter wheat | owies | winter triticale | winter wheat | maize |
| **Type of sprayer** | BACCAI | BACCAI | BACCAI | BACCAI | BACCAI | BACCAI | BACCAI | BACCAI | SPRBIC | BACCAI | BACCAI | BACCAI | SPRBIC | BACCAI | BACCAI | BACCAI |
| **Date of treatment** | 15.05.2020 | 26.05.2020 | 19.05.2021 | 26.05.2021 | 26.05.2021 | 31.05.2021 | 27.05.2021 | 24.06.2021 | 15.06.2021 | 28.04.2021 | 02.06.2021 | 07.06.2021 | 01.06.2021 | 22.06.2022 | 21.06.2022 | 12.07.2022 |
| **Plant development phase** | BBCH 11-12 | BBBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-13 | BBCH 11-12 | BBCH 11-12 |
| **Soil type** | loamy sand | loamy sand | loamy sand | loamy sand | loamy sand | sand | loamy sand | loamy sand | slit loam | sandy loam | loamy sand | sandy loam | sandy loam | loamy sand | loamy sand | sandy loam |
| **pH** | 6.2 | 5.1 | 4.3 | 7.4 | 6.2 | 5.6 | 6.5 | 6.0 | 5.9 | 6.3 | 7.9 | 4.9 | 6.7 | 6.8 | 6.4 | 6.0 |
| **Water (L/ha)** | 200 L/ha | 200 L/ha | 200 L/ha | 200 L/ha | 200 L/ha | 200 L/ha | 200 L/ha | 300 L/ha | 300 L/ha | 300 L/ha | 300 L/ha | 200 L/ha | 300 L/ha | 300 L/ha | 300 L/ha | 300 L/ha |

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

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

**Efficacy tests**

The 30 trials (14 trials in preemergence application and 16 trials in postemergence application) have been carried out in maize in 2020,2021 and in 2022 in Poland.

The product CHR/H/IZOXACYP 250 SC has been used in maize in spring at the following rates of:

0.16, 0.20, 0.24 and 0.28 L/ha – preemergence,

0.20, 0.25, 0.30, 0.35 and 0.40 L/ha – postemergence.

Tested herbicide was applied at the growth stage:

Preemergence BBCH 00-09 and postemergence BBCH 11-13.

Table 3.2‑10: Details on trial methodology

|  |  |  |
| --- | --- | --- |
| Guidelines | General guidelines | PP 1/152 (3) Design and analysis of efficacy evaluation trials |
|  | PP 1/181 (3) Conduct and reporting of efficacy evaluation trials including good experimental practice |
|  | PP 1/135 (3) Phytotoxicity assessment |
| Specific guidelines | PP 1/50(3) Weeds in maize  PP 1/50(4) Weeds in maize |
| Experimental design | Plot design | Randomized Complete Block (RCB) – (30) |
| Plot size | Maize preemergence: 12.5-30.0 m2  Maize postemergence: 12.5 m2 – 15.0 m2 |
| Number of replications | 4 (30) |
| Crop | Trials per crop | Maize preemergence (14 trails)  Maize postemergence (16 trails) |
| Varieties per crop | Maize preemergence: PIONEER P8307, SY Calo, DKC 3595, Cedro (FAO 200), ES Faraday, ES Constellation, Baobi, DKC3079, Farmfire, Farmodena, Pioneer P8255, DKC 3350  Maize postemergence: LG 32.16, SM Hubal, LG 3216, ES Yakari, Luigi, Ambrosini, Sm Piast, Opoka, PIONEER P8307, SY Talisman, DKC 3595, Cedro, PIONEER, Ułan, Subito |
| Sowing period | Maize preemergence: 08.05.2021-26.05.2021; 25.04.2022-09.05.2022  Maize postemergence: 22.04.2020-29.04.2020, 15.04.2021-14.06.2021; 30.05.2022-16.06.2022 |
| Application | Crop stage (BBCH)\* at application | Maize preemergence: BBCH 00-09  Maize postemergence: BBCH 11-13 |
| Timing  Pest stage at application (1) | The data available in Appendix 4 |
| Number of applications  Intervals between applications | 1 (30 trials), interval – n/a |
| Spray volumes | Maize preemergence: 200-300 L/ha  Maize postemergence: 200-300 L/ha |
| Assessment | Assessment types | Assessment of efficacy  Assessment of phytotoxicity |
| Assessment dates | Assessment dates deatalis is available in Appendix 4 |
| Other relevant information | e.g. Soil type, pH (in case of soil active substance …) | Maize preemergence: pH: 5.1-7.9  Maize postemergence: pH: 4.3-7.9 |
| e.g. Natural / artificial innoculation… | n/a |
| e.g. Field / Greenhouse... | n/a |
| ... | n/a |

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

Crop(s) 1 AND/OR Target(s) 1

A total of 17 trials were carried out to evaluate the efficacy of product CHR/H/IZOXACYP 250 SC for the control of mono- and dicotyledonous weeds in maize.

* + - 1. **Efficacy tests of CHR/H/IZOXACYP 250 SC**

# PREEMERGENCE APPLICATION

The 14 trials were carried out in maize in 2021 and 2022. The herbicide CHR/H/IZOXACYP 250 SC was applied once per season at the following rates of 0.16, 0.20, 0.24 and 0.28 L/ha.

# 3.2.3-1.1 The efficacy of CHR/H/IZOXACYP 250 SC in control of CHEAL *Chenopodium album*

The efficiency of CHR/H/IZOXACYP 250 SC in control of CHEAL *Chenopodium album* were investigated in 12 trials. The tested product at rates: 0.16 L/ha, 0.20 L/ha, 0.24 L/ha and 0.28 L/ha controlled this species of weed at the low to high level of efficacy 22-29 DA-A. The effectiveness fluctuated from 69.72–89.43%.

The effectiveness fluctuated at rate 0.16 L/ha from 37.70% (28 DA-A) to 94.00% (28 DA-A), at rate 0.20 L/ha from 51.30% (28 DA-A) to 94.80% (28 DA-A), at rate 0.24 L/ha from 68.80% (28 DA-A) to 99.00% (28 DA-A) and at rate 0.28 L/ha from 78.80% (29 DA-A) to 100% (28 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 91.63% for Adengo 315 SC during the assessment (Appendix 5 tab. 1).

# 3.2.3-1.2 The efficacy of CHR/H/IZOXACYP 250 SC in control of ANTAR *Anthemisa arvensis*

The efficiency of CHR/H/IZOXACYP 250 SC in control of ANTAR *Anthemisa arvensis* were investigated in 6 trials. The tested product at rates: 0.16 L/ha, 0.20 L/ha, 0.24 L/ha and 0.28 L/ha controlled this species of weed at the medium to high level of efficacy 22-28 DA-A. The effectiveness fluctuated from 73.02–87.73%.

The effectiveness fluctuated at rate 0.16 L/ha from 62.50% (28 DA-A) to 92.50% (28 DA-A), at rate 0.20 L/ha from 68.30% (28 DA-A) to 93.80% (28 DA-A), at rate 0.24 L/ha from 73.80% (28 DA-A) to 94.80% (28 DA-A) and at rate 0.28 L/ha from 80.80% (29 DA-A) to 95.80% (28 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 91.53% for Adengo 315 SC during the assessment (Appendix 5 tab. 2).

# 3.2.3-1.3 The efficacy of CHR/H/IZOXACYP 250 SC in control of POLPE *Polygonum persicaria*

The efficiency of CHR/H/IZOXACYP 250 SC in control of POLPE *Polygonum persicaria* were investigated in 6 trials. The tested product at rates: 0.16 L/ha, 0.20 L/ha, 0.24 L/ha and 0.28 L/ha controlled this species of weed at the medium to high level of efficacy 27-39 DA-A. The effectiveness fluctuated from 72.52–92.65%.

The effectiveness fluctuated at rate 0.16 L/ha from 66.50% (28 DA-A) to 91.80% (28 DA-A), at rate 0.20 L/ha from 75.00% (28 DA-A) to 93.50% (28 DA-A), at rate 0.24 L/ha from 80.00% (28 DA-A) to 98.00% (39 DA-A) and at rate 0.28 L/ha from 85.00% (28 DA-A) to 100% (39 DA-A).

The efficacy of the tested herbicide was lower than standard product. In the trials efficacy amounted above 98.93% for Adengo 315 SC during the assessment (Appendix 5 tab. 3).

# 3.2.3-1.4 The efficacy CHR/H/IZOXACYP 250 SC in control of THLAR *Thlaspi arvense*

The efficiency of CHR/H/IZOXACYP 250 SC in control of THLAR *Thlaspi arvense* were investigated in 6 trials. The tested product at rates: 0.16 L/ha, 0.20 L/ha, 0.24 L/ha and 0.28 L/ha controlled this species of weed at the medium to high level of efficacy 22-28 DA-A. The effectiveness fluctuated from 73.18–87.13%.

The effectiveness fluctuated at rate 0.16 L/ha from 32.50% (28 DA-A) to 96.50% (28 DA-A), at rate 0.20 L/ha from 40.00% (28 DA-A) to 99.50% (28 DA-A), at rate 0.24 L/ha from 56.30% (28 DA-A) to 100% (28 DA-A) and at rate 0.28 L/ha from 65.00% (28 DA-A) to 100% (28 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 92.95% for Adengo 315 SC during the assessment (Appendix 5 tab. 4).

# 3.2.3-1.5 The efficacy of CHR/H/IZOXACYP 250 SC in control of VIOAR *Viola arvensis*

The efficiency of CHR/H/IZOXACYP 250 SC in control of VIOAR *Viola arvensis* were investigated in 8 trials. The tested product at rates: 0.16 L/ha, 0.20 L/ha, 0.24 L/ha and 0.28 L/ha controlled this species of weed at the low to medium level of efficacy 22-29 DA-A. The effectiveness fluctuated from 67.30–83.81%.

The effectiveness fluctuated at rate 0.16 L/ha from 0.00% (28 DA-A) to 99.00% (28 DA-A), at rate 0.20 L/ha from 11.30% (28 DA-A) to 100% (28 DA-A), at rate 0.24 L/ha from 26.30% (28 DA-A) to 100% (28 DA-A) and at rate 0.28 L/ha from 36.30% (28 DA-A) to 100% (28 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 81.30% for Adengo 315 SC during the assessment (Appendix 5 tab. 5).

# 3.2.3-1.6 The efficacy of CHR/H/IZOXACYP 250 SC in control of ECHCG *Echinochloa crus-galli*

The efficiency of CHR/H/IZOXACYP 250 SC in control of ECHCG *Echinochloa crus-galli* were investigated in 9 trials. The tested product at rates: 0.16 L/ha, 0.20 L/ha, 0.24 L/ha and 0.28 L/ha controlled this species of weed at the medium to high level of efficacy 22-29 DA-A. The effectiveness fluctuated from 72.41–86.69%.

The effectiveness fluctuated at rate 0.16 L/ha from 37.50% (25 DA-A) to 96.00% (28 DA-A), at rate 0.20 L/ha from 45.00% (25 DA-A) to 97.50% (28 DA-A), at rate 0.24 L/ha from 52.50% (25 DA-A) to 98.50% (28 DA-A) and at rate 0.28 L/ha from 67.50% (25 DA-A) to 99.30% (28 DA-A).

The efficacy of the tested herbicide was lower than the standard product. In the trials efficacy amounted above 89.99% for Adengo 315 SC during the assessment (Appendix 5 tab. 6).

# 3.2.3-1.7 The efficacy of CHR/H/IZOXACYP 250 SC in control of CAPBP *Capsella bursa-pastoris*

The efficiency of CHR/H/IZOXACYP 250 SC in control of CAPBP *Capsella bursa-pastoris* were investigated in 6 trials. The tested product at rates: 0.16 L/ha, 0.20 L/ha, 0.24 L/ha and 0.28 L/ha controlled this species of weed at the medium to high level of efficacy 27-28 DA-A. The effectiveness fluctuated from 76.48–94.18%.

The effectiveness fluctuated at rate 0.16 L/ha from 57.30% (28 DA-A) to 93.80% (28 DA-A), at rate 0.20 L/ha from 58.80% (28 DA-A) to 94.80% (28 DA-A), at rate 0.24 L/ha from 68.50% (28 DA-A) to 100% (28 DA-A) and at rate 0.28 L/ha from 86.30% (28 DA-A) to 100% (28 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 95.88% for Adengo 315 SC during the assessment (Appendix 5 tab. 7).

# 3.2.3-1.8 The efficacy of CHR/H/IZOXACYP 250 SC in control of MATIN *Tripleurospermum mar. inodorum*

The efficiency of CHR/H/IZOXACYP 250 SC in control of MATIN *Tripleurospermum mar. inodorum* were investigated in 4 trials. The tested product at rates: 0.16 L/ha, 0.20 L/ha, 0.24 L/ha and 0.28 L/ha controlled this species of weed at the low to high level of efficacy 22-28 DA-A. The effectiveness fluctuated from 61.95–86.53%.

The effectiveness fluctuated at rate 0.16 L/ha from 30.00% (28 DA-A) to 77.30% (22 DA-A), at rate 0.20 L/ha from 47.50% (28 DA-A) to 83.75% (28 DA-A), at rate 0.24 L/ha from 72.50% (28 DA-A) to 98.50% (28 DA-A) and at rate 0.28 L/ha from 81.30% (28 DA-A) to 100% (28 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 76.28% for Adengo 315 SC during the assessment (Appendix 5 tab. 8).

# 3.2.3-1.9 The efficacy of CHR/H/IZOXACYP 250 SC in control of STEME *Stellaria media*

The efficiency of CHR/H/IZOXACYP 250 SC in control of STEME *Stellaria media* were investigated in 5 trials. The tested product at rates: 0.16 L/ha, 0.20 L/ha, 0.24 L/ha and 0.28 L/ha controlled this species of weed at the medium to high level of efficacy 22-28 DA-A. The effectiveness fluctuated from 73.15–91.20%.

The effectiveness fluctuated at rate 0.16 L/ha from 65.00% (25 DA-A) to 85.00% (27 DA-A), at rate 0.20 L/ha from 68.50% (28 DA-A) to 91.30% (27 DA-A), at rate 0.24 L/ha from 75.80% (28 DA-A) to 100% (28 DA-A) and at rate 0.28 L/ha from 82.50% (28 DA-A) to 100% (28 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 84.96% for Adengo 315 SC during the assessment (Appendix 5 tab. 9).

# 3.2.3-1.10 The efficacy of CHR/H/IZOXACYP 250 SC in control of BRSNW *Brassica napus* (self-plant sown)

The efficiency of CHR/H/IZOXACYP 250 SC in control of BRSNW *Brassica napus* (self-plant sown) were investigated in 5 trials. The tested product at rates: 0.16 L/ha, 0.20 L/ha, 0.24 L/ha and 0.28 L/ha controlled this species of weed at the low to medium level of efficacy 27-28 DA-A. The effectiveness fluctuated from 58.11–81.86%.

The effectiveness fluctuated at rate 0.16 L/ha from 0.00% (28 DA-A) to 94.30% (28 DA-A), at rate 0.20 L/ha from 12.50% (28 DA-A) to 96.50% (28 DA-A), at rate 0.24 L/ha from 26.30% (28 DA-A) to 97.50% (28 DA-A) and at rate 0.28 L/ha from 35.00% (28 DA-A) to 100% (28 DA-A).

The efficacy of the tested herbicide was lower than the standard product. In the trials efficacy amounted above 87.00% for Adengo 315 SC during the assessment (Appendix 5 tab. 10).

# 3.2.3-1.11 The efficacy of CHR/H/IZOXACYP 250 SC in control of AMARE *Amaranthus retroflexus*

The efficiency of CHR/H/IZOXACYP 250 SC in control of AMARE *Amaranthus retroflexus* were investigated in 6 trials. The tested product at rates: 0.16 L/ha, 0.20 L/ha, 0.24 L/ha and 0.28 L/ha controlled this species of weed at the low to high level of efficacy 22-28 DA-A. The effectiveness fluctuated from 68.44–91.72%.

The effectiveness fluctuated at rate 0.16 L/ha from 57.50% (25 DA-A) to 76.25% (28 DA-A), at rate 0.20 L/ha from 65.00% (25 DA-A) to 84.80% (28 DA-A), at rate 0.24 L/ha from 71.30% (25 DA-A) to 100% (28 DA-A) and at rate 0.28 L/ha from 83.80% (25 DA-A) to 100% (28 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 87.12% for Adengo 315 SC during the assessment (Appendix 5 tab. 11).

# 3.2.3-1.12 The efficacy of CHR/H/IZOXACYP 250 SC in control of SOLNI *Solanum nigrum*

The efficiency of CHR/H/IZOXACYP 250 SC in control of SOLNI *Solanum nigrum* were investigated in 6 trials. The tested product at rates: 0.16 L/ha, 0.20 L/ha, 0.24 L/ha and 0.28 L/ha controlled this species of weed at the medium to high level of efficacy 27-28 DA-A. The effectiveness fluctuated from 78.23–90.93%.

The effectiveness fluctuated at rate 0.16 L/ha from 58.80% (28 DA-A) to 87.80% (28 DA-A), at rate 0.20 L/ha from 61.00% (28 DA-A) to 91.80% (28 DA-A), at rate 0.24 L/ha from 68.30% (28 DA-A) to 98.00% (28 DA-A) and at rate 0.28 L/ha from 85.80% (28 DA-A) to 100% (28 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 86.93% for Adengo 315 SC during the assessment (Appendix 5 tab. 12).

# POSTEMERGENCE APPLICATION

The 16 trials were carried out in maize in 2020, 2021 and 2022. The herbicide CHR/H/IZOXACYP 250 SC was applied once per season at the following rates of 0.20, 0.25, 0.30, 0.35 and 0.40 L/ha.

# 3.2.3-1.13 The efficacy of CHR/H/IZOXACYP 250 SC in control of CHEAL *Chenopodium album*

The efficiency of CHR/H/IZOXACYP 250 SC in control of CHEAL *Chenopodium album* were investigated in 13 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 11-14 DA-A. The effectiveness fluctuated from 63.38–96.40%.

The effectiveness fluctuated at rate 0.20 L/ha from 10.00% (14 DA-A) to 90.00% (13 DA-A), at rate 0.25 L/ha from 20.00% (14 DA-A) to 97.50% (13 DA-A), at rate 0.30 L/ha from 40.00% (14 DA-A) to 100% (13 DA-A), at rate 0.35 L/ha from 55.00% (14 DA-A) to 100% (13 DA-A) and at rate 0.40 L/ha from 93.80% (14 DA-A) to 99.00% (13 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 88.11% for Adengo 315 SC during the assessment (Appendix 5 tab. 13).

The efficiency of CHR/H/IZOXACYP 250 SC in control of CHEAL *Chenopodium album* were investigated in 13 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the low to high level of efficacy 25-28 DA-A. The effectiveness fluctuated from 64.96–97.25%.

The effectiveness fluctuated at rate 0.20 L/ha from 0.00% (28 DA-A) to 87.50% (27 DA-A), at rate 0.25 L/ha from 10.00% (28 DA-A) to 95.00% (27 DA-A), at rate 0.30 L/ha from 20.00% (28 DA-A) to 100% (27;28 DA-A), at rate 0.35 L/ha from 40.00% (28 DA-A) to 100% (27;28 DA-A) and at rate 0.40 L/ha from 95.50% (25 DA-A) to 99.00% (27 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 93.60% for Adengo 315 SC during the assessment (Appendix 5 tab. 14).

# 3.2.3-1.14 The efficacy of CHR/H/IZOXACYP 250 SC in control of POLCO *Polygonum convolvulus*

The efficiency of CHR/H/IZOXACYP 250 SC in control of POLCO *Polygonum convolvulus* were investigated in 8 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the low to medium level of efficacy 11-14 DA-A. The effectiveness fluctuated from 8.13–70.30%.

The effectiveness fluctuated at rate 0.20 L/ha from 0.00% (11;13;14 DA-A) to 20.00% (14 DA-A), at rate 0.25 L/ha from 0.00% (11;14 DA-A) to 51.30% (13 DA-A), at rate 0.30 L/ha from 0.00% (11;14 DA-A) to 56.30% (13 DA-A), at rate 0.35 L/ha from 21.30% (11 DA-A) to 64.50% (14 DA-A) and at rate 0.40 L/ha from 68.80% (13 DA-A) to 71.80% (14 DA-A).

The efficacy of the tested herbicide was lower than the standard product. In the trials efficacy amounted above 88.08% for Adengo 315 SC during the assessment (Appendix 5 tab. 15).

The efficiency of CHR/H/IZOXACYP 250 SC in control of POLCO *Polygonum convolvulus* were investigated in 8 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the high level of efficacy 25-28 DA-A. The effectiveness fluctuated from 7.92–58.50%.

The effectiveness fluctuated at rate 0.20 L/ha from 0.00% (26;28 DA-A) to 30.00% (28 DA-A), at rate 0.25 L/ha from 0.00% (28 DA-A) to 46.30% (28 DA-A), at rate 0.30 L/ha from 0.00% (28 DA-A) to 50.80% (25 DA-A), at rate 0.35 L/ha from 0.00% (28 DA-A) to 63.50% (25 DA-A) and at rate 0.40 L/ha from 50.00% (27 DA-A) to 67.00% (25 DA-A).

The efficacy of the tested herbicide was lower than the standard product. In the trials efficacy amounted above 97.31% for Adengo 315 SC during the assessment (Appendix 5 tab. 16).

# 3.2.3-1.15 The efficacy of CHR/H/IZOXACYP 250 SC in control of ANTAR *Anthemis arvensis*

The efficiency of CHR/H/IZOXACYP 250 SC in control of ANTAR *Anthemis arvensis* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 13-14 DA-A. The effectiveness fluctuated from 70.86–99.00%.

The effectiveness fluctuated at rate 0.20 L/ha from 56.00% (14 DA-A) to 84.50% (13 DA-A), at rate 0.25 L/ha from 73.00% (14 DA-A) to 95.00% (13 DA-A), at rate 0.30 L/ha from 81.00% (14 DA-A) to 99.00% (13 DA-A), at rate 0.35 L/ha from 90.00% (14 DA-A) to 99.00% (13 DA-A) and at rate 0.40 L/ha from 99.00% (13 DA-A) to 99.00% (13 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 96.97% for Adengo 315 SC during the assessment (Appendix 5 tab. 17).

The efficiency of CHR/H/IZOXACYP 250 SC in control of ANTAR *Anthemis arvensis* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 26-28 DA-A. The effectiveness fluctuated from 72.40–100%.

The effectiveness fluctuated at rate 0.20 L/ha from 58.00% (28 DA-A) to 80.00% (28 DA-A), at rate 0.25 L/ha from 74.00% (28 DA-A) to 100% (27 DA-A), at rate 0.30 L/ha from 80.00% (28 DA-A) to 100% (27 DA-A), at rate 0.35 L/ha from 89.00% (28 DA-A) to 100% (27 DA-A) and at rate 0.40 L/ha from 100% (27 DA-A) to 100% (27 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 98.97% for Adengo 315 SC during the assessment (Appendix 5 tab. 18).

# 3.2.3-1.16 The efficacy of CHR/H/IZOXACYP 250 SC in control of POLPE *Polygonum persicaria*

The efficiency of CHR/H/IZOXACYP 250 SC in control of POLPE *Polygonum persicaria* were investigated in 8 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium high level of efficacy 11-14 DA-A. The effectiveness fluctuated from 64.94–100%.

The effectiveness fluctuated at rate 0.20 L/ha from 10.00% (14 DA-A) to 95.80% (14 DA-A), at rate 0.25 L/ha from 52.50% (14 DA-A) to 98.00% (14 DA-A), at rate 0.30 L/ha from 61.30% (14 DA-A) to 99.00% (14 DA-A), at rate 0.35 L/ha from 68.80% (14 DA-A) to 100% (14 DA-A) and at rate 0.40 L/ha from 100% (14 DA-A) to 100% (14 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 93.80% for Adengo 315 SC during the assessment (Appendix 5 tab. 19).

The efficiency of CHR/H/IZOXACYP 250 SC in control of POLPE *Polygonum persicaria* were investigated in 8 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 25-28 DA-A. The effectiveness fluctuated from 70.01–100%.

The effectiveness fluctuated at rate 0.20 L/ha from 0.00% (28 DA-A) to 97.80% (28 DA-A), at rate 0.25 L/ha from 30.00% (28 DA-A) to 99.50% (28 DA-A), at rate 0.30 L/ha from 80.00% (28 DA-A) to 100% (28 DA-A), at rate 0.35 L/ha from 95.00% (28 DA-A) to 100% (28 DA-A) and at rate 0.40 L/ha from 100% (28 DA-A) to 100% (28 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 99.31% for Adengo 315 SC during the assessment (Appendix 5 tab. 20).

# 3.2.3-1.17 The efficacy of CHR/H/IZOXACYP 250 SC in control of THLAR *Thlaspi arvense*

The efficiency of CHR/H/IZOXACYP 250 SC in control of THLAR *Thlaspi arvense* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 11-14 DA-A. The effectiveness fluctuated from 71.06–100%.

The effectiveness fluctuated at rate 0.20 L/ha from 45.00% (14 DA-A) to 80.00% (11;13 DA-A), at rate 0.25 L/ha from 66.30% (14 DA-A) to 97.80% (13 DA-A), at rate 0.30 L/ha from 70.00% (14 DA-A) to 100% (14 DA-A), at rate 0.35 L/ha from 72.50% (14 DA-A) to 100% (14 DA-A) and at rate 0.40 L/ha from 100% (14 DA-A) to 100% (14 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 96.33% for Adengo 315 SC during the assessment (Appendix 5 tab. 21).

The efficiency of CHR/H/IZOXACYP 250 SC in control of THLAR *Thlaspi arvense* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 25-28 DA-A. The effectiveness fluctuated from 73.52–100%.

The effectiveness fluctuated at rate 0.20 L/ha from 40.00% (28 DA-A) to 83.30% (27 DA-A), at rate 0.25 L/ha from 78.80% (28 DA-A) to 97.50% (25 DA-A), at rate 0.30 L/ha from 95.00% (27 DA-A) to 100% (25;26;28 DA-A), at rate 0.35 L/ha from 97.50% (27 DA-A) to 100% (25;26;28 DA-A) and at rate 0.40 L/ha from 100% (25 DA-A) to 100% (25 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 100% for Adengo 315 SC during the assessment (Appendix 5 tab. 22).

# 3.2.3-1.18 The efficacy of CHR/H/IZOXACYP 250 SC in control of VIOAR *Viola arvensis*

The efficiency of CHR/H/IZOXACYP 250 SC in control of VIOAR *Viola arvensis* were investigated in 7 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 11-14 DA-A. The effectiveness fluctuated from 78.06–98.50%.

The effectiveness fluctuated at rate 0.20 L/ha from 57.50% (14 DA-A) to 90.30% (13 DA-A), at rate 0.25 L/ha from 72.50% (14 DA-A) to 96.30% (13 DA-A), at rate 0.30 L/ha from 75.00% (14 DA-A) to 100% (13 DA-A), at rate 0.35 L/ha from 75.00% (14 DA-A) to 100% (13 DA-A) and at rate 0.40 L/ha from 97.00% (13 DA-A) to 100% (14 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 93.80% for Adengo 315 SC during the assessment (Appendix 5 tab. 23).

The efficiency of CHR/H/IZOXACYP 250 SC in control of VIOAR *Viola arvensis* were investigated in 7 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 25-28 DA-A. The effectiveness fluctuated from 83.92–97.90%.

The effectiveness fluctuated at rate 0.20 L/ha from 79.50% (26 DA-A) to 92.50% (27 DA-A), at rate 0.25 L/ha from 85.00% (28 DA-A) to 98.00% (27 DA-A), at rate 0.30 L/ha from 90.00% (26 DA-A) to 100% (27 DA-A), at rate 0.35 L/ha from 95.00% (28 DA-A) to 100% (27 DA-A) and at rate 0.40 L/ha from 97.00% (27 DA-A) to 98.80% (25 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 100% for Adengo 315 SC during the assessment (Appendix 5 tab. 24).

# 3.2.3-1.19 The efficacy of CHR/H/IZOXACYP 250 SC in control of SOLNI *Solanum nigrum*

The efficiency of CHR/H/IZOXACYP 250 SC in control of SOLNI *Solanum nigrum* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 11-14 DA-A. The effectiveness fluctuated from 61.30–99.00%.

The effectiveness fluctuated at rate 0.20 L/ha from 30.00% (14 DA-A) to 82.50% (13 DA-A), at rate 0.25 L/ha from 46.00% (14 DA-A) to 95.00% (13 DA-A), at rate 0.30 L/ha from 55.00% (14 DA-A) to 100% (13 DA-A), at rate 0.35 L/ha from 55.00% (14 DA-A) to 100% (13 DA-A) and at rate 0.40 L/ha from 99.00% (13 DA-A) to 99.00% (13 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 83.08% for Adengo 315 SC during the assessment (Appendix 5 tab. 25).

The efficiency of CHR/H/IZOXACYP 250 SC in control of SOLNI *Solanum nigrum* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 27-28 DA-A. The effectiveness fluctuated from 68.70–100%.

The effectiveness fluctuated at rate 0.20 L/ha from 40.00% (28 DA-A) to 83.50% (27 DA-A), at rate 0.25 L/ha from 62.50% (28 DA-A) to 92.50% (27 DA-A), at rate 0.30 L/ha from 68.80% (28 DA-A) to 100% (27 DA-A), at rate 0.35 L/ha from 85.30% (28 DA-A) to 100% (27;28 DA-A) and at rate 0.40 L/ha from 100% (27 DA-A) to 100% (27 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 94.80% for Adengo 315 SC during the assessment (Appendix 5 tab. 26).

# 3.2.3-1.20 The efficacy of CHR/H/IZOXACYP 250 SC in control of ECHCG *Echinochloa crus-galli*

The efficiency of CHR/H/IZOXACYP 250 SC in control of ECHCG *Echinochloa crus-galli* were investigated in 9 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the low to high level of efficacy 11-14 DA-A. The effectiveness fluctuated from 48.41–94.25%.

The effectiveness fluctuated at rate 0.20 L/ha from 5.00% (14 DA-A) to 79.30% (13 DA-A), at rate 0.25 L/ha from 10.00% (14 DA-A) to 85.00% (13 DA-A), at rate 0.30 L/ha from 13.80% (14 DA-A) to 92.80% (13 DA-A), at rate 0.35 L/ha from 25.00% (14 DA-A) to 97.80% (13 DA-A) and at rate 0.40 L/ha from 93.50% (14 DA-A) to 95.00% (13 DA-A).

The efficacy of the tested herbicide was lower than the standard product. In the trials efficacy amounted above 93.19% for Adengo 315 SC during the assessment (Appendix 5 tab. 27).

The efficiency of CHR/H/IZOXACYP 250 SC in control of ECHCG *Echinochloa crus-galli* were investigated in 9 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the low to high level of efficacy 25-28 DA-A. The effectiveness fluctuated from 51.56–97.40%.

The effectiveness fluctuated at rate 0.20 L/ha from 0.00% (28 DA-A) to 78.00% (27 DA-A), at rate 0.25 L/ha from 5.00% (28 DA-A) to 83.50% (27 DA-A), at rate 0.30 L/ha from 26.30% (28 DA-A) to 89.00% (27 DA-A), at rate 0.35 L/ha from 50.00% (28 DA-A) to 96.00% (27 DA-A) and at rate 0.40 L/ha from 95.80% (25 DA-A) to 99.00% (27 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 96.63% for Adengo 315 SC during the assessment (Appendix 5 tab. 28).

# 3.2.3-1.21 The efficacy of CHR/H/IZOXACYP 250 SC in control of SINAR *Sinapsis arvensis*

The efficiency of CHR/H/IZOXACYP 250 SC in control of SINAR *Sinapsis arvensis* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the low to high level of efficacy 11-14 DA-A. The effectiveness fluctuated from 68.46–100%.

The effectiveness fluctuated at rate 0.20 L/ha from 33.0% (14 DA-A) to 90.00% (13 DA-A), at rate 0.25 L/ha from 46.00% (14 DA-A) to 96.00% (13 DA-A), at rate 0.30 L/ha from 55.00% (14 DA-A) to 98.00% (13 DA-A), at rate 0.35 L/ha from 63.00% (14 DA-A) to 100% (13 DA-A) and at rate 0.40 L/ha from 100% (13 DA-A) to 100% (13 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 91.58% for Adengo 315 SC during the assessment (Appendix 5 tab. 29).

The efficiency of CHR/H/IZOXACYP 250 SC in control of SINAR *Sinapsis arvensis* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 27-28 DA-A. The effectiveness fluctuated from 71.50–100%.

The effectiveness fluctuated at rate 0.20 L/ha from 50.00% (28 DA-A) to 92.00% (27 DA-A), at rate 0.25 L/ha from 65.00% (28 DA-A) to 100% (27 DA-A), at rate 0.30 L/ha from 77.50% (28 DA-A) to 100% (28 DA-A), at rate 0.35 L/ha from 85.50% (28 DA-A) to 100% (28 DA-A) and at rate 0.40 L/ha from 100% (27 DA-A) to 100% (27 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 96.67% for Adengo 315 SC during the assessment (Appendix 5 tab. 30).

# 3.2.3-1.22 The efficacy of CHR/H/IZOXACYP 250 SC in control of CAPBP *Capsella bursa pastoris*

The efficiency of CHR/H/IZOXACYP 250 SC in control of CAPBP *Capsella bursa pastoris* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 11-14 DA-A. The effectiveness fluctuated from 76.52–99.00%.

The effectiveness fluctuated at rate 0.20 L/ha from 46.30% (14 DA-A) to 100% (13 DA-A), at rate 0.25 L/ha from 65.00% (14 DA-A) to 100% (13 DA-A), at rate 0.30 L/ha from 70.00% (14 DA-A) to 100% (13 DA-A), at rate 0.35 L/ha from 73.80% (14 DA-A) to 100% (13 DA-A) and at rate 0.40 L/ha from 99.00% (13 DA-A) to 99.00% (13 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 94.67% for Adengo 315 SC during the assessment (Appendix 5 tab. 31).

The efficiency of CHR/H/IZOXACYP 250 SC in control of CAPBP *Capsella bursa pastoris* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the high level of efficacy 27-28 DA-A. The effectiveness fluctuated from 82.50–100%.

The effectiveness fluctuated at rate 0.20 L/ha from 55.00% (28 DA-A) to 95.00% (26 DA-A), at rate 0.25 L/ha from 66.30% (28 DA-A) to 97.50% (26 DA-A), at rate 0.30 L/ha from 97.50% (28 DA-A) to 100% (26;28 DA-A), at rate 0.35 L/ha from 100% (26 DA-A) to 100% (28 DA-A) and at rate 0.40 L/ha from 100% (27 DA-A) to 100% (27 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 100% for Adengo 315 SC during the assessment (Appendix 5 tab. 32).

# 3.2.3-1.23 The efficacy of CHR/H/IZOXACYP 250 SC in control of MATIN *Tripleurospermum inodorum*

The efficiency of CHR/H/IZOXACYP 250 SC in control of MATIN *Tripleurospermum inodorum* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 11-14 DA-A. The effectiveness fluctuated from 75.30–99.00%.

The effectiveness fluctuated at rate 0.20 L/ha from 67.50% (14 DA-A) to 85.00% (11 DA-A), at rate 0.25 L/ha from 79.00% (14 DA-A) to 91.30% (11 DA-A), at rate 0.30 L/ha from 85.00% (14 DA-A) to 96.00% (14 DA-A), at rate 0.35 L/ha from 90.00% (13;14 DA-A) to 100% (11 DA-A) and at rate 0.40 L/ha from 99.00% (13 DA-A) to 99.00% (13 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 95.63% for Adengo 315 SC during the assessment (Appendix 5 tab. 33).

The efficiency of CHR/H/IZOXACYP 250 SC in control of MATIN *Tripleurospermum inodorum* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 27-28 DA-A. The effectiveness fluctuated from 79.86–100%.

The effectiveness fluctuated at rate 0.20 L/ha from 70.00% (28 DA-A) to 88.00% (28 DA-A), at rate 0.25 L/ha from 80.00% (28 DA-A) to 95.00% (28 DA-A), at rate 0.30 L/ha from 85.80% (26 DA-A) to 100% (28 DA-A), at rate 0.35 L/ha from 87.30% (26 DA-A) to 100% (27;28 DA-A) and at rate 0.40 L/ha from 100% (28 DA-A) to 100% (28 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 99.80% for Adengo 315 SC during the assessment (Appendix 5 tab. 34).

# 3.2.3-1.24 The efficacy of CHR/H/IZOXACYP 250 SC in control of VERHE *Veronica hederifolia*

The efficiency of CHR/H/IZOXACYP 250 SC in control of VERHE *Veronica hederifolia* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 14 DA-A. The effectiveness fluctuated from 46.70–92.50%.

The effectiveness fluctuated at rate 0.20 L/ha from 29.00% (14 DA-A) to 75.00% (14 DA-A), at rate 0.25 L/ha from 36.00% (14 DA-A) to 85.00% (14 DA-A), at rate 0.30 L/ha from 45.00% (14 DA-A) to 89.50% (14 DA-A), at rate 0.35 L/ha from 49.00% (14 DA-A) to 91.30% (14 DA-A) and at rate 0.40 L/ha from 92.50% (14 DA-A) to 92.50% (14 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 74.22% for Adengo 315 SC during the assessment (Appendix 5 tab. 35).

The efficiency of CHR/H/IZOXACYP 250 SC in control of VERHE *Veronica hederifolia* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 25-28 DA-A. The effectiveness fluctuated from 58.26–97.00%.

The effectiveness fluctuated at rate 0.20 L/ha from 39.00% (28 DA-A) to 85.00% (28 DA-A), at rate 0.25 L/ha from 51.00% (28 DA-A) to 91.30% (28 DA-A), at rate 0.30 L/ha from 61.00% (28 DA-A) to 92.50% (28 DA-A), at rate 0.35 L/ha from 79.00% (28 DA-A) to 95.30% (25 DA-A) and at rate 0.40 L/ha from 97.00% (25 DA-A) to 97.00% (25 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 86.88% for Adengo 315 SC during the assessment (Appendix 5 tab. 36).

# 3.2.3-1.25 The efficacy of CHR/H/IZOXACYP 250 SC in control of STEME *Stellaria media*

The efficiency of CHR/H/IZOXACYP 250 SC in control of STEME *Stellaria media* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the medium to high level of efficacy 13-14 DA-A. The effectiveness fluctuated from 84.28–100%.

The effectiveness fluctuated at rate 0.20 L/ha from 71.30% (14 DA-A) to 90.80% (14 DA-A), at rate 0.25 L/ha from 77.50% (14 DA-A) to 100% (13 DA-A), at rate 0.30 L/ha from 86.30% (14 DA-A) to 100% (13 DA-A), at rate 0.35 L/ha from 90.00% (14 DA-A) to 100% (13;14 DA-A) and at rate 0.40 L/ha from 100% (13 DA-A) to 100% (14 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 96.72% for Adengo 315 SC during the assessment (Appendix 5 tab. 37).

The efficiency of CHR/H/IZOXACYP 250 SC in control of STEME *Stellaria media* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the high level of efficacy 25-28 DA-A. The effectiveness fluctuated from 91.00–100%.

The effectiveness fluctuated at rate 0.20 L/ha from 75.00% (28 DA-A) to 100% (28 DA-A), at rate 0.25 L/ha from 77.50% (28 DA-A) to 100% (25;26;27;28 DA-A), at rate 0.30 L/ha from 86.30% (28 DA-A) to 100% (25;26;27;28 DA-A), at rate 0.35 L/ha from 94.50% (28 DA-A) to 100% (25;26;27;28 DA-A) and at rate 0.40 L/ha from 100% (25 DA-A) to 100% (27 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 99.42% for Adengo 315 SC during the assessment (Appendix 5 tab. 38).

# 3.2.3-1.26 The efficacy of CHR/H/IZOXACYP 250 SC in control of BRSNW *Brassica napus* (self-plant sown)

The efficiency of CHR/H/IZOXACYP 250 SC in control of BRSNW *Brassica napus* (self-plant sown) were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the low to high level of efficacy 11-14 DA-A. The effectiveness fluctuated from 50.40–100%.

The effectiveness fluctuated at rate 0.20 L/ha from 31.00% (14 DA-A) to 75.00% (14 DA-A), at rate 0.25 L/ha from 41.00% (14 DA-A) to 92.50% (14 DA-A), at rate 0.30 L/ha from 53.00% (14 DA-A) to 98.80% (14 DA-A), at rate 0.35 L/ha from 64.00% (14 DA-A) to 100% (14 DA-A) and at rate 0.40 L/ha from 100% (14 DA-A) to 100% (14 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 82.67% for Adengo 315 SC during the assessment (Appendix 5 tab. 39).

The efficiency of CHR/H/IZOXACYP 250 SC in control of BRSNW *Brassica napus* (self-plant sown)were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the low to high level of efficacy 25-28 DA-A. The effectiveness fluctuated from 55.02–100%.

The effectiveness fluctuated at rate 0.20 L/ha from 38.80% (28 DA-A) to 90.00% (25;28 DA-A), at rate 0.25 L/ha from 52.50% (28 DA-A) to 100% (25;28 DA-A), at rate 0.30 L/ha from 66.30% (28 DA-A) to 100% (25;28 DA-A), at rate 0.35 L/ha from 79.50% (26 DA-A) to 100% (25;28 DA-A) and at rate 0.40 L/ha from 100% (25 DA-A) to 100% (25 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 91.73% for Adengo 315 SC during the assessment (Appendix 5 tab. 40).

# 3.2.3-1.27 The efficacy of CHR/H/IZOXACYP 250 SC in control of AMARE *Amaranthus retroflexus*

The efficiency of CHR/H/IZOXACYP 250 SC in control of CHEAL *Chenopodium album* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the low to high level of efficacy 11-14 DA-A. The effectiveness fluctuated from 60.08–88.55%.

The effectiveness fluctuated at rate 0.20 L/ha from 10.00% (14 DA-A) to 95.00% (13 DA-A), at rate 0.25 L/ha from 35.00% (14 DA-A) to 97.50% (13 DA-A), at rate 0.30 L/ha from 66.30% (14 DA-A) to 99.00% (14 DA-A) and at rate 0.35 L/ha from 75.00% (14 DA-A) to 99.30% (13 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 93.10% for Adengo 315 SC during the assessment (Appendix 5 tab. 41).

The efficiency of CHR/H/IZOXACYP 250 SC in control of CHEAL *Chenopodium album* were investigated in 6 trials. The tested product at rates: 0.20 L/ha, 0.25 L/ha, 0.30 L/ha, 0.35 L/ha and 0.40 L/ha controlled this species of weed at the low to high level of efficacy 26-28 DA-A. The effectiveness fluctuated from 63.55–94.72%.

The effectiveness fluctuated at rate 0.20 L/ha from 30.00% (28 DA-A) to 77.50% (28 DA-A), at rate 0.25 L/ha from 51.30% (28 DA-A) to 83.00% (28 DA-A), at rate 0.30 L/ha from 82.80% (26 DA-A) to 100% (28 DA-A) and at rate 0.35 L/ha from 85.00% (26 DA-A) to 100% (28 DA-A).

The efficacy of the tested herbicide was comparable to the standard product. In the trials efficacy amounted above 98.55% for Adengo 315 SC during the assessment (Appendix 5 tab. 42).

**Conclusions on the biological efficacy**

The obtained data in performed trials show that CHR/H/IZOXACYP 250 SC provides benefits against the most important weeds in maize as shown in the tables below.

The following table describes the effectiveness of weeds:

|  |  |
| --- | --- |
| S (Susceptible) | > 85% (within each trial the average must be higher than 85%) |
| MS (Moderately Susceptible) | 70 – 85% |
| MT (Moderately Tolerant ) | 60 – 70% |
| T (Tolerant) | < 60% |

**The following table shows the average sensitivity of weeds in maize:**

**MAIZE – PREEMERGENCE APPLICATION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Product code (L, kg/ha)** | **EPPO code** | **Scientific name** | **DA-A** | **Pest stage** | **Average** | **Efficacy** |
| CHR/H/IZOXACYP 250 SC 0.16 L/ha | CHEAL | *Chenopodium album* | 22-29 DA-A | BBCH 00 | 69.72 | MT |
| ANTAR | *Anthemis arvensis* | 22-28 DA-A | BBCH 00 | 73.02 | MS |
| POLPE | *Polygonum persicaria* | 28-39 DA-A | BBCH 00 | 75.52 | MS |
| THLAR | *Thlaspi arvense* | 22-28 DA-A | BBCH 00 | 73.18 | MS |
| VIOAR | *Viola arvensis* | 22-29 DA-A | BBCH 00 | 67.30 | MT |
| ECHCG | *Echinochloa crus-galli* | 22-29 DA-A | BBCH 00 | 72.41 | MS |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 00 | 76.48 | MS |
| MATIN | *Tripleurospermum inodorum* | 22-28 DA-A | BBCH 00 | 61.95 | MT |
| STEME | *Stellaria media* | 22-28 DA-A | BBCH 00 | 73.15 | MS |
| BRSNW | *Brassica napus (self-sown plant)* | 27-28 DA-A | BBCH 00 | 58.11 | T |
| AMARE | *Amaranthus retroflexus* | 22-28 DA-A | BBCH 00 | 68.44 | MT |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 00 | 78.23 | MS |
| CHR/H/IZOXACYP 250 SC 0.20 L/ha | CHEAL | *Chenopodium album* | 22-29 DA-A | BBCH 00 | 76.12 | MS |
| ANTAR | *Anthemis arvensis* | 22-28 DA-A | BBCH 00 | 78.37 | MS |
| POLPE | *Polygonum persicaria* | 28-39 DA-A | BBCH 00 | 82.20 | MS |
| THLAR | *Thlaspi arvense* | 22-28 DA-A | BBCH 00 | 76.77 | MS |
| VIOAR | *Viola arvensis* | 22-29 DA-A | BBCH 00 | 71.50 | MS |
| ECHCG | *Echinochloa crus-galli* | 22-29 DA-A | BBCH 00 | 75.10 | MS |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 00 | 81.95 | MS |
| MATIN | *Tripleurospermum inodorum* | 22-28 DA-A | BBCH 00 | 70.26 | MS |
| STEME | *Stellaria media* | 22-28 DA-A | BBCH 00 | 78.37 | MS |
| BRSNW | *Brassica napus (self-sown plant)* | 27-28 DA-A | BBCH 00 | 67.70 | MT |
| AMARE | *Amaranthus retroflexus* | 22-28 DA-A | BBCH 00 | 75.86 | MS |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 00 | 82.07 | MS |
| CHR/H/IZOXACYP 250 SC 0.24 L/ha | CHEAL | *Chenopodium album* | 22-29 DA-A | BBCH 00 | 83.50 | MS |
| ANTAR | *Anthemis arvensis* | 22-28 DA-A | BBCH 00 | 83.15 | MS |
| POLPE | *Polygonum persicaria* | 28-39 DA-A | BBCH 00 | 87.65 | S |
| THLAR | *Thlaspi arvense* | 22-28 DA-A | BBCH 00 | 81.90 | MS |
| VIOAR | *Viola arvensis* | 22-29 DA-A | BBCH 00 | 76.78 | MS |
| ECHCG | *Echinochloa crus-galli* | 22-29 DA-A | BBCH 00 | 81.19 | MS |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 00 | 88.43 | S |
| MATIN | *Tripleurospermum inodorum* | 22-28 DA-A | BBCH 00 | 81.83 | MS |
| STEME | *Stellaria media* | 22-28 DA-A | BBCH 00 | 86.22 | S |
| BRSNW | *Brassica napus (self-sown plant)* | 27-28 DA-A | BBCH 00 | 73.88 | MS |
| AMARE | *Amaranthus retroflexus* | 22-28 DA-A | BBCH 00 | 84.84 | MS |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 00 | 86.23 | S |
| CHR/H/IZOXACYP 250 SC 0.28 L/ha | CHEAL | *Chenopodium album* | 22-29 DA-A | BBCH 00 | 89.43 | S |
| ANTAR | *Anthemis arvensis* | 22-28 DA-A | BBCH 00 | 87.73 | S |
| POLPE | *Polygonum persicaria* | 28-39 DA-A | BBCH 00 | 92.65 | S |
| THLAR | *Thlaspi arvense* | 22-28 DA-A | BBCH 00 | 87.13 | S |
| VIOAR | *Viola arvensis* | 22-29 DA-A | BBCH 00 | 83.81 | MS |
| ECHCG | *Echinochloa crus-galli* | 22-29 DA-A | BBCH 00 | 86.69 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 00 | 94.18 | S |
| MATIN | *Tripleurospermum inodorum* | 22-28 DA-A | BBCH 00 | 86.53 | S |
| STEME | *Stellaria media* | 22-28 DA-A | BBCH 00 | 91.20 | S |
| BRSNW | *Brassica napus (self-sown plant)* | 27-28 DA-A | BBCH 00 | 81.86 | MS |
| AMARE | *Amaranthus retroflexus* | 22-28 DA-A | BBCH 00 | 91.72 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 00 | 90.93 | S |
| Adengo 315 SC 0.33 L/ha | CHEAL | *Chenopodium album* | 22-29 DA-A | BBCH 00 | 91.63 | S |
| ANTAR | *Anthemis arvensis* | 22-28 DA-A | BBCH 00 | 91.53 | S |
| POLPE | *Polygonum persicaria* | 28-39 DA-A | BBCH 00 | 98.93 | S |
| THLAR | *Thlaspi arvense* | 22-28 DA-A | BBCH 00 | 92.95 | S |
| VIOAR | *Viola arvensis* | 22-29 DA-A | BBCH 00 | 81.30 | MS |
| ECHCG | *Echinochloa crus-galli* | 22-29 DA-A | BBCH 00 | 89.99 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 00 | 95.88 | S |
| MATIN | *Tripleurospermum inodorum* | 22-28 DA-A | BBCH 00 | 76.28 | MS |
| STEME | *Stellaria media* | 22-28 DA-A | BBCH 00 | 84.96 | MS |
| BRSNW | *Brassica napus (self-sown plant)* | 27-28 DA-A | BBCH 00 | 87.00 | S |
| AMARE | *Amaranthus retroflexus* | 22-28 DA-A | BBCH 00 | 87.12 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 00 | 86.93 | S |

On the basis of submitted research, it is possible to state that CHR/H/IZOXACYP 250 SC used at dose controlled:

**Dose CHR/H/IZOXACYP 250 SC 0.16 L/ha**

Moderately Susceptible: *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE), *Thlaspi arvense* (THLAR), *Stellaria media* (STEME), *Capsella bursa-pastoris* (CAPBP), *Echinochloa crus-galli* (ECHCG), *Solanum nigrum* (SOLNI),

Moderately Tolerant: *Chenopodium album* (CHEAL), *Viola arvensis* (VIOAR), *Tripleurospermum mar. inodorum* (MATIN), *Amaranthus retroflexus* (AMARE),

Tolerant: *Brassica napus* (self-sown plant) (BRSNW)

**Dose CHR/H/IZOXACYP 250 SC 0.20 L/ha**

Moderately Susceptible: *Polygonum persicaria* (POLPE), *Thlaspi arvense* (THLAR), *Capsella bursa-pastoris* (CAPBP), *Stellaria media* (STEME), *Amaranthus retroflexus* (AMARE), *Anthemis arvensis* (ANTAR), *Viola arvensis* (VIOAR), *Tripleurospermum mar. inodorum* (MATIN), *Chenopodium album* (CHEAL), *Echinochloa crus-galli* (ECHCG), *Solanum nigrum* (SOLNI),

Tolerant: *Brassica napus* (self-sown plant) (BRSNW)

**Dose CHR/H/IZOXACYP 250 SC 0.24 L/ha**

Susceptible: *Polygonum persicaria* (POLPE), *Capsella bursa-pastoris* (CAPBP), *Stellaria media* (STEME), *Solanum nigrum* (SOLNI),

Moderately Susceptible: *Thlaspi arvense* (THLAR), *Amaranthus retroflexus* (AMARE), *Anthemis arvensis* (ANTAR), *Viola arvensis* (VIOAR), *Tripleurospermum mar. inodorum* (MATIN), *Chenopodium album* (CHEAL), *Echinochloa crus-galli* (ECHCG), *Brassica napus* (self-sown plant) (BRSNW)

**Dose CHR/H/IZOXACYP 250 SC 0.28 L/ha**

Susceptible: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE), *Thlaspi arvense* (THLAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Stellaria media* (STEME), *Amaranthus retroflexus* (AMARE), *Echinochloa crus-galli* (ECHCG), *Solanum nigrum* (SOLNI),

Moderately Susceptible: *Viola arvensis* (VIOAR), *Brassica napus* (self-sown plant) (BRSNW)

**MAIZE – POSTEMERGENCE APPLICATION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Product code (L, kg/ha)** | **EPPO code** | **Scientific name** | **DA-A** | **Pest stage** | **Average** | **Efficacy** |
| CHR/H/IZOXACYP 250 SC 0.20 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 64.96 | MT |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 7.92 | T |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 72.40 | MS |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 70.01 | MS |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 73.52 | MS |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 83.92 | MS |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 68.70 | MT |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 51.56 | T |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 71.50 | MS |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 82.50 | MS |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 79.86 | MS |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 58.26 | T |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 91.00 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 55.02 | T |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | 63.55 | MT |
| CHR/H/IZOXACYP 250 SC 0.25 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 76.21 | MS |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 23.24 | T |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 84.55 | MS |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 82.91 | MS |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 90.43 | S |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 89.51 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 81.13 | MS |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 62.97 | MT |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 84.67 | MS |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 90.02 | S |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 87.97 | S |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 69.85 | MT |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 96.25 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 73.60 | MS |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | 76.77 | MS |
| CHR/H/IZOXACYP 250 SC 0.30 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 85.42 | S |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 28.85 | T |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 89.93 | S |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 95.14 | S |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 98.30 | S |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 93.44 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 87.93 | S |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 71.13 | MS |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 96.25 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 99.05 | S |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 95.97 | S |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 78.38 | MS |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 97.72 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 79.98 | MS |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | 91.73 | S |
| CHR/H/IZOXACYP 250 SC 0.35 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 89.93 | S |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 35.13 | T |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 93.52 | S |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 99.38 | S |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 99.58 | S |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 96.87 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 94.60 | S |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 83.98 | MS |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 97.58 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 100.00 | S |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 97.88 | S |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 87.85 | S |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 99.08 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 89.22 | S |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | 94.72 | S |
| CHR/H/IZOXACYP 250 SC 0.40 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 97.25 | S |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 58.50 | T |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 100.00 | S |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 100.00 | S |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 100.00 | S |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 97.90 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 100.00 | S |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 97.40 | S |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 100.00 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 100.00 | S |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 100.00 | S |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 97.00 | S |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 100.00 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 100.00 | S |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | - | - |
| Adengo 315 SC 0.33 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 93.60 | S |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 97.31 | S |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 98.97 | S |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 99.31 | S |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 100.00 | S |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 100.00 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 94.80 | S |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 96.63 | S |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 96.67 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 100.00 | S |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 99.80 | S |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 86.88 | S |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 99.42 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 91.73 | S |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | 98.55 | S |

On the basis of submitted research, it is possible to state that CHR/H/IZOXACYP 250 SC used at dose controlled:

**Dose CHR/H/IZOXACYP 250 SC 0.20 L/ha**

Susceptible: *Stellaria media* (STEME)

Moderately Susceptible: *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE), *Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Sinapsis arvensis* (SINAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN),

Moderately Tolerant: *Chenopodium album* (CHEAL), *Amaranthus retroflexus* (AMARE), *Solanum nigrum* (SOLNI),

Tolerant: *Polygonum convolvulus* (POLCO), *Echinochloa crus-galli* (ECHCG), *Veronica hederifolia (VERHE), Brassica napus* (self-sown plant) (BRSNW)

**Dose CHR/H/IZOXACYP 250 SC 0.25 L/ha**

Susceptible: *Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Stellaria media* (STEME),

Moderately Susceptible: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE), *Amaranthus retroflexus* (AMARE), *Solanum nigrum* (SOLNI), *Sinapsis arvensis* (SINAR), *Brassica napus* (self-sown plant) (BRSNW),

Moderately Tolerant: *Echinochloa crus-galli* (ECHCG), *Veronica hederifolia (VERHE),*

Tolerant: *Polygonum convolvulus* (POLCO)

**Dose CHR/H/IZOXACYP 250 SC 0.30 L/ha**

Susceptible: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE),*Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Solanum nigrum* (SOLNI), *Sinapsis arvensis* (SINAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Stellaria media* (STEME), *Brassica napus* (self-sown plant) (BRSNW), *Amaranthus retroflexus* (AMARE)

Moderately Susceptible: *Echinochloa crus-galli* (ECHCG), *Veronica hederifolia (VERHE), Brassica napus* (self-sown plant) (BRSNW),

Tolerant: *Polygonum convolvulus* (POLCO)

**Dose CHR/H/IZOXACYP 250 SC 0.35 L/ha**

Susceptible: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE),*Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Solanum nigrum* (SOLNI), *Sinapsis arvensis* (SINAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Veronica hederifolia (VERHE), Stellaria media* (STEME), *Brassica napus* (self-sown plant) (BRSNW), *Amaranthus retroflexus* (AMARE)

Moderately Susceptible: *Echinochloa crus-galli* (ECHCG)

Tolerant: *Polygonum convolvulus* (POLCO)

**Dose CHR/H/IZOXACYP 250 SC 0.40 L/ha**

Susceptible: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE),*Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Solanum nigrum* (SOLNI), *Sinapsis arvensis* (SINAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Veronica hederifolia (VERHE), Stellaria media* (STEME), *Brassica napus* (self-sown plant) (BRSNW), *Amaranthus retroflexus* (AMARE), *Echinochloa crus-galli* (ECHCG)

Tolerant: *Polygonum convolvulus* (POLCO)

Table 3.2‑11: Efficacy of product CHR/H/IZOXACYP 250 SC at the timing of assessment

**PREEMERGENCE APPLICATION IN MAIZE**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Target** | **CHR/H/IZOXACYP 250 SC at rate** | **Number of trials** | **Infestation in the untreated control (unit)** | | **% control** | | | | **No of trials where product is >, <, = compared to standard(s)\*\*** |
| **CHR/H/IZOXACYP 250 SC at rate** | | **Adengo 315 SC at rate 0.33 L/ha** | |
| **Mean** | **Min & Max** | **Mean** | **Min & Max** | **Mean** | **Min & Max** |
| *Chenopodium album* | 0.16 | 12 | 18.3 | 5.0 & 45.0 | 69.72 | 37.50 & 94.00 | 91.63 | 73.80 & 100 | - |
| 0.20 | 76.12 | 51.30 & 94.80 | - |
| 0.24 | 83.50 | 68.80 & 99.00 | - |
| 0.28 | 89.43 | 78.80 & 100 | - |
| *Anthemis arvensis* | 0.16 | 6 | 6.3 | 5.0 & 8.0 | 73.02 | 62.50 &  92.50 | 91.53 | 80.80 & 100 | - |
| 0.20 | 78.37 | 68.30 & 93.80 | - |
| 0.24 | 83.15 | 73.80 & 94.80 | - |
| 0.28 | 87.73 | 80.80 & 95.80 | - |
| *Polygonum persicaria* | 0.16 | 6 | 10.2 | 5.0 & 24.0 | 75.52 | 66.50 & 91.80 | 97.93 | 97.30 & 100 | - |
| 0.20 | 82.20 | 75.00 & 93.50 | - |
| 0.24 | 87.65 | 80.00 & 98.00 | - |
| 0.28 | 92.65 | 85.00 & 100 | - |
| *Thlaspi arvense* | 0.16 | 6 | 6.9 | 5.0 & 9.0 | 73.18 | 32.50 & 96.50 | 92.95 | 85.80 & 100 | - |
| 0.20 | 76.77 | 40.00 & 99.50 | - |
| 0.24 | 81.90 | 56.30 & 100 | - |
| 0.28 | 87.13 | 65.00 & 100 | - |
| *Viola arvensis* | 0.16 | 8 | 9.7 | 6.0 & 18.5 | 67.30 | 0.00 & 99.00 | 81.30 | 45.80 & 100 | - |
| 0.20 | 71.50 | 11.30 & 100 | - |
| 0.24 | 76.78 | 26.30 & 100 | - |
| 0.28 | 83.81 | 36.30 & 100 | - |
| *Echinochola crus-galli* | 0.16 | 9 | 11.9 | 5.0 & 30.0 | 72.41 | 37.50 & 96.00 | 89.99 | 59.50 & 100 | - |
| 0.20 | 75.10 | 45.00 & 97.50 | - |
| 0.24 | 81.19 | 52.50 & 98.50 | - |
| 0.28 | 86.69 | 67.50 & 99.30 | - |
| *Capsella bursa-pastoris* | 0.16 | 6 | 6.3 | 5.0 & 8.0 | 76.48 | 57.30 & 93.80 | 95.88 | 86.30 & 100 | - |
| 0.20 | 81.95 | 58.80 & 94.80 | - |
| 0.24 | 88.43 | 68.50 & 100 | - |
| 0.28 | 94.18 | 86.30 & 100 | - |
| *Tripleurospermum mar. inodorum* | 0.16 | 4 | 8.6 | 5.0 & 13.3 | 61.95 | 30.00 & 77.30 | 76.28 | 43.00 & 100 | - |
| 0.20 | 70.26 | 47.50 & 83.75 | - |
| 0.24 | 81.83 | 72.50 & 98.50 | - |
| 0.28 | 86.53 | 81.30 & 100 | - |
| *Stellaria media* | 0.16 | 5 | 7.1 | 5.0 & 11.5 | 73.15 | 65.00 & 85.00 | 84.96 | 44.00 & 100 | - |
| 0.20 | 78.37 | 68.50 & 91.30 | - |
| 0.24 | 86.22 | 75.80 & 100 | - |
| 0.28 | 91.20 | 82.50 & 100 | - |
| *Brassica napus* (self-sown plant) | 0.16 | 5 | 7.6 | 5.0 & 15.0 | 58.11 | 0.00 & 94.30 | 87.00 | 50.00 & 100 | - |
| 0.20 | 67.70 | 12.50 & 96.50 | - |
| 0.24 | 73.88 | 26.30 & 97.50 | - |
| 0.28 | 81.86 | 35.00 & 100 | - |
| *Amaranthus retroflexus* | 0.16 | 6 | 7.2 | 5.0 & 12.0 | 0.00 | 0.00 & 76.25 | 87.12 | 44.50 & 100 | - |
| 0.20 | 68.44 | 57.50 & 84.80 | - |
| 0.24 | 75.86 | 65.00 & 100 | - |
| 0.28 | 84.84 | 71.30 & 100 | - |

\* A, B, C can be a “trial group” (as defined in page 10, e.g. EPPO climatic zone A) or a specific target (e.g. weed A, weed B...). In order to adapt the table to the data presented, it is possible:

- to add lines or columns,

- to duplicate the table (e.g. one table for “trial group 1”, one table for “trial group 2”, one table for “all”).

\*\* Optional

**POSTEMERGENCE APPLICATION IN MAIZE**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Target** | **CHR/H/IZOXACYP 250 SC at rate** | **Number of trials** | **Infestation in the untreated control (unit)** | | **% control** | | | | **No of trials where product is >, <, = compared to standard(s)\*\*** |
| **CHR/H/IZOXACYP 250 SC at rate** | | **Adengo 315 SC at rate 0.33 L/ha** | |
| **Mean** | **Min & Max** | **Mean** | **Min & Max** | **Mean** | **Min & Max** |
| *Chenopodium album* | 0.20 | 13 | 17.9 | 6.0 & 45.0 | 64.96 | 0.00 & 87.50 | 93.60 | 77.00 & 100 | - |
| 0.25 | 76.21 | 10.00 & 95.00 | - |
| 0.30 | 85.42 | 20.00 & 100 | - |
| 0.35 | 89.93 | 40.00 & 100 | - |
| 0.40 | 97.25 | 95.50 & 99.00 | - |
| *Polygonum convolvulus* | 0.20 | 8 | 6.8 | 5.0 & 10.3 | 7.92 | 0.00 & 30.00 | 97.31 | 91.50 & 100 | - |
| 0.25 | 23.24 | 0.00 & 46.30 | - |
| 0.30 | 28.85 | 0.00 & 50.80 | - |
| 0.35 | 35.13 | 0.00 & 63.50 | - |
| 0.40 | 58.50 | 50.00 & 67.00 | - |
| *Anthemis arvensis* | 0.20 | 6 | 5.1 | 5.0 & 5.5 | 72.40 | 58.00 & 80.00 | 98.97 | 93.80 & 100 | - |
| 0.25 | 84.55 | 74.00 & 100 | - |
| 0.30 | 89.93 | 80.00 & 100 | - |
| 0.35 | 93.52 | 89.00 & 100 | - |
| 0.40 | 100 | 100 & 100 | - |
| *Polygonum persicaria* | 0.20 | 8 | 8.2 | 5.0 & 21.0 | 70.01 | 0.00 & 97.80 | 99.31 | 95.00 & 100 | - |
| 0.25 | 82.91 | 30.00 & 99.50 | - |
| 0.30 | 95.14 | 80.00 & 100 | - |
| 0.35 | 99.38 | 95.00 & 100 | - |
| 0.40 | 100 | 100 & 100 | - |
| *Thlaspi arvense* | 0.20 | 6 | 5.8 | 5.0 & 7.0 | 73.52 | 40.00 & 83.30 | 100 | 100 & 100 | - |
| 0.25 | 90.43 | 78.80 & 97.50 | - |
| 0.30 | 98.30 | 95.00 & 100 | - |
| 0.35 | 99.58 | 97.50 & 100 | - |
| 0.40 | 100 | 100 & 100 | - |
| *Viola arvensis* | 0.20 | 7 | 9.7 | 5.0 & 30.0 | 83.92 | 79.50 & 92.50 | 100 | 100 & 100 | - |
| 0.25 | 89.51 | 85.00 & 98.00 | - |
| 0.30 | 93.44 | 90.00 & 100 | - |
| 0.35 | 96.87 | 95.00 & 100 | - |
| 0.40 | 97.90 | 97.00 & 98.80 | - |
| *Solanum nigrum* | 0.20 | 6 | 5.2 | 5.0 & 6.0 | 68.70 | 40.00 & 83.50 | 94.80 | 83.50 & 100 | - |
| 0.25 | 81.13 | 62.50 & 92.50 | - |
| 0.30 | 87.93 | 68.80 & 100 | - |
| 0.35 | 94.60 | 85.30 & 100 | - |
| 0.40 | 100 | 100 & 100 | - |
| *Echinochloa crus-galli* | 0.20 | 9 | 13.8 | 5.0 & 26.0 | 51.56 | 0.00 & 78.00 | 96.63 | 93.30 & 100 | - |
| 0.25 | 62.97 | 5. 00 & 83.50 | - |
| 0.30 | 71.13 | 26.30 & 89.00 | - |
| 0.35 | 83.98 | 50.00 & 96.00 | - |
| 0.40 | 97.40 | 95.80 & 99.00 | - |
| *Sinapsis arvensis* | 0.20 | 6 | 6.5 | 5.0 & 11.8 | 71.50 | 50.00 & 92.00 | 96.67 | 85.00 & 100 | - |
| 0.25 | 84.67 | 65.00 & 100 | - |
| 0.30 | 96.25 | 77.50 & 100 | - |
| 0.35 | 97.58 | 85.50 & 100 | - |
| 0.40 | 100 | 100 & 100 | - |
| *Capsella bursa-pastoris* | 0.20 | 6 | 5.5 | 5.0 & 6.8 | 82.50 | 55.00 & 95.00 | 100 | 100 & 100 | - |
| 0.25 | 90.02 | 66.30 & 97.50 | - |
| 0.30 | 99.05 | 97.50 & 100 | - |
| 0.35 | 100 | 100 & 100 | - |
| 0.40 | 100 | 100 & 100 | - |
| *Tripleurospermum inodorum* | 0.20 | 6 | 5.8 | 5.0 & 7.0 | 79.86 | 70.00 & 88.00 | 99.80 | 98.80 & 100 | - |
| 0.25 | 87.97 | 80.00 & 95.00 | - |
| 0.30 | 95.97 | 85.80 & 100 | - |
| 0.35 | 97.88 | 87.30 & 100 | - |
| 0.40 | 100 | 100 & 100 | - |
| *Veronica hederifolia* | 0.20 | 6 | 5.2 | 5.0 & 6.0 | 58.26 | 39.00 & 85.00 | 86.88 | 78.00 & 97.50 | - |
| 0.25 | 69.85 | 51.00 & 91.30 | - |
| 0.30 | 78.38 | 61.00 & 92.50 | - |
| 0.35 | 87.85 | 79.00 & 95.30 | - |
| 0.40 | 97.00 | 97.00 & 97.00 | - |
| *Stellaria media* | 0.20 | 6 | 6.5 | 5.0 & 9.0 | 91.00 | 75.00 & 100 | 99.42 | 96.50 & 100 | - |
| 0.25 | 96.25 | 77.50 & 100 | - |
| 0.30 | 97.72 | 86.30 & 100 | - |
| 0.35 | 99.08 | 94.50 & 100 | - |
| 0.40 | 100 | 100 & 100 | - |
| *Brassica napus* (self-sown plant) | 0.20 | 6 | 6.8 | 5.0 & 10.0 | 55.02 | 38.80 & 90.00 | 91.73 | 84.80 & 100 | - |
| 0.25 | 73.60 | 52.50 & 100 | - |
| 0.30 | 79.98 | 66.30 &100 | - |
| 0.35 | 89.22 | 79.50 & 100 | - |
| 0.40 | 55.02 | 100 & 100 | - |
| *Amaranthus retroflexus* | 0.20 | 6 | 8.3 | 5.0 & 13.5 | 63.55 | 30.00 & 77.50 | 98.55 | 93.30 & 100 | - |
| 0.25 | 76.77 | 51.30 & 83.00 | - |
| 0.30 | 91.73 | 82.80 & 100 | - |
| 0.35 | 94.72 | 85.00 & 100 | - |
| 0.40 | - | - | - |

\* A, B, C can be a “trial group” (as defined in page 10, e.g. EPPO climatic zone A) or a specific target (e.g. weed A, weed B...). In order to adapt the table to the data presented, it is possible:

- to add lines or columns,

- to duplicate the table (e.g. one table for “trial group 1”, one table for “trial group 2”, one table for “all”).

\*\* Optional

Crop(s) 2 / Target(s) 2

Not applicable

Minor use

Not applicable

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

Not applicable

Table 3.2‑12: Yield (quality) effect of product in efficacy trials on crop \* target 1

Not applicable

Summary and conclusion

Not applicable

|  |  |
| --- | --- |
| Comments of zRMS: | All details about efficacy methodology used during 30 efficacy trials are presented above by Applicant. The trials were performed in North-East EPPO zone (Poland), in varied soil, environmental and climatic conditions with the use of different agricultural practice.  The experiment was established on a set of complete randomized blocks in 4 replications, statistical methods and observation dates were applied. The reports 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.  Submitted efficacy trials are correctly performed according to appropriate EPPO standards. Studies were carried out by testing unit mandated to conduct research in the field of efficacy of plant protection products and are officially GEP recognized. Studies were carried out in different growing seasons: for post-emergence use in 2020, 2021 and 2022 and pre-emergence use in 2021 and 2022.  The number of efficacy trials of the product presented in this dossier is in accordance with the basic number of trials defined in EPPO PP/226 (6–15 trials) for N-E EPPO zone. For pre-emergence use Applicant submitted 14 trials and for post-emergence – 16 trials carried out on maize crops.  We are dealing with the active substances used commonly for many years in many countries. Minimal level of infestation should be at least 5%. In the opinion of Evaluator, as maize is a major crop in Poland, at least 6 trials for each major weed species and 3 trials for minor weed species can be accepted. A slightly higher number of tests are required for weeds, because no plant protection product containing only isoxaflutol as a single substance has been registered in Poland. So far, only mixtures with other substances have been registered.  Applicant used a sensitivity scale of efficacy/susceptibility weeds due to existing Member State requirements for expressing levels of control for weeds and the practice of preparations by Polish farmers:  • S (susceptible) > 85%  • MS (moderately susceptible) 70-85%  • MT (moderately tolerant) 60-70%  • T (tolerant) < 60%.  Applicant correctly presented results. All studied weed species were characterized by enough number of trials and level of infestation.  **Pre-emergence use on maize crops against weeds (14 trials):**  **CHEAL** – 12 trials (4: 2021; 8: 2022) – major weed, so number of trials is sufficient. MT at 0.16 L/ha; MS at 0.2 L/ha; MS at 0.24 L/ha; S at 0.28 L/ha.  **ANTHAR –** 6 trials (1: 2021; 5-2022) – minor weed, so number of trials is acceptable. MS at 0.16 L/ha; MS at 0.2 L/ha; MS at 0.24 L/ha; S at 0.28 L/ha.  **POLPE –** 6 trials (1: 2021; 5-2022) – major weed, so number of trials is enough. MS at 0.16 L/ha; MS at 0.2 L/ha; S at 0.24 L/ha; S at 0.28 L/ha.  **THLAR –** 6 trials (1: 2021; 5-2022) – minor weed, so number of trials is sufficient. MS at 0.16 L/ha; MS at 0.2 L/ha; MS at 0.24 L/ha; S at 0.28 L/ha.  **VIOAR –** 8 trials (2:2021; 6-2022) – minor weed, so number of trials is sufficient. MT at 0.16 L/ha; MS at 0.2 L/ha; MS at 0.24 L/ha; MS at 0.28 L/ha.  **SOLNI –** 6 trials (2022) – major weed, so number of trials is acceptable. MS at 0.16 L/ha; MS at 0.2 L/ha; S at 0.24 L/ha; S at 0.28 L/ha.  **ECHCG –** 9 trials (2: 2021; 7: 2022) – major weed, so number of trials is enough. MS at 0.16 L/ha; MS at 0.2 L/ha; MS at 0.24 L/ha; S at 0.28 L/ha.  **CAPBP –** 6 trials (1: 2021; 5: 2022) – minor weed, so number of trials is sufficient. MS at 0.16 L/ha; MS at 0.2 L/ha; S at 0.24 L/ha; S at 0.28 L/ha.  **MATIN –** 4 trials (2: 2021; 2: 2022) – minor weed, so number of trials is acceptable. MT at 0.16 L/ha; MS at 0.2 L/ha; MS at 0.24 L/ha; S at 0.28 L/ha.  **STEME –** 5 trials (2: 2021; 3-2022) – minor weed, so number of trials is enough. MS at 0.16 L/ha; MS at 0.2 L/ha; S at 0.24 L/ha; S at 0.28 L/ha.  **BRSNW–** 5 trials (2: 2021; 3: 2022) – minor weed, so number of trials is acceptable. T at 0.16 L/ha; MT at 0.2 L/ha; MS at 0.24 L/ha; MS at 0.28 L/ha.  **AMARE –** 6 trials (2: 2021; 4: 2022) – major weed, so number of trials is sufficient. MT at 0.16 L/ha; MS at 0.2 L/ha; MS at 0.24 L/ha; S at 0.28 L/ha.  The most effective dose for most studied weed species for pre-emergence use was dose: 0.28 L/ha. This dose should be recommended in label. Only for MATIN and STEME the efficacy of dose 0.28 L/ha was lower than standard reference product used in trials (Adengo 315 SC 0.33 L/ha). Efficacy for BRSNW was better in tested product than standard ref. product.  **Post-emergence uses on maize crops against weeds (16 trials):**  **CHEAL –** 13 trials (2: 2020; 11: 2021) – major weed, so number of trials is acceptable. MT at 0.2 L/ha; MS at 0.25 L/ha; S at 0.3 L/ha; S at 0.35 L/ha; S at 0.4 L/ha.  **POLCO –** 8 trials (2: 2020; 6: 2021) – major weed, so number of trials is sufficient. T at 0.2 L/ha; MT at 0.25 L/ha; T at 0.3 L/ha; T at 0.35 L/ha; T at 0.4 L/ha.  **ANTHAR –** 6 trials (1: 2020; 5: 2021) – minor weed, so number of trials is enough. MS at 0.2 L/ha; MS at 0.25 L/ha; S at 0.3 L/ha; S at 0.35 L/ha; S at 0.4 L/ha.  **POLPE** – 8 trials (1: 2020; 7: 2021) – major weed, so number of trials is acceptable. MS at 0.2 L/ha; MS at 0.25 L/ha; S at 0.3 L/ha; S at 0.35 L/ha; S at 0.4 L/ha.  **THLAR –** 6 trials (1: 2020; 5: 2021) – minor weed, so number of trials is sufficient. MS at 0.2 L/ha; S at 0.25 L/ha; S at 0.3 L/ha; S at 0.35 l/ha; S at 0.4 L/ha.  **VIOAR –** 7 trials (2: 2020; 5: 2021) – minor weed, so number of trials is acceptable. MS at 0.2 L/ha; S at 0.25 L/ha; S at 0.3 L/ha; S at 0.35 L/ha; S at 0.4 L/ha.  **SOLNI –** 6 trials (1: 2020; 3: 2021; 2: 2022) – major weed, so number of trials is enough. MT at 0.2 L/ha; MS at 0.25 L/ha; S at 0.3 L/ha; S at 0.35 L/ha.  **ECHCG –** 9 trials (2: 2020; 7: 2021) – major weed, so number of trials is sufficient. T at 0.2 L/ha; MT at 0.25 L/ha; MS at 0.3 L/ha; MS at 0.35 L/ha; S at 0.4 L/ha.  **SINAR –** 6 trials (1: 2020: 3: 2021: 2: 2022) – minor weed, so number of trials is acceptable. MS at 0.2 L/ha; MS at 0.25 L/ha; S at 0.3 L/ha; S at 0.35 L/ha; S at 0.4 L/ha.  **CAPBP –** 6 trials (1: 2020; 5: 2021) – minor weed, so number of trials is enough. MS at 0.2 L/ha; S at 0.25 L/ha; S at 0.3 L/ha; S at 0.35 L/ha; S at 0.4 L/ha.  **MATIN –** 6 trials (1: 2020; 5: 2021) – minor weed, so number of trials is sufficient. MS at 0.2 L/ha; S at 0.25 L/ha; S at 0.3 L/ha; S at 0.35 L/ha; S at 0.4 L/ha.  **VERHE –** 3 trials (1: 2020; 2: 2021) – minor weed, so number of trials is acceptable. T at 0.2 L/ha; MT at 0.25 L/ha; MS at 0.3 L/ha; S at 0.35 L/ha; S at 0.4 L/ha.  **STEME –** 6 trials (1: 2020; 5: 2021) – minor weed, so number of trials is sufficient. S at 0.2 L/ha; S at 0.25 L/ha; S at 0.3 l/ha; S at 0.35 L/ha; S at 0.4 L/ha.  **BRSNW –** 6 trials (1: 2020; 2: 2021; 3: 2022) – minor weed, so number of trials is acceptable. T at 0.2 L/ha; MS at 0.25 L/ha; MS at 0.3 L/ha and S at 0.35 L/ha; S at 0.4 L/ha.  **AMARE** – 6 trials (2021) – major weed, so number of trials is sufficient. MT at 0.2 L/ha; MS at 0.25 L/ha; S at 0.3 L/ha; S at 0.35 L/ha; S at 0.4 L/ha.  The most effective dose for most studied weed species for post-emergence use was dose: 0.3 L/ha. This dose should be recommended in label. Only for BRSNW and ECHCG the efficacy of dose 0.3 L/ha was lower than standard reference product used in trials (Adengo 315 SC 0.33 L/ha).  **In the GAP table and label project only, maize can be accepted. Sweet corn can be accepted only on the basis on Article 51 without any trials.** There is a lack of 2-3 selectivity studies performed on sweet corn. Because only forage corn (its varieties) for silage, biogas and grain appeared in the studies. |

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

**3.3.1 Mode of action**

CHR/H/IZOXACYP 250 SC is a herbicide containing active substance isoxaflutole 250 g/L.

**Isoxaflutole** is a systemic herbicide belonging to HRAC group 27 – 4-HPPD inhibitors. Isoxaflutole was developed for agricultural use. The use evaluated for the first EU approval was for the control of broad leaved and annual grass weeds in maize (silage, grain, seed and sweet corn). In maize isoxaflutole is applied as a single application at the stage of growth of maize BBCH 00 – 13 i.e. pre-emergence of the maize up to the third true leaf. In sweet corn there is a single application at the stage of BBCH 00 – 09 i.e. pre-emergence only. Following uptake, isoxaflutole is very xylem mobile when taken up via the roots and phloem mobile when taken up via the shoots and it accumulates in the leaf margins and tips. Eventually lethal amounts of isoxaflutole accumulate in the foliage and meristem. Germinating seedlings that contact the product either do not emerge or emerge white and stop growing. Isoxaflutole may also be adsorbed by foliage and roots of already emerged weeds and will injure or control young weeds that are emerged at application.

**3.3.2 Mechanism of resistance**

CHR/H/IZOXACYP 250 SC is a herbicide containing active substance isoxaflutole 250 g/L, which belong to HRAC group 27 – 4-HPPD inhibitors. According HRAC Mechanism of resistance studies are ongoing. Accroding to EPPO PP 1/213 (4) Resistance risk analysis weeds usually only produce one generation per year and development of resistance is usually a relatively slow process. It is difﬁcult to class any weed species as inherently more or less likely to develop resistance to a particular herbicide.

**3.3.3 Evidence of resistance**

**Isoxaflutole** is grouped into the isoxazole chemical group. The mode of action is based on the inhibition of of Hydroxyphenyl Pyruvate Dioxygenase (HRAC group: 27, legacy F2). This group of herbicides is quite well known and has been applied commercially for decades.

According to Ian Heap’s website (http://www.weedscience.org) there are only two species which have been reported as resistant to isoxaflutole: *Raphanus raphanistrum* and *Amaranthus tuberculatus (=A. rudis)* (Table 1). Both cases have been reported in the Australia and USA with no evidence of resistance in Europe. Taking into account the entire HRAC group 27, 14 cases of weed resistance to 4-HPPD inhibitors in three weed species were reported: *Raphanus raphanistrum, Amaranthus tuberculatus (=A. rudis)* and *Amaranthus palmeri* (Table 2). All cases reported have been in the Australia and USA with no evidence of resistance in Europe.

*According to https://weedscience.org/ :*

*Table 1. Herbicide resistance cases to isoxaflutole*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **Species** | **Country** | **Actives** | **Crops** |
| 2011 | *Amaranthus tuberculatus (=A. rudis)* | United States | imazamethabenz-methyl, thifensulfuron-methyl, chlorimuron-ethyl, atrazine, isoxaflutole, glyphosate, mesotrione | Corn (maize), Soybean |
| 2015 | *Raphanus raphanistrum* | Australia | chlorsulfuron, atrazine, diflufenican, fluridone, isoxaflutole, 2,4-D, mesotrione, tembotrione | Wheat |

*According to https://weedscience.org/ :*

*Table 2. Herbicide resistance cases to 4-HPPD inhibitors*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **Species** | **Country** | **Actives** | **Crops** |
| 2009 | *Amaranthus tuberculatus (=A. rudis)* | United States | imazethapyr, chlorimuron-ethyl, atrazine, mesotrione, tembotrione, topramezone | Seed corn |
| 2009 | *Amaranthus tuberculatus (=A. rudis)* | United States | thifensulfuron-methyl, rimsulfuron, atrazine, mesotrione, tembotrione, topramezone | Seed corn |
| 2009 | *Amaranthus palmeri* | United States | thifensulfuron-methyl, atrazine, mesotrione, pyrasulfotole, tembotrione, topramezone | Corn (maize), Sorghum |
| 2011 | *Amaranthus tuberculatus (=A. rudis)* | United States | imazamethabenz-methyl, thifensulfuron-methyl, chlorimuron-ethyl, atrazine, isoxaflutole, glyphosate, mesotrione | Corn (maize), Soybean |
| 2011 | *Amaranthus tuberculatus (=A. rudis)* | United States | mesotrione, tembotrione, topramezone | Corn (maize) |
| 2011 | *Amaranthus palmeri* | United States | mesotrione, tembotrione, topramezone | Corn (maize) |
| 2014 | *Amaranthus palmeri* | United States | atrazine, mesotrione, tembotrione, topramezone | Corn (maize) |
| 2014 | *Amaranthus palmeri* | United States | imazethapyr, thifensulfuron-methyl, tembotrione | Corn (maize) |
| 2015 | *Raphanus raphanistrum* | Australia | chlorsulfuron, atrazine, diflufenican, fluridone, isoxaflutole, 2,4-D, mesotrione, tembotrione | Wheat |
| 2015 | *Amaranthus palmeri* | United States | chlorsulfuron, atrazine, glyphosate, 2,4-D, mesotrione | Sorghum |
| 2016 | *Amaranthus tuberculatus (=A. rudis)* | United States | imazethapyr, chlorimuron-ethyl, atrazine, fomesafen, lactofen, acifluorfen, 2,4-D, mesotrione, tembotrione, topramezone | Corn (maize), Soybean |
| 2016 | *Amaranthus palmeri* | United States | mesotrione | Corn (maize) |
| 2020 | *Raphanus raphanistrum* | Australia | metsulfuron-methyl, dicamba, 2,4-D, mesotrione, topramezone, pyroxasulfone | Wheat |
| 2020 | *Amaranthus tuberculatus (=A. rudis)* | United States | imazethapyr, atrazine, fomesafen, glyphosate, mesotrione | Soybean |

**3.3.4 Cross-resistance**

*According to https://hracglobal.com/files/Herbicide-Cross-Resistance-and-Multiple-Resistance-in-Plants.pdf*

Cross resistance is defined as the expression of a genetically-endowed mechanism conferring the ability to withstand herbicides from different chemical classes. There are two broad cross resistance categories; target site cross resistance and non-target site cross resistance.

Target site cross resistance occurs when a change at the biochemical site of action of one herbicide also confers resistance to herbicides from a different chemical class that inhibit the same site of action in the plant. Target site cross resistance does not necessarily result in resistance to all herbicide classes with a similar mode of action or indeed all herbicides within a given herbicide class.

Non target site cross resistance is defined as cross resistance to dissimilar herbicide classes conferred by a mechanism(s) other than resistant enzyme target sites. Until recently documented for *L. rigidum* and *A. myosuroides*, non-target site cross resistance was largely unknown in herbicide-resistant weeds but is well known in the insecticide resistance literature (Brattsten et al., 1986; Georghiou, 1986).

Cross resistance occurs mainly in the group of ALS inhibitors, acetyl-CoA carboxylase (ACCase)-inhibitors and photosystem two (PS2)-inhibitors. There is no evidence to cross resistance to 4-HPPD inhibitors, including isoxaflutole.

**3.3.5 Sensitivity data**

Applicant didn’t conduct separately trials for sensitivity data, this data was evaluated in efficacy trials. The 17 field trials (4 preemergence trials and 13 postemergence trials) use were established in order to determine the sensitivity of weeds in maize. The CHR/H/IZOXACYP 250 SC was tested at doses: 0.16-0.28 L/ha (preemergence application) and 0.2 to 0.4 L/ha (postemergence aplliacation) in maize for the control of mono and dicot weeds. None of the tested weeds showed high tolerance to the product CHR/H/IZOXACYP 250 SC. Detailed studies on the weeds sensitivity are submitted and summarised in 3.2 Efficacy data (KCP 6).

**3.3.6 Use pattern**

Herbicide CHR/H/IZOXACYP 250 SC has demonstrated good crop tolerance to maize. Therefore concluded that CHR/H/IZOXACYP 250 SC is safe usage at proposed rate and this support the label claim for the use in maize.

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

Based on submitted data the following regulation on the label is proposed:

maize:

Recommended dose at:

CHR/H/IZOXACYP 250 SC 0.28 L/ha – preemergence application,

CHR/H/IZOXACYP 250 SC 0.30 L/ha – postemergence application.

CHR/H/IZOXACYP 250 SC is to be applied in spring in maize: BBCH 00-09 and BBCH 11-13.

Recommended volume of water 200-300 L/ha (maize)

Recommended medium droplet spraying

The product CHR/H/IZOXACYP 250 SC should be use once per season at spring pre- and postemergence. To avoid resistance, products contain active substance with the same group shouldn’t be used year after year on the same field.

Use of CHR/H/IZOXACYP 250 SC according to the proposed GAP does not represent a hazard to rotational crops and does not justify a specific labelling. CHR/H/IZOXACYP 250 SC is not persistent in soil nor is it taken up by succeeding crops.

**3.3.7 Resistance risk assessment of unrestricted usepattern**

Not applicable

**3.3.8 Test methods**

Not applicable

**3.3.9 Acceptability of the resistance risk**

CHR/H/IZOXACYP 250 SC is a herbicide containing active substance isoxaflutole 250 g/L. The mode of action is based on the inhibition of of Hydroxyphenyl Pyruvate Dioxygenase (HRAC group: 27, legacy F2). This group of herbicides is quite well known and has been applied commercially for decades.

According to Ian Heap’s website (http://www.weedscience.org) there are only two species which have been reported as resistant to isoxaflutole: *Raphanus raphanistrum* and *Amaranthus tuberculatus (=A. rudis)* (Table 1). Both cases have been reported in the Australia and USA with no evidence of resistance in Europe. Taking into account the entire HRAC group 27, 14 cases of weed resistance to 4-HPPD inhibitors in three weed species were reported: *Raphanus raphanistrum, Amaranthus tuberculatus (=A. rudis)* and *Amaranthus palmeri* (Table 2). All cases reported have been in the Australia and USA with no evidence of resistance in Europe (the risk of developing resistance to 4-HPPD inhibitors, including isoxaflutone) is very low).

According to submitted efficacy data none of the tested weeds showed high tolerance to the product CHR/H/IZOXACYP 250 SC.

CHR/H/IZOXACYP 250 SC is a herbicide containing active substance isoxaflutole 250 g/L, which belong to HRAC group 27 – 4-HPPD inhibitors. According HRAC Mechanism of resistance studies are ongoing.

Accroding to EPPO PP 1/213 (4) Resistance risk analysis weeds usually only produce one generation per year and development of resistance is usually a relatively slow process.

In conclusion, in the applicant’s opinion, this level of weeds resistance risk should be considered to be acceptable.

**3.3.10 Management strategy**

Accroding to *Herbicide Resistance Action Committee (HRAC) (https://hracglobal.com/prevention-management/best-management-practices)*

Integrated Weed Management (IWM) refers to using chemical, cultural, mechanical and biological methods, in an integrated fashion, to control weeds. It does not rely excessively on any one method. When used in a integrated approach, the following tools help reduce selection pressure and survival of resistant weeds.

* Chemical - Applying herbicides to a crop.
* Mechanical - Includes measures such as hand-weeding using cultivation or ploughing to control emerged plants and bury non-germinated seed. It also includes harvest weed seed destruction such as stubble burning and cutting for hay or silage to prevent the weeds from setting seed.
* Cultural - Includes altering the crop planting date, row spacing and harvest timing to disrupt the weed cycle. It also includes planting crops that can out-compete weeds, buying certified seed that’s free of weeds and using a diverse crop rotation. Growers should also sanitize farm equipment when moving between fields.
* Biological - Includes introducing insects and pathogens that control target weed species and introducing post-harvest grazing of growing weeds.

Using a diversified crop rotation allows farmers to use these different weed techniques. Avoid successive crops that use herbicides with the same mechanism of action to control the same weed species in the same field.

Guidelines for the sustainable use of herbicide site of action groups:

• Use mixtures or sequential treatments of herbicides having different sites of action. Each herbicide in the mixture should target the same weed species.

• Consider all chemical control options before planting, in-crop and after harvest.

• Avoid continued use of the same herbicides, or herbicides with the same site of action in the same field, unless integrated with other weed control practices.

• Limit the number of applications of a single herbicide or herbicides with the same site of action in a single growing season.

• Herbicide mixtures and herbicide rotations alone are not enough to prevent resistance. They must be used in a diversified plan than also incorporates mechanical, cultural and biological practices.

Growers should also do the following:

• Follow label use instructions, such as application rates, timing and equipment recommendations.

• Know the weeds in their fields and nearby non-crop areas and tailor their weed control program to weed densities and economic thresholds.

• Monitor herbicide results and be aware of any trends or changes in weed populations.

• Maintain detailed field records to confirm cropping and herbicide history.

**3.3.11 Implementation of the management strategy**

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

**3.3.12 Monitoring, reporting and reaction to changes in performance**

*Accroding to https://hracglobal.com/files/Monitoring-and-Mitigation-of-Herbicide-Resistance.pdf*

Managing the risk of herbicide resistance (HR) is an area of strategic importance for leading herbicide technology providers and is the focus of the Global Herbicide Resistance Action Committee (HRAC), an organization comprised of 8 major companies working as a part of Crop Life International. Early detection of HR, understanding the scope of HR in a defined area, and potential mitigation of resistance through efforts to limit its spread are important aspects of managing the risk of HR. Monitoring for HR populations has been employed by public and private weed scientists for both early detection and defining the scope of resistance. The primary methods used to monitor for resistance include:

1) field surveys where seed from putative resistant plants are collected and tested in a controlled environment using bioassay procedures,

2) market research surveys of farmers and weed management experts, and

3) tracking farmer performance inquiries with appropriate follow up field evaluation and testing.

The most common monitoring method is the use of field surveys designed to either qualitatively (i.e., determine whether the level of resistance is high, medium, or low) or quantitatively (i.e., determine the area infested with HR populations) define existing HR. The primary method to detect resistance in new species and in new geographies is to track farmer performance inquiries. Once resistance is detected, steps may be taken to mitigate its impact. A critical aspect to mitigation is the implementation of best management practices (BMPs) which is facilitated by effective education and training programs. Education efforts can be enhanced with information obtained from monitoring studies and early detection of resistant populations using appropriate monitoring methods can improve the outcome of mitigation efforts.

|  |  |
| --- | --- |
| Comments of zRMS: | According to EPPO PP 1/213 (4) Resistance risk analysis weeds usually only produce one generation per year and development of resistance is usually a relatively slow process. It is difﬁcult to class any weed species as inherently more or less likely to develop resistance to a particular herbicide.  According to Ian Heap’s website (http://www.weedscience.org) there are only two species which have been reported as resistant to isoxaflutole: *Raphanus raphanistrum* and *Amaranthus tuberculatus* (=*A. rudis*) (Table 1). Both cases have been reported in the Australia and USA with no evidence of resistance in Europe. Taking into account the entire HRAC group 27, 14 cases of weed resistance to 4-HPPD inhibitors in three weed species were reported: *Raphanus raphanistrum*, *Ama-ranthus tuberculatus* (=*A. rudis*) and *Amaranthus* palmeri (Table 2). All cases reported have been in the Australia and USA with no evidence of resistance in Europe.  ZRMs agree with Applicant that cross resistance occurs mainly in the group of ALS inhibitors, acetyl-CoA carboxylase (ACCase)-inhibitors and photosystem two (PS2)-inhibitors. There is no evidence to cross resistance to 4-HPPD inhibitors, including isoxaflutole. None of the tested weeds showed high tolerance to the product CHR/H/IZOXACYP 250 SC. The product CHR/H/IZOXACYP 250 SC should be use once per season at spring pre- and postemergence. To avoid resistance, products contain active substance with the same group shouldn’t be used year after year on the same field. No cases were reported in Europe.  Use of CHR/H/IZOXACYP 250 SC according to the proposed GAP does not represent a hazard to rotational crops and does not justify a specific labelling. CHR/H/IZOXACYP 250 SC is not persistent in soil nor is it taken up by succeeding crops.  **The herbicide label provides all the necessary information for preventing weed resistance to herbicides.**  **Taking into consideration low inherent and medium-high agronomic risk for resistance development, it can be concluded that measures for resistance management, based mainly on application limitations and the alternation of crops and modes of action, should be established.**  Product should be used in rates neither lower nor higher than recommended in the label due to prevent resistance development. Chemical treatments should be performed at the optimum time, adapted to the soil and climate conditions, to utilize herbicidal action of the herbicide in an optimal way. Positions potentially simple resistance or cross effect of changes in the group of herbicides should give positive results. |

## Adverse effects on treated crops (KCP 6.4)

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

Table 3.4‑1: Presentation of trials selectivity trials.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Crop\*** | **Country** | **Type of trial\*\*** | **Number of trials** | **Years** | **GEP, non-GEP, official\*\*\*** | **Comments (any other relevant information)** |
| **North-East Zone** |
| Maize  preemergence application | Poland | S + Y + Q | 4 | 2021 | GEP | **-** |
| S + Y + Q | 4 | 2022 | GEP | **-** |
| Maize  postemergence application | Poland | S + Y + Q | 2 | 2020 | GEP | **-** |
| S + Y + Q | 6 | 2021 | GEP | **-** |
| **TOTAL** | - | - | **16** | **2020-2022** | **-** | **-** |

\* 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 organisatio

Table 3.4‑2: Presentation of reference standards used in selectivity trials.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop(s)** | **Reference standard** | **Country(ies) where the product is registered (1)** | **Authorization number** | **Active substance(s)** | **Formulation** | | **Registered application** | **Application** | **Remark(4)** |
| **Type(2)** | **Concentration of a.s.** | **rate(3)** | **rate in trials (per treatment)** |
| maize | Adengo 315 SC | Poland | R – 14/2011 | isoxaflutole | SC – Suspension concentrate | 225 g/L | 0.33-0.44 L/ha | 0.33 L/ha | - |
| thiencarbazone-methyl | 90 g/L |

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

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

(3) Dose / dose range authorized in the country

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

### Phytotoxicity to host crop (KCP 6.4.1)

Materials and methods

The applicant submitted 16 reports (in total) showing the results in research into product selectivity carried out in 2020, 2021 and 2022 in maize (8 trials – preemergence application and 8 trials – postemergence application). List of these reports is contained in Appendix 1.

Site

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

Testing units

Efficacy studies on herbicide CHR/H/IZOXACYP 250 SC were performed in 2020 and 2021 by:

- SynTech Research Poland Sp. z o.o., ul. Jagiellońska 69/1, 85-027 Bydgoszcz, Poland

- A.T Sp. z o.o., ul. Przemysłowa 3, 88-300 Mogilno, Poland

- Poznań University of Life Sciences, Research and Education Center Gorzyń, ul. Wojska Polskiego 28, 60-637 Poznań; Poland

Experimental details

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

- PP 1/135 (3) Phytotoxicity assessment

- PP 1/152 (3) Design and analysis of efficacy evaluation trials

- PP 1/181 (3) Conduct and reporting of efficacy evaluation trials including good experimental practice

They were carried out on the field in the conditions of natural agrofag infestation. The efficacy trials were concluded according to the EPPO standards:

- PP 1/050 (3) Weeds in maize

- PP 1/050 (4) Weeds in maize

Assessment methods

Statistical Analysis

Statistical analysis of the results were calculated out with the use of statistic pack of ARM 9.0. the trial results were statistically analyzed using Student & Newman & Kelus Test (p=0,05).

The treatment means of the assessment dates were calculated and compared using Student-Newman-Keuls test (P=0.05). The statistical procedures were applied using ARM 2020.1 software.

The test results were statistically evaluated using the ARM 2020.1 statistical program. All assessment data was analyzed by analysis of variance (two-way analysis of variance). The significance of differences between the combinations was assessed with the Student-Newman-Keuls test, at the significance level p = 0.05 using the "ARM 10" (version 2020.1).

Software for analysis of the results was ARM Revision 2017.4 from Gylling Data Management. Data were analysed using analysis of variance (ANOVA) on untransformed data and on transformed ones when the Bartlett's test indicated so. If transformation did not improve the distribution, original values were used and therefore significant differences reported should be interpreted with caution. The probability of no significant differences occurring between treatment means was calculated as the F probability value (Treatment Prob(F)). Student-Newman-Keuls (S-N-K) tests were applied when treatment differences were identified on the basis of the ANOVA test. Mean comparison performed only when AOV Treatment P(F) is significant at level selected. Results obtained where indicated by a letter-treatment means with no letters in common are significantly different in accordance with a S-N-K conducted at a 95% confidence level. Where data have been transformed, letters are included in the transformed data.

Statistical analysis of the results were calculated out with the use of statistic pack of ARM 9.0. the trial results were statistically analyzed using Student & Newman & Kelus Test (p=0,05).

Assessment of phytotoxicity

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

Phytotoxicity (chlorosis and necrosis), stunting and thinning were assessed by visual estimation of the intensity on an overall plot basis on a percentage scale 0-100 % (0=no damage). The assessment date was determined by the speed of action and period of efficacy of the test substances.

The phytotoxicity assessment of the tested product was carried out by visually assessing the intensity of chlorosis, necrosis, leaf twisting, reduction of plant turgor, etc. on the surface of the entire plots and comparing each plot with the control plot. The assessment was made directly on the plantation. The results are presented on a 0-100 scale, where 0 - no phytotoxicity, 100 - complete destruction of plants. Viability rating was done visually on a 0-100% scale where 0% = no crop and 100% = most viable plot in each replicate (at least one plot in each replication must be scored 100).

Harvest

The crop was harvested with a combine harvester from the central part of each plot.

Sample for each plots was analyzed on the grain analyzer: Aquamatic 5200 Perten; Inframatic 8800.

A plot combine for intermixing-free grain-harvest in field trials was used for harvesting the centre of the plot. The total yield is given in unit/ha adjusted to a fixed moisture content.

Applications methods and rates

The applications were carried out by a T-BOOM – BACCAI and plot sprayer BICSPR in maize.

Tested herbicide was applied at the growth stage:

Preemergence BBCH 00-09 and postemergence BBCH 11-13 in maize.

The product CHR/H/IZOXACYP 250 SC has been used in maize at the following rates of:

0.28 and 0.56 L/ha – preemergence,

0.35 and 0.70 L/ha – postemergence.

Adengo 315 SC was used as a reference product in maize.

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

**Experiment pattern:**

**MAIZE PREEMERGENCE APPLICATION**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **Rate (L/ha)** | **other rate (g a.s./ha)** | **Appl code** | **Growth Stage BBCH** |
| 1 | Untreated Check |  |  |  |  |
| 2 | CHR/H/IZOXACYP 250 SC | 0.28 L/ha | 70 g a.s./ha | A | BBCH 00-09 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.56 L/ha | 140 g a.s./ha | A | BBCH 00-09 |
| 4 | Adengo 315 SC | 0.33 L/ha | 103.95 g a.s./ha | A | BBCH 00-09 |
| 5 | Adengo 315 SC | 0.66 L/ha | 207.90 g a.s./ha | A | BBCH 00-09 |

**MAIZE POSTEMERGENCE APPLICATION – 2020**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **Rate (L/ha)** | **other rate (g a.s./ha)** | **Appl code** | **Growth Stage BBCH** |
| 1 | Untreated Check |  |  |  |  |
| 2 | CHR/H/IZOXACYP 250 SC | 0.40 L/ha | 100 g a.s./ha | A | BBCH 11-13 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.80 L/ha | 200 g a.s./ha | A | BBCH 11-13 |
| 4 | Adengo 315 SC | 0.33 L/ha | 103.95 g a.s./ha | A | BBCH 11-13 |
| 5 | Adengo 315 SC | 0.66 L/ha | 207.90 g a.s./ha | A | BBCH 11-13 |

**MAIZE POSTEMERGENCE APPLICATION – 2021, 2022**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Name** | **Rate (L/ha)** | **other rate (g a.s./ha)** | **Appl code** | **Growth Stage BBCH** |
| 1 | Untreated Check |  |  |  |  |
| 2 | CHR/H/IZOXACYP 250 SC | 0.35 L/ha | 87.5 g a.s./ha | A | BBCH 11-13 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.70 L/ha | 175 g a.s./ha | A | BBCH 11-13 |
| 4 | Adengo 315 SC | 0.33 L/ha | 103.95 g a.s./ha | A | BBCH 11-13 |
| 5 | Adengo 315 SC | 0.66 L/ha | 207.90 g a.s./ha | A | BBCH 11-13 |

Details of experiments

**MAIZE PREEMERGENCE APPLICATION**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Report code** | A.T/2021/052/KK | A.T/2021/053/KK | AH/21/K/17/Zł/01 | AH/21/K/17/Gr/02 | **CHR\_H\_IZOXACYP22\_SEL\_PL01** | **CHR\_H\_IZOXACYP22\_SEL\_PL02** | **CHR\_H\_IZOXACYP22\_SEL\_PL03** | **CHR\_H\_IZOXACYP22\_SEL\_PL04** |
| **Location** | Grzebienisko / Poland | Poland/ Studzieniec | Poland/ Złotniki | Poland/ Gorzyń | Nagady/Poland | Rąblów/Poland | Tonowo /Poland | Dochanowo /Poland |
| **Plant /cultivar** | maize/ Invictus | maize/ Farmezzo | maize/ Farmodena | maize/ DKC3350 | maize/ Ligato | maize/ PIONEER P8307 | maize/ Rosomak | maize/ SY Calo |
| **Seeding date** | 19.04.2021 | 05.05.2021 | 08.05.2021 | 10.05.2021 | 19.05.2022 | 02.06.2022 | 04.05.2022 | 01.05.2022 |
| **Seeding rate** | 82000 S/ha | 83000 S/ha | 80000 S/ha | 80000 S/ha | 90 000 S/ha | 88 000 S/ha | 82 000 S/ha | 82 000 S/ha |
| **Forecrop** | maize | maize | soybean | winter wheat | winter barley | maize | winter triticale | maize |
| **Type of sprayer** | BACCAI | BACCAI | BICSPR | BICSPR | BACCAI | SPRBIC | BACCAI | BACCAI |
| **Date of treatment** | 29.04.2021 | 05.05.2021 | 12.05.2021 | 13.05.2021 | 25.05.2022 | 02.06.2022 | 10.05.2022 | 06.05.2022 |
| **Plant development phase** | BBCH 01-05 | BBCH 00 | BBCH 06 | BBCH 03 | BBCH 00 | BBCH 00 | BBCH 05 | BBCH 05 |
| **Soil type** | loamy sand | sand | loamy sand | loamy sand | silt loam | silt loam | sandy loam | sandy clay loam |
| **pH** | 7.4 | 5.9 | 5.1 | 6.0 | 4.5 | 5.9 | 6.0 | 6.6 |
| **Water (L/ha)** | 200 L/ha | 300 L/ha | 250 L/ha | 200 L/ha | 200 L/ha | 200 L/ha | 200 L/ha | 300 L/ha |

**MAIZE POSTEMERGENCE APPLICATION**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Report code** | **A.T/2021/060/KK** | **A.T/2021/061/KK** | **A.T/2021/062/KK** | **A.T/2020/083/KK** | **A.T/2020/084/KK** | **SRPL21-442-336FE** | **SRPL21-443-336FE** | **SRPL21-444-336FE** |
| **Location** | Grzebienisko/ Poland | Mirosław /Poland | Orzelski Młyn /Poland | Zamarte /Poland | Nowe Młodochowo /Poland | Rąblów /Poland | Gietrzwałd /Poland | Jabłowo Pałuckie /Poland |
| **Plant /cultivar** | maize/Invictus | maize/ Legion | maize/ Amavit | maize/ SM Hubal | maize/ Abelardo | maize/ PIONEER P8307 | maize/ Opoka FAO 240 | maize/ DKC 3595 |
| **Seeding date** | 19.04.2021 | 04.05.2021 | 29.04.2021 | 29.04.2020 | 23.04.2020 | 31.05.2021 | 16.05.2021 | 08.05.2021 |
| **Seeding rate** | 82000 S/ha | 85000 S/ha | 80000 S/ha | 80000 S/ha | 85 000 S/ha | 86000 S/ha | 110000 S/ha | 90000 S/ha |
| **Forecrop** | maize | winter triticale | winter triticale | winter rye | winter rye | maize | winter wheat | maize |
| **Type of sprayer** | BACCAI | BACCAI | BACCAI | BACCAI | BACCAI | SPRBIC | BACCAI | BACCAI |
| **Date of treatment** | 18.05.2021 | 04.06.2021 | 24.05.2021 | 22.05.2020 | 22.05.2020 | 15.06.2021 | 07.06.2021 | 10.06.2021 |
| **Plant development phase** | BBCH 11-12 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 11-13 | BBCH 12-13 |
| **Soil type** | loamy sand | loamy sand | sandy loam | sandy loam | loamy sand | slit loam | sandy loam | loamy sand |
| **pH** | 7.4 | 4.9 | 5.9 | 6.1 | 6.6 | 5.9 | 5.4 | 7.9 |
| **Water (L/ha)** | 200 L/ha | 300 L/ha | 200 L/ha | 200 L/ha | 200 L/ha | 250 L/ha | 200 L/ha | 300 L/ha |

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

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

Table 3.4‑3: Phytotoxicity of product

The 8 selectivity trials (preemergence application) and 14 efficacy trials (postemergence application) in maize were carried out in Poland in 2021 and 2022 on a wide range of commercially grown varieties.

The 8 selectivity trials (postemergence application) and 16 efficacy trials (postemergence application) in maize were carried out in Poland in 2020, 2021 and 2022 on a wide range of commercially grown varieties.

**PREEMERGENCE APPLICATION**

The eight selectivity trials and fourteen efficacy trials (with phytotoxicity assessment) were carried out maize in Poland in 2021 and 2022 on a wide range of commercially grown varieties. In two trials: report no. A.T/2021/053/KK there were observed some phytotoxicity symptoms on tested product and standard and report no. CHR\_H\_IZOXACYP22\_SEL\_PL01 there were observed some phytotoxicity symptoms only on standard product. Phytotoxicity have no impact on yield quality and quantity.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Number of trials with** | | **Selectivity trials (8)** | | | | **Efficacy trials (14)** | |
| **CHR/H/IZOXACYP 250 SC** | | **Adengo 315 SC** | | **CHR/H/IZOXACYP 250 SC** | **Adengo 315 SC** |
| **N** | **2N (or other)** | **N** | **2N (or other)** | **N** | **N** |
| **Maximum of phytotoxicity recorded during the trials** | 0% to 5% | n/a | n/a | n/a | 1 | n/a | n/a |
| >5% to 10% | n/a | 1 | n/a | n/a | n/a | n/a |
| >10% to 15% | n/a | n/a | n/a | 1 | n/a | n/a |
| >15 % | n/a | n/a | n/a | n/a | n/a | n/a |
| **Level of symptoms at the last assessments** | 0% to 5% | n/a | n/a | n/a | 1 | n/a | n/a |
| >5% to 10% | n/a | n/a | n/a | n/a | n/a | n/a |
| >10% to 15% | n/a | n/a | n/a | n/a | n/a | n/a |
| >15 % | n/a | n/a | n/a | n/a | n/a | n/a |

POSTEMERGENCE APPLICATION

The eight selectivity trials and 16 efficacy trials (with phytotoxicity assessment) were carried out on maize in Poland in two seasons 2020, 2021 and 2022 on a wide range of commercially grown varieties. In two selectivity trials (report no. A.T/2021/060/KK and A.T/2020/084/KK) and in one efficacy trials (reposrt no. A.T/2021/054/KK) there were observed some phytotoxicity symptoms on tested product and standard. Phytotoxicity have no impact on yield quality and quantity.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Number of trials with** | | **Selectivity trials (8)** | | | | **Efficacy trials (16)** | |
| **CHR/H/IZOXACYP 250 SC** | | **Adengo 315 SC** | | **CHR/H/IZOXACYP 250 SC** | **Adengo 315 SC** |
| **N** | **2N (or other)** | **N** | **2N (or other)** | **N** | **N** |
| **Maximum of phytotoxicity recorded during the trials** | 0% to 5% | n/a | 1 | 1 | 1 | 1 | 1 |
| >5% to 10% | n/a | n/a | n/a | n/a | n/a | n/a |
| >10% to 15% | n/a | n/a | n/a | n/a | n/a | n/a |
| >15 % | n/a | n/a | n/a | n/a | n/a | n/a |
| **Level of symptoms at the last assessments** | 0% to 5% | n/a | 1 | n/a | 1 | n/a | n/a |
| >5% to 10% | n/a | n/a | n/a | n/a | n/a | n/a |
| >10% to 15% | n/a | n/a | n/a | n/a | n/a | n/a |
| >15 % | n/a | n/a | n/a | n/a | n/a | n/a |

|  |  |
| --- | --- |
| Comments of zRMS: | Research should be conducted in the Poland or/and in other countries from the North-East EPPO zone or neighbouring countries not belonging to the zone. According to the Polish guidelines for new substance/new application/new composition at least 5-8 selectivity studies performed in two growing seasons on 4-5 varieties for major crops should be presented. Also, Applicant can use CIRCA for the assessment, but into account must be taken issues related to data protection. Alternatively, Applicant can use the data from the records of other / neighbouring countries – but the justification for using this part by Applicant must be submitted.  Metida Plus 250 SC/ Taizza Plus 250 SC’ (product code: CHR/H/IZOXACYP 250 SC is characterized as a new composition. Because no plant protection product with isoxaflutole as a single active compound is not yet registered in Polish market. Metida Plus 250 SC/ Taizza Plus 250 SC’ will be the first product with this composition for used to control weeds in maize crops.  Selectivity studies on herbicide were performed in total in 16 trials by companies authorized to conduct studies on efficacy of plant protection products. The trials were performed with the use of different agricultural practice. The trials were performed with the use of cultivars, differing in growth strength as well as soil and water requirements. The appropriate experimental design was applied. The herbicide has been used in two doses: N and 2N. In all trials studied product was compared to the standard reference containing the same active ingredient. Statistical analysis of the data was performed. Also, phytotoxicity effect was assessed during efficacy trials.  **Pre-emergence use:** 8 trials carried out in PL (N-E EPPO zone) in 2021 (4 trials) and 2022 (4 trials) on different varieties of maize: Invictus (1), Farmezzo (1), Farmodena (1), DKC 3350 (1), Ligato (1), Pioneer P8307 (1), Rosomak (1), SY Calo (1). Following BBCH was studied during those trials: BBCH 00-06 and water volume: 200-300 L/ha. In two trials: report no. A.T/2021/053/KK there were observed some phytotoxicity symptoms on tested product and standard and report no. CHR\_H\_IZOXACYP22\_SEL\_PL01 there were observed some phytotoxicity symptoms only on standard product. Phytotoxicity have no impact on yield quality and quantity. In other selectivity studies, there were no symptoms indicating phytotoxicity of the evaluated product.  **Post-emergence use:** 8 trials carried out in PL (N-E EPPO zone) in 2020 (2 trials) and 2021 (6 trials) on different varieties of maize: Invictus (1), Legion (1), Amarit (1), SM Hubal (1), Abelardo (1), Pioneer P8307 (1), Opoka FAO 240 (1) and DKC 3595 (1). Following BBCH was studied during those trials: BBCH 11-13 and water volume: 200-300 L/ha. In two selectivity trials (report no. A.T/2021/060/KK and A.T/2020/084/KK) and in one efficacy trials (report no. A.T/2021/054/KK) there were observed some phytotoxicity symptoms on tested product and standard. Phytotoxicity have no impact on yield quality and quantity.  **In the opinion of Evaluator, the Applicant submitted enough selectivity trials for maize for Poland against pre-emergence and post-emergence use.** However special restrictions/warnings on the label should deemed necessary according to observe some phytotoxicity effect in some trials. **This warning should include information that some varieties of corn may show transient symptoms of damage after application of the product, which does not have a negative impact on the quantity and quality of the crop.**  **In the GAP table and label project only, maize can be accepted. Sweet corn can be accepted only on the basis on Article 51 without any trials.** There is a lack of 2-3 selectivity studies performed on sweet corn. Because only forage corn (its varieties) for silage, biogas and grain appeared in the studies. |

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

Influence of CHR/H/IZOXACYP 250 SC on the yield of grains was evaluated in selectivity research. The yield was evaluated on the basis of harvested grains quantity from one hectare (t/ha). The influence of the tested product on quantity of grain was evaluated in 16 field experiments in in maize (8 trials – preemergence application and 8 trials – postemergence application) in Poland in 2020, 2021 and 2022. There weren’t difference between the treatment objects and standard.

In 4 trials (2 trial in preemergence application, 2 trials in postemergence application) there were phytotoxicity effects (report no. A.T/2021/053/KK, A.T/2021/060/KK and A.T/2020/084/KK – phytotoxicity of tested product and standard; report no. CHR\_H\_IZOXACYP22\_SEL\_PL01 – phytotoxicity only of standard). This effects didn’t have any negative effect on the yield of maize.

**MAIZE – PREEMERGENCE APPLICATION**

table 3.4.2.1-1 The influence of the CHR/H/IZOXACYP 250 SC on yield quantity [t/ha]

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Crop code | | | **maize yield t/ha** | | | | | | | |  |  |  |
| Report code | | | **A.T/2021/052/KK** | **A.T/2021/053/KK** | **AH/21/K/17/Zł/01** | **AH/21/K/17/Gr/02** | **CHR\_H\_IZOXACYP22\_SEL\_PL01** | **CHR\_H\_IZOXACYP22\_SEL\_PL02** | **CHR\_H\_IZOXACYP22\_SEL\_PL03** | **CHR\_H\_IZOXACYP22\_SEL\_PL04** |  |  |  |
| Application date | | | 29.04.2021 | 05.05.2021 | 12.05.2021 | 13.05.2021 | 25.05.2022 | 02.06.2022 | 10.05.2022 | 06.05.2022 |  |  |  |
| Crop stage in application | | | BBCH 01-05 | BBCH 00 | BBCH 06 | BBCH 03 | BBCH 00 | BBCH 00 | BBCH 05 | BBCH 05 |  |  |  |
| Assessment date | | | 29.09.2021 | 08.10.2021 | 03.11.2021 | 18.10.2021 | 08.11.2022 | 17.10.2022 | 10.11.2022 | 05.10.2022 |  |  |  |
| Days after application DA-A | | | 153 DA-A | 156 DA-A | 175 DA-A | 158 DA-A | 167 DA-A | 137 DA-A | 184 DA-A | 152 DA-A |  |  |  |
| Crop stage majority | | | BBCH 99 | BBCH 99 | BBCH 89 | BBCH 89 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | **Average** | **Min.** | **Max.** |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 6.13 | 9.17 | 7.39 | 12.22 | 10.36 | 7.13 | 8.61 | 9.97 | 8.87 | 6.13 | 12.22 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.28 | 7.00 | 10.00 | 8.03 | 12.49 | 10.44 | 7.17 | 8.68 | 9.9 | 9.21 | 7.00 | 12.49 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.56 | 6.55 | 9.78 | 7.84 | 12.33 | 10.5 | 7.15 | 8.69 | 10.08 | 9.12 | 6.55 | 12.33 |
| 4 | Adengo 315 SC | 0.33 | 6.36 | 9.37 | 7.57 | 12.09 | 10.35 | 7.12 | 8.66 | 10.18 | 8.96 | 6.36 | 12.09 |
| 5 | Adengo 315 SC | 0.66 | 7.19 | 9.75 | 7.55 | 12.01 | 10.24 | 7.13 | 8.64 | 10.06 | 9.07 | 7.13 | 12.01 |
| LSD(P=.05) | | | 2.890 | 1.945 | 0.602 | 1.046 | 0.313 | 0.173 | 0.401 | 0.335 |  |  |  |

table 3.4.2.1-2 The influence of the CHR/H/IZOXACYP 250 SC on cob yield quantity [t/ha]

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Crop code | | | **maize cob yield t/ha** | |  |  |  |
| Report code | | | **A.T/2021/052/KK** | **A.T/2021/053/KK** |  |  |  |
| Application date | | | 29.04.2021 | 05.05.2021 |  |  |  |
| Crop stage in application | | | BBCH 01-05 | BBCH 00 |  |  |  |
| Assessment date | | | 29.09.2021 | 08.10.2021 |  |  |  |
| Days after application DA-A | | | 153 DA-A | 156 DA-A |  |  |  |
| Crop stage majority | | | BBCH 99 | BBCH 99 | **Average** | **Min.** | **Max.** |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |
| 1 | Untreated Check | - | 8.91 | 12.35 | 10.63 | 8.91 | 12.35 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.28 | 10.33 | 13.79 | 12.06 | 10.33 | 13.79 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.56 | 9.31 | 13.22 | 11.27 | 9.31 | 13.22 |
| 4 | Adengo 315 SC | 0.33 | 9.08 | 12.54 | 10.81 | 9.08 | 12.54 |
| 5 | Adengo 315 SC | 0.66 | 10.80 | 13.53 | 12.17 | 10.80 | 13.53 |
| LSD(P=.05) | | | 3.862 | 2.165 |  |  |  |

**MAIZE – POSTEMERGENCE APPLICATION**

table 3.4.2.1-3 The influence of the CHR/H/IZOXACYP 250 SC on yield quantity [t/ha]

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Crop code | | | **maize yield t/ha** | | | | | | | |  |  |  |
| Report code | | | **A.T/2020/083/KK** | **A.T/2020/084/KK** | **A.T/2021/060/KK** | **A.T/2021/061/KK** | **A.T/2021/062/KK** | **SRPL21-442-336FE** | **SRPL21-443-336FE** | **SRPL21-444-336FE** |  |  |  |
| Application date | | | 22.05.2020 | 22.05.2020 | 18.05.2021 | 04.06.2021 | 24.05.2021 | 15.06.2021 | 07.06.2021 | 10.06.2021 |  |  |  |
| Crop stage in application | | | BBCH 12-13 | BBCH 11-12 | BBCH 11-12 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 11-13 | BBCH 12-13 |  |  |  |
| Assessment date | | | 09.10.2020 | 06.10.2020 | 29.09.2021 | 07.10.2021 | 01.10.2021 | 28.10.2021 | 18.10.2021 | 29.10.2021 |  |  |  |
| Days after application DA-A | | | 140 DA-A | 137 DA-A | 134 DA-A | 125 DA-A | 130 DA-A | 135 DA-A | 133 DA-A | 141 DA-A |  |  |  |
| Crop stage majority | | | BBCH 89 | BBCH 89 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | **Average** | **Min.** | **Max.** |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 13.84 | 9.92 | 10.37 | 9.81 | 11.12 | 7.10 | 9.70 | 11.71 | 10.45 | 7.10 | 13.84 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.35 | - | - | 11.83 | 10.28 | 11.21 | 7.10 | 8.10 | 11.67 | 10.03 | 7.10 | 11.83 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.40 | 14.58 | 10.78 | - | - | - | - | - | - | 12.68 | 10.78 | 14.58 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.70 | - | - | 10.58 | 10.37 | 11.27 | 7.10 | 8.20 | 11.93 | 9.91 | 7.10 | 11.93 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.80 | 13.76 | 11.34 | - | - | - | - | - | - | 12.55 | 11.34 | 13.76 |
| 6 | Adengo 315 SC | 0.33 | 13.54 | 11.37 | 10.81 | 9.86 | 11.44 | 7.10 | 7.90 | 11.71 | 10.47 | 7.10 | 13.54 |
| 7 | Adengo 315 SC | 0.66 | 13.76 | 9.96 | 10.23 | 9.44 | 10.91 | 7.10 | 9.00 | 11.60 | 10.25 | 7.10 | 13.76 |
| LSD(P=.05) | | | 0.975 | 0.725 | 1.900 | 1.671 | 0.947 | 0.200 | 2.300 | 0.766 |  |  |  |

table 3.4.2.1-4 The influence of the CHR/H/IZOXACYP 250 SC on cob yield quantity [t/ha]

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Crop code | | | **maize cob yield t/ha** | | | | |  |  |  |
| Report code | | | **A.T/2020/083/KK** | **A.T/2020/084/KK** | **A.T/2021/060/KK** | **A.T/2021/061/KK** | **A.T/2021/062/KK** |  |  |  |
| Application date | | | 22.05.2020 | 22.05.2020 | 18.05.2021 | 04.06.2021 | 24.05.2021 |  |  |  |
| Crop stage in application | | | BBCH 12-13 | BBCH 11-12 | BBCH 11-12 | BBCH 12-13 | BBCH 11-12 |  |  |  |
| Assessment date | | | 09.10.2020 | 06.10.2020 | 29.09.2021 | 07.10.2021 | 01.10.2021 |  |  |  |
| Days after application DA-A | | | 140 DA-A | 137 DA-A | 134 DA-A | 125 DA-A | 130 DA-A |  |  |  |
| Crop stage majority | | | BBCH 89 | BBCH 89 | BBCH 99 | BBCH 99 | BBCH 99 | **Average** | **Min.** | **Max.** |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 19.54 | 12.06 | 15.33 | 15.54 | 16.57 | 15.81 | 12.06 | 19.54 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.35 | - | - | 17.22 | 16.07 | 16.29 | 16.53 | 16.07 | 17.22 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.40 | 20.65 | 12.38 | - | - | - | 16.52 | 12.38 | 20.65 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.70 | - | - | 15.02 | 16.11 | 16.86 | 16.00 | 15.02 | 16.86 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.80 | 19.61 | 13.24 | - | - | - | 16.43 | 13.24 | 19.61 |
| 6 | Adengo 315 SC | 0.33 | 19.17 | 13.27 | 15.71 | 15.50 | 17.07 | 16.14 | 13.27 | 19.17 |
| 7 | Adengo 315 SC | 0.66 | 19.46 | 12.11 | 14.23 | 14.86 | 16.26 | 15.38 | 12.11 | 19.46 |
| LSD(P=.05) | | | 1.224 | 1.124 | 2.652 | 2.176 | 0.713 |  |  |  |

Table 3.4‑4: Relationship between phytotoxicity and yield.

In 4 selectivity trials (2 trial in preemergence application, 2 trials in postemergence application) there were phytotoxicity effects (report no. A.T/2021/053/KK, A.T/2021/060/KK and A.T/2020/084/KK – phytotoxicity of tested product and standard; report no. CHR\_H\_IZOXACYP22\_SEL\_PL01 – phytotoxicity only of standard). This effects didn’t have any negative effect on the yield of maize.

No significant differences in the grain yield were noted.

**MAIZE – PREEMERGENCE APPLICATION**

| Test report | Variety | Maximum phyto. at 1N rate (%) (DAA) | | Maximum phyto. at 2N (or other) rate (%) (DAA) | | Yield in the untreated control  Absolute figures (%) | Yield at 1N as % of untreated | | Yield at 2N (or other) rate as % of untreated | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CHR/H/IZOXACYP 250 SC | Adengo 315 SC | CHR/H/IZOXACYP 250 SC | Adengo 315 SC | CHR/H/IZOXACYP 250 SC | Adengo 315 SC | CHR/H/IZOXACYP 250 SC | Adengo 315 SC |
| A.T/2021/053/KK | Farmezzo | 0% (19-76 DA-A) | 0% (19-76 DA-A) | 9.5% (19 DA-A) | 10.8% (19 DA-A) | 9.17  (100%) | 10.0  (109.1%) | 9.37  (102.2%) | 9.78  (106.7%) | 9.75  (106.3%) |
| CHR\_H\_IZOXACYP22\_SEL\_PL01 | Ligato | 0% (7-56 DA-A) | 0% (7-56 DA-A) | 0% (7-56 DA-A) | 2% (22-56 DA-A) | 10.36 (100%) | 10.44 (100.8%) | 10.35 (99.9%) | 10.50 (101.4%) | 10.24 (98.8%) |

**MAIZE – POSTEMERGENCE APPLICATION**

| Test report | Variety | Maximum phyto. at 1N rate (%) (DAA) | | Maximum phyto. at 2N (or other) rate (%) (DAA) | | Yield in the untreated control  Absolute figures (%) | Yield at 1N as % of untreated | | Yield at 2N (or other) rate as % of untreated | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CHR/H/IZOXACYP 250 SC | Adengo 315 SC | CHR/H/IZOXACYP 250 SC | Adengo 315 SC | CHR/H/IZOXACYP 250 SC | Adengo 315 SC | CHR/H/IZOXACYP 250 SC | Adengo 315 SC |
| A.T/2021/060/KK | Invictus | 0%  (10-64 DA-A) | 0.8%  (17-21 DA-A) | 5.0%  (27 DA-A) | 5.0%  (10 DA-A) | 10.37 (100%) | 11.83  (114.1%) | 10.81  (104.2%) | 10.58  (102.0%) | 10.23  (98.6%) |
| A.T/2020/084/KK | Abelardo | 0%  (11-61 DA-A) | 0%  (11-61 DA-A) | 10.0% (11 DA-A) | 12.5% (11 DA-A) | 9.92 (100%) | 10.78  (108.7%) | 11.37  (114.6%) | 11.34  (114.3%) | 9.96  (100.4%) |

|  |  |
| --- | --- |
| Comments of zRMS: | Yield was assessed during selectivity trials. Detailed results were presented in the tables by Applicant below.  **Pre-emergence use:** maize yield (t/ha) assessed in 8 trials and cob quality yield (t/ha) assessed in 2 trials.  **Post-emergence use:** maize yield (t/ha) assessed in 8 trials and cob quality yield (t/ha) assessed in 5 trials.  In 4 selectivity trials (2 trial in pre-emergence application, 2 trials in post-emergence application) there were phytotoxicity effects (report no. A.T/2021/053/KK, A.T/2021/060/KK and A.T/2020/084/KK – phytotoxicity of tested product and standard; report no. CHR\_H\_IZOXACYP22\_SEL\_PL01 – phytotoxicity only of standard).There wasn’t difference between the treatment objects and standard. These effects didn’t have any negative effect on the yield of maize. No significant differences in the grain yield were noted.  In the GAP table and label project only, maize can be accepted. Sweet corn can be accepted only on the basis on Article 51 without any trials. There is a lack of 2-3 selectivity studies performed on sweet corn. Because only forage corn (its varieties) for silage, biogas and grain appeared in the studies. |

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

The influence of CHR/H/IZOXACYP 250 SC on quality of grain was evaluated in 16 field experiments in in maize (8 trials – preemergence application and 8 trials – postemergence application) in Poland in 2020, 2021 and 2022. There weren’t difference between the treatment objects and standard.

In 4 selectivity trials (2 trial in preemergence application, 2 trials in postemergence application) there were phytotoxicity effects (report no. A.T/2021/053/KK, A.T/2021/060/KK and A.T/2020/084/KK – phytotoxicity of tested product and standard; report no. CHR\_H\_IZOXACYP22\_SEL\_PL01 – phytotoxicity only of standard). This effects didn’t have any negative effect on the quality yield of maize. Details of the data shows tables below.

**MAIZE – PREEMERGENCE APPLICATION**

table 3.4.3.1-1 The influence of the CHR/H/IZOXACYP 250 SC on quality of yield

maize (HLW = weight 100 Ltr (hl))

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Crop code | | | **maize HLW kg/Hl** | | | | | |  |  |  |
| Report code | | | **AH/21/K/17/Zł/01** | **AH/21/K/17/Gr/02** | **CHR\_H\_IZOXACYP22\_SEL\_PL01** | **CHR\_H\_IZOXACYP22\_SEL\_PL02** | **CHR\_H\_IZOXACYP22\_SEL\_PL03** | **CHR\_H\_IZOXACYP22\_SEL\_PL04** |  |  |  |
| Application date | | | 12.05.2021 | 13.05.2021 | 25.05.2022 | 02.06.2022 | 10.05.2022 | 06.05.2022 |  |  |  |
| Crop stage in application | | | BBCH 06 | BBCH 03 | BBCH 00 | BBCH 00 | BBCH 05 | BBCH 05 |  |  |  |
| Assessment date | | | 15.11.2021 | 09.11.2021 | 08.11.2022 | 17.10.2022 | 10.11.2022 | 05.10.2022 |  |  |  |
| Days after application DA-A | | | 187 DA-A | 180 DA-A | 167 DA-A | 137 DA-A | 184 DA-A | 152 DA-A |  |  |  |
| Crop stage majority | | | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | **Average** | **Min.** | **Max.** |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 77.33 | 69.78 | 77.34 | 83.05 | 73.15 | 70.55 | 75.20 | 69.78 | 83.05 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.28 | 76.58 | 69.03 | 78.34 | 83.03 | 73.48 | 70.28 | 64.43 | 0.28 | 83.03 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.56 | 75.63 | 69.78 | 78.3 | 83.03 | 72.8 | 70.43 | 64.36 | 0.56 | 83.03 |
| 4 | Adengo 315 SC | 0.33 | 77.35 | 69.55 | 78.68 | 83.3 | 72.73 | 70.63 | 64.65 | 0.33 | 83.30 |
| 5 | Adengo 315 SC | 0.66 | 75.33 | 70.25 | 78.41 | 83.03 | 73.88 | 69.83 | 64.48 | 0.66 | 83.03 |
| LSD(P=.05) | | | 5.244 | 1.952 | 2.678 | 0.307 | 1.326 | 1.011 |  |  |  |

table 3.4.3.1-2 The influence of the CHR/H/IZOXACYP 250 SC on quality of yield

maize thousand weight grain

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Crop code | | | **maize TKW g** | | | | | | | | |  | |  | |  | |
| Report code | | | **A.T/2021/052/KK** | **A.T/2021/053/KK** | **AH/21/K/17/Zł/01** | **AH/21/K/17/Gr/02** | **CHR\_H\_IZOXACYP22\_SEL\_PL01** | **CHR\_H\_IZOXACYP22\_SEL\_PL02** | **CHR\_H\_IZOXACYP22\_SEL\_PL03** | **CHR\_H\_IZOXACYP22\_SEL\_PL04** |  | |  | |  | |
| Application date | | | 29.04.2021 | 05.05.2021 | 12.05.2021 | 13.05.2021 | 25.05.2022 | 02.06.2022 | 10.05.2022 | 06.05.2022 |  | |  | |  | |
| Crop stage in application | | | BBCH 01-05 | BBCH 00 | BBCH 06 | BBCH 03 | BBCH 00 | BBCH 00 | BBCH 05 | BBCH 05 |  | |  | |  | |
| Assessment date | | | 22.10.2021 | 22.10.2021 | 15.11.2021 | 09.11.2021 | 08.11.2022 | 17.10.2022 | 10.11.2022 | 05.10.2022 |  | |  | |  | |
| Days after application DA-A | | | 176 DA-A | 170 DA-A | 187 DA-A | 180 DA-A | 167 DA-A | 137 DA-A | 184 DA-A | 152 DA-A |  | |  | |  | |
| Crop stage majority | | | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | **Average** | | **Min.** | | **Max.** | |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  | |  | |  | |
| 1 | Untreated Check | - | 293.38 | 199.00 | 316.31 | 361.48 | 301.1 | 270.96 | 321.13 | 297.04 | 295.05 | | 199.00 | | 361.48 | |
| 2 | CHR/H/IZOXACYP 250 SC | 0.28 | 329.13 | 198.19 | 314.88 | 359.33 | 300.6 | 270.94 | 323.1 | 302.63 | 299.85 | | 198.19 | | 359.33 | |
| 3 | CHR/H/IZOXACYP 250 SC | 0.56 | 306.63 | 190.00 | 318.81 | 373.83 | 300.04 | 270.99 | 322.85 | 298.29 | 297.68 | | 190.00 | | 373.83 | |
| 4 | Adengo 315 SC | 0.33 | 284.25 | 193.94 | 315.77 | 357.68 | 296.93 | 271.06 | 322.28 | 294.4 | 292.04 | | 193.94 | | 357.68 | |
| 5 | Adengo 315 SC | 0.66 | 339.75 | 203.00 | 314.58 | 364.33 | 296.51 | 270.93 | 323.23 | 303.45 | 301.97 | | 203.00 | | 364.33 | |
| LSD(P=.05) | | | 60.992 | 22.575 | 9.357 | 22.903 | 10.775 | 0.303 | 2.488 | 9.625 |  | |  | |  | |

table 3.4.3.1-3 The influence of the CHR/H/IZOXACYP 250 SC on quality of yield

maize moisture content

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Crop code | | | **maize moisture content %** | | | | | | | |  |  |  |
| Report code | | | **A.T/2021/052/KK** | **A.T/2021/053/KK** | **AH/21/K/17/Zł/01** | **AH/21/K/17/Gr/02** | **CHR\_H\_IZOXACYP22\_SEL\_PL01** | **CHR\_H\_IZOXACYP22\_SEL\_PL02** | **CHR\_H\_IZOXACYP22\_SEL\_PL03** | **CHR\_H\_IZOXACYP22\_SEL\_PL04** |  |  |  |
| Application date | | | 29.04.2021 | 05.05.2021 | 12.05.2021 | 13.05.2021 | 25.05.2022 | 02.06.2022 | 10.05.2022 | 06.05.2022 |  |  |  |
| Crop stage in application | | | BBCH 01-05 | BBCH 00 | BBCH 06 | BBCH 03 | BBCH 00 | BBCH 00 | BBCH 05 | BBCH 05 |  |  |  |
| Assessment date | | | 29.09.2021 | 08.10.2021 | 03.11.2021 | 18.10.2021 | 08.11.2022 | 17.10.2022 | 10.11.2022 | 05.10.2022 |  |  |  |
| Days after application DA-A | | | 153 DA-A | 156 DA-A | 175 DA-A | 158 DA-A | 167 DA-A | 137 DA-A | 184 DA-A | 152 DA-A |  |  |  |
| Crop stage majority | | | BBCH 99 | BBCH 99 | BBCH 89 | BBCH 89 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | **Average** | **Min.** | **Max.** |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 17.93 | 18.48 | 28.80 | 18.10 | 27.96 | 23.3 | 29.93 | 30.45 | 24.37 | 17.93 | 30.45 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.28 | 17.95 | 19.35 | 27.90 | 18.00 | 28.02 | 23.03 | 30.3 | 29.78 | 24.29 | 17.95 | 30.30 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.56 | 17.43 | 18.03 | 27.20 | 17.60 | 27.66 | 23.23 | 30.2 | 30.15 | 23.94 | 17.43 | 30.20 |
| 4 | Adengo 315 SC | 0.33 | 17.88 | 17.13 | 28.00 | 17.60 | 28.03 | 23.48 | 30.35 | 30.1 | 24.07 | 17.13 | 30.35 |
| 5 | Adengo 315 SC | 0.66 | 19.41 | 19.60 | 27.50 | 17.40 | 27.65 | 23.5 | 30.48 | 30 | 24.44 | 17.40 | 30.48 |
| LSD(P=.05) | | | 2.824 | 3.163 | 1.220 | 1.100 | 1.481 | 0.568 | 0.565 | 0.856 |  |  |  |

**MAIZE – POSTEMERGENCE APPLICATION**

table 3.4.3.1-4 The influence of the CHR/H/IZOXACYP 250 SC on quality of yield

maize (HLW = weight 100 Ltr (hl))

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Crop code | | | **maize HLW kg/Hl** | | |  |  |  |
| Report code | | | **SRPL21-442-336FE** | **SRPL21-443-336FE** | **SRPL21-444-336FE** |  |  |  |
| Application date | | | 15.06.2021 | 07.06.2021 | 10.06.2021 |  |  |  |
| Crop stage in application | | | BBCH 12-13 | BBCH 11-13 | BBCH 12-13 |  |  |  |
| Assessment date | | | 28.10.2021 | 18.10.2021 | 29.10.2021 |  |  |  |
| Days after application DA-A | | | 135 DA-A | 133 DA-A | 141 DA-A |  |  |  |
| Crop stage majority | | | BBCH 99 | BBCH 99 | BBCH 99 | **Average** | **Min.** | **Max.** |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |
| 1 | Untreated Check | - | 82.80 | 71.58 | 76.00 | 76.79 | 71.58 | 82.80 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.35 | 83.20 | 71.58 | 75.80 | 76.86 | 71.58 | 83.20 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.70 | 83.10 | 72.43 | 75.40 | 76.98 | 72.43 | 83.10 |
| 4 | Adengo 315 SC | 0.33 | 83.10 | 71.55 | 76.40 | 77.02 | 71.55 | 83.10 |
| 5 | Adengo 315 SC | 0.66 | 83.20 | 71.45 | 76.50 | 77.05 | 71.45 | 83.20 |
| LSD(P=.05) | | | 0.830 | 3.142 | 2.090 |  |  |  |

table 3.4.3.1-5 The influence of the CHR/H/IZOXACYP 250 SC on quality of yield

maize thousand weight grain

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Crop code | | | **maize TKW g** | | | | | | | |  | |  | |  |
| Report code | | | **A.T/2020/083/KK** | **A.T/2020/084/KK** | **A.T/2021/060/KK** | **A.T/2021/061/KK** | **A.T/2021/062/KK** | **SRPL21-442-336FE** | **SRPL21-443-336FE** | **SRPL21-444-336FE** |  |  | |  | |
| Application date | | | 22.05.2020 | 22.05.2020 | 18.05.2021 | 04.06.2021 | 24.05.2021 | 15.06.2021 | 07.06.2021 | 10.06.2021 |  |  | |  | |
| Crop stage in application | | | BBCH 12-13 | BBCH 11-12 | BBCH 11-12 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 11-13 | BBCH 12-13 |  |  | |  | |
| Assessment date | | | 09.10.2020 | 06.10.2020 | 22.10.2021 | 22.10.2021 | 22.10.2021 | 28.10.2021 | 18.10.2021 | 29.10.2021 |  |  | |  | |
| Days after application DA-A | | | 140 DA-A | 137 DA-A | 157 DA-A | 140 DA-A | 151 DA-A | 135 DA-A | 133 DA-A | 141 DA-A |  |  | |  | |
| Crop stage majority | | | BBCH 89 | BBCH 89 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | **Average** | **Min.** | | **Max.** | |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  | |  | |
| 1 | Untreated Check | - | 375.90 | 245.25 | 388.88 | 350.75 | 382.91 | 270.05 | 402.70 | 324.00 | 342.56 | 245.25 | | 402.70 | |
| 2 | CHR/H/IZOXACYP 250 SC | 0.35 | - | - | 350.38 | 346.50 | 367.63 | 270.28 | 380.50 | 319.50 | 339.13 | 270.28 | | 380.50 | |
| 3 | CHR/H/IZOXACYP 250 SC | 0.40 | 381.20 | 251.50 | - | - | - | - | - | - | 316.35 | 251.50 | | 381.20 | |
| 4 | CHR/H/IZOXACYP 250 SC | 0.70 | - | - | 374.75 | 338.00 | 374.63 | 270.23 | 382.85 | 327.20 | 344.61 | 270.23 | | 382.85 | |
| 5 | CHR/H/IZOXACYP 250 SC | 0.80 | 376.93 | 239.63 | - | - | - | - | - | - | 308.28 | 239.63 | | 376.93 | |
| 6 | Adengo 315 SC | 0.33 | 384.05 | 247.75 | 398.50 | 351.75 | 383.88 | 270.21 | 392.70 | 322.30 | 343.89 | 247.75 | | 398.50 | |
| 7 | Adengo 315 SC | 0.66 | 383.83 | 237.63 | 384.50 | 352.13 | 377.75 | 270.25 | 394.70 | 324.70 | 340.69 | 237.63 | | 394.70 | |
| LSD(P=.05) | | | 9.212 | 28.454 | 61.165 | 23.067 | 21.739 | 0.440 | 31.828 | 10.840 |  |  | |  | |

table 3.4.3.1-6 The influence of the CHR/H/IZOXACYP 250 SC on quality of yield

maize moisture content

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Crop code | | | **maize moisture content %** | | | | | | | |  |  |  |
| Report code | | | **A.T/2020/083/KK** | **A.T/2020/084/KK** | **A.T/2021/060/KK** | **A.T/2021/061/KK** | **A.T/2021/062/KK** | **SRPL21-442-336FE** | **SRPL21-443-336FE** | **SRPL21-444-336FE** |  |  |  |
| Application date | | | 22.05.2020 | 22.05.2020 | 18.05.2021 | 04.06.2021 | 24.05.2021 | 15.06.2021 | 07.06.2021 | 10.06.2021 |  |  |  |
| Crop stage in application | | | BBCH 12-13 | BBCH 11-12 | BBCH 11-12 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 11-13 | BBCH 12-13 |  |  |  |
| Assessment date | | | 09.10.2020 | 06.10.2020 | 29.09.2021 | 07.10.2021 | 01.10.2021 | 28.10.2021 | 18.10.2021 | 29.10.2021 |  |  |  |
| Days after application DA-A | | | 140 DA-A | 137 DA-A | 134 DA-A | 125 DA-A | 130 DA-A | 135 DA-A | 133 DA-A | 141 DA-A |  |  |  |
| Crop stage majority | | | BBCH 89 | BBCH 89 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | BBCH 99 | **Average** | **Min.** | **Max.** |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 30.33 | 18.73 | 18.83 | 20.95 | 23.58 | 22.15 | 36.85 | 33.00 | 25.55 | 18.73 | 36.85 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.35 | - | - | 18.60 | 20.23 | 21.28 | 22.08 | 38.48 | 33.20 | 25.65 | 18.60 | 38.48 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.40 | 29.35 | 17.70 | - | - | - | - | - | - | 23.53 | 17.70 | 29.35 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.70 | - | - | 18.40 | 19.58 | 24.03 | 22.15 | 38.05 | 32.90 | 25.85 | 18.40 | 38.05 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.80 | 29.90 | 18.22 | - | - | - | - | - | - | 24.06 | 18.22 | 29.90 |
| 6 | Adengo 315 SC | 0.33 | 29.88 | 18.68 | 19.00 | 20.30 | 23.73 | 22.18 | 37.45 | 32.80 | 25.50 | 18.68 | 37.45 |
| 7 | Adengo 315 SC | 0.66 | 29.73 | 19.20 | 18.00 | 20.30 | 23.70 | 22.15 | 36.38 | 32.70 | 25.27 | 18.00 | 36.38 |
| LSD(P=.05) | | | 0.928 | 2.455 | 4.332 | 3.442 | 3.100 | 0.350 | 2.458 | 1.050 |  |  |  |

|  |  |
| --- | --- |
| Comments of zRMS: | Quality of yield was assessed in 16 trials (8 trials for pre-emergence and 8 trials for post-emergence use). In 4 selectivity trials (2 trial in pre-emergence application, 2 trials in post-emergence application) there were phytotoxicity effects (report no. A.T/2021/053/KK, A.T/2021/060/KK and A.T/2020/084/KK – phytotoxicity of tested product and standard; report no. CHR\_H\_IZOXACYP22\_SEL\_PL01 – phytotoxicity only of standard).  **Pre-emergence use:** 6 trials for HLW, 8 trials for thousand weight grain and 8 trials for moisture.  **Post-emergence use**: 3 trails for HLW, 8 trials for thousand weight grain and 8 trials for moisture.  The data obtained in trials harvested demonstrate that tested product – Metida Plus 250 SC/ Taizza Plus 250 SC’ (product code: CHR/H/IZOXACYP 250 SC is as safe to the crop as the reference products used in the trials.  In the GAP table and label project only, maize can be accepted. Sweet corn can be accepted only on the basis on Article 51 without any trials. There is a lack of 2-3 selectivity studies performed on sweet corn. Because only forage corn (its varieties) for silage, biogas and grain appeared in the studies. |

### Effects on transformation processes (KCP 6.4.4)

Lack of additional tests in this range. Active substance comprising in this product has been applied for many years, not only in Poland but also in the other countries of Europe.

According to ***Isoxaflutole\_RAR\_01\_Volume\_1\_2015-01-28\_san.pdf*** Residues in products of plant or animal origin subject to processing were showed to be <0.01 mg/kg for isoxaflutole parent and for the DKN metabolite (RPA 202248). Therefore, studies on the nature of residues in processed commodities are not required and were not conducted.

According to magnitude of residues in plants provided in Section B7 in core dossier no signifi-cant residues, i.e. >0.1 mg/kg, were found in grain and therefore processing studies are not requi-red. No further studies have been performed. Therefore, no impact for effects on processed commodities has been predicted.

According to EPPO PP 1/243 (2) and information above, additional studies are not required.

|  |  |
| --- | --- |
| Comments of zRMS: | Considering that product is applied at early stage of the crop (pre-emergence use at BBCH 00-09 and post-emergence use at BBCH 11-13) and maize is not a typical crop used for subsequent processing, it could be agreed that no negative impact on processing is expected. Adverse effects on plant parts (seed) used for propagation purposes did not occur. |

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

There is no information available pointing to presence of any limitations to using of CHR/H/IZOXACYP 250 SC in seed crops of maize.

In the course of studies carried out in Poland in the season of 2020, 2021 and 2022 on product CHR/H/IZOXACYP 250 SC the herbicide has not been observed to have any significant influence on yield.

The product may be used in seed crops of maize.

|  |  |
| --- | --- |
| Comments of zRMS: | Special trials to investigate this purpose or reasoned case were not submitted by Applicant. Therefore, either restrictions/warnings based on absence of data or conclusions from other similar isoxaflutole products out of protection should be implemented. ZRMs agree with Applicant that CHR/H/IZOXACYP 250 SC has not been observed to have any significant influence on yield. So, **the product may be used in seed crops of maize.** |

Summary and conclusion

The submitted efficacy data (reports from 30 field trials) and additional information fulfill requirements and conditions determined in the following EPPO guidelines:

- PP 1/135 (3) Phytotoxicity assessment

- PP 1/152 (3) Design and analysis of efficacy evaluation trials

- PP 1/181 (3) Conduct and reporting of efficacy evaluation trials including good experimental practice

They were carried out on the field in the conditions of natural agrofag infestation. The efficacy trials were concluded according to the EPPO standards:

- PP 1/50(3) Weeds in maize

- PP 1/50(4) Weeds in maize

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

The formulation of CHR/H/IZOXACYP 250 SC is suspension concentrate (SC) and it comprises active substance 250 g/L isoxaflutole. The applicant submitted 30 reports in total (14 trials – preemergence application and 16 trials – postemergence application) showing the results in research into product efficacy carried out in 2020, 2021 and 2022 in maize.

The obtained data in performed trials show that CHR/H/IZOXACYP 250 SC provides benefits against the most important weeds in maize as shown in the table below.

The following table describes the effectiveness of weeds:

|  |  |
| --- | --- |
| S (Susceptible) | > 85% (within each trial the average must be higher than 85%) |
| MS (Moderately Susceptible) | 70 – 85% |
| MT (Moderately Tolerant ) | 60 – 70% |
| T (Tolerant) | < 60% |

**The following table shows the average sensitivity of weeds in maize:**

**MAIZE – PREEMERGENCE APPLICATION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Product code (L, kg/ha)** | **EPPO code** | **Scientific name** | **DA-A** | **Pest stage** | **Average** | **Efficacy** |
| CHR/H/IZOXACYP 250 SC 0.16 L/ha | CHEAL | *Chenopodium album* | 22-29 DA-A | BBCH 00 | 69.72 | MT |
| ANTAR | *Anthemis arvensis* | 22-28 DA-A | BBCH 00 | 73.02 | MS |
| POLPE | *Polygonum persicaria* | 28-39 DA-A | BBCH 00 | 75.52 | MS |
| THLAR | *Thlaspi arvense* | 22-28 DA-A | BBCH 00 | 73.18 | MS |
| VIOAR | *Viola arvensis* | 22-29 DA-A | BBCH 00 | 67.30 | MT |
| ECHCG | *Echinochloa crus-galli* | 22-29 DA-A | BBCH 00 | 72.41 | MS |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 00 | 76.48 | MS |
| MATIN | *Tripleurospermum inodorum* | 22-28 DA-A | BBCH 00 | 61.95 | MT |
| STEME | *Stellaria media* | 22-28 DA-A | BBCH 00 | 73.15 | MS |
| BRSNW | *Brassica napus (self-sown plant)* | 27-28 DA-A | BBCH 00 | 58.11 | T |
| AMARE | *Amaranthus retroflexus* | 22-28 DA-A | BBCH 00 | 68.44 | MT |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 00 | 78.23 | MS |
| CHR/H/IZOXACYP 250 SC 0.20 L/ha | CHEAL | *Chenopodium album* | 22-29 DA-A | BBCH 00 | 76.12 | MS |
| ANTAR | *Anthemis arvensis* | 22-28 DA-A | BBCH 00 | 78.37 | MS |
| POLPE | *Polygonum persicaria* | 28-39 DA-A | BBCH 00 | 82.20 | MS |
| THLAR | *Thlaspi arvense* | 22-28 DA-A | BBCH 00 | 76.77 | MS |
| VIOAR | *Viola arvensis* | 22-29 DA-A | BBCH 00 | 71.50 | MS |
| ECHCG | *Echinochloa crus-galli* | 22-29 DA-A | BBCH 00 | 75.10 | MS |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 00 | 81.95 | MS |
| MATIN | *Tripleurospermum inodorum* | 22-28 DA-A | BBCH 00 | 70.26 | MS |
| STEME | *Stellaria media* | 22-28 DA-A | BBCH 00 | 78.37 | MS |
| BRSNW | *Brassica napus (self-sown plant)* | 27-28 DA-A | BBCH 00 | 67.70 | MT |
| AMARE | *Amaranthus retroflexus* | 22-28 DA-A | BBCH 00 | 75.86 | MS |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 00 | 82.07 | MS |
| CHR/H/IZOXACYP 250 SC 0.24 L/ha | CHEAL | *Chenopodium album* | 22-29 DA-A | BBCH 00 | 83.50 | MS |
| ANTAR | *Anthemis arvensis* | 22-28 DA-A | BBCH 00 | 83.15 | MS |
| POLPE | *Polygonum persicaria* | 28-39 DA-A | BBCH 00 | 87.65 | S |
| THLAR | *Thlaspi arvense* | 22-28 DA-A | BBCH 00 | 81.90 | MS |
| VIOAR | *Viola arvensis* | 22-29 DA-A | BBCH 00 | 76.78 | MS |
| ECHCG | *Echinochloa crus-galli* | 22-29 DA-A | BBCH 00 | 81.19 | MS |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 00 | 88.43 | S |
| MATIN | *Tripleurospermum inodorum* | 22-28 DA-A | BBCH 00 | 81.83 | MS |
| STEME | *Stellaria media* | 22-28 DA-A | BBCH 00 | 86.22 | S |
| BRSNW | *Brassica napus (self-sown plant)* | 27-28 DA-A | BBCH 00 | 73.88 | MS |
| AMARE | *Amaranthus retroflexus* | 22-28 DA-A | BBCH 00 | 84.84 | MS |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 00 | 86.23 | S |
| CHR/H/IZOXACYP 250 SC 0.28 L/ha | CHEAL | *Chenopodium album* | 22-29 DA-A | BBCH 00 | 89.43 | S |
| ANTAR | *Anthemis arvensis* | 22-28 DA-A | BBCH 00 | 87.73 | S |
| POLPE | *Polygonum persicaria* | 28-39 DA-A | BBCH 00 | 92.65 | S |
| THLAR | *Thlaspi arvense* | 22-28 DA-A | BBCH 00 | 87.13 | S |
| VIOAR | *Viola arvensis* | 22-29 DA-A | BBCH 00 | 83.81 | MS |
| ECHCG | *Echinochloa crus-galli* | 22-29 DA-A | BBCH 00 | 86.69 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 00 | 94.18 | S |
| MATIN | *Tripleurospermum inodorum* | 22-28 DA-A | BBCH 00 | 86.53 | S |
| STEME | *Stellaria media* | 22-28 DA-A | BBCH 00 | 91.20 | S |
| BRSNW | *Brassica napus (self-sown plant)* | 27-28 DA-A | BBCH 00 | 81.86 | MS |
| AMARE | *Amaranthus retroflexus* | 22-28 DA-A | BBCH 00 | 91.72 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 00 | 90.93 | S |
| Adengo 315 SC 0.33 L/ha | CHEAL | *Chenopodium album* | 22-29 DA-A | BBCH 00 | 91.63 | S |
| ANTAR | *Anthemis arvensis* | 22-28 DA-A | BBCH 00 | 91.53 | S |
| POLPE | *Polygonum persicaria* | 28-39 DA-A | BBCH 00 | 98.93 | S |
| THLAR | *Thlaspi arvense* | 22-28 DA-A | BBCH 00 | 92.95 | S |
| VIOAR | *Viola arvensis* | 22-29 DA-A | BBCH 00 | 81.30 | MS |
| ECHCG | *Echinochloa crus-galli* | 22-29 DA-A | BBCH 00 | 89.99 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 00 | 95.88 | S |
| MATIN | *Tripleurospermum inodorum* | 22-28 DA-A | BBCH 00 | 76.28 | MS |
| STEME | *Stellaria media* | 22-28 DA-A | BBCH 00 | 84.96 | MS |
| BRSNW | *Brassica napus (self-sown plant)* | 27-28 DA-A | BBCH 00 | 87.00 | S |
| AMARE | *Amaranthus retroflexus* | 22-28 DA-A | BBCH 00 | 87.12 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 00 | 86.93 | S |

On the basis of submitted research, it is possible to state that CHR/H/IZOXACYP 250 SC used at dose controlled:

**Dose CHR/H/IZOXACYP 250 SC 0.16 L/ha**

Moderately Susceptible: *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE), *Thlaspi arvense* (THLAR), *Stellaria media* (STEME), *Capsella bursa-pastoris* (CAPBP), *Echinochloa crus-galli* (ECHCG), *Solanum nigrum* (SOLNI),

Moderately Tolerant: *Chenopodium album* (CHEAL), *Viola arvensis* (VIOAR), *Tripleurospermum mar. inodorum* (MATIN), *Amaranthus retroflexus* (AMARE),

Tolerant: *Brassica napus* (self-sown plant) (BRSNW)

**Dose CHR/H/IZOXACYP 250 SC 0.20 L/ha**

Moderately Susceptible: *Polygonum persicaria* (POLPE), *Thlaspi arvense* (THLAR), *Capsella bursa-pastoris* (CAPBP), *Stellaria media* (STEME), *Amaranthus retroflexus* (AMARE), *Anthemis arvensis* (ANTAR), *Viola arvensis* (VIOAR), *Tripleurospermum mar. inodorum* (MATIN), *Chenopodium album* (CHEAL), *Echinochloa crus-galli* (ECHCG), *Solanum nigrum* (SOLNI),

Tolerant: *Brassica napus* (self-sown plant) (BRSNW)

**Dose CHR/H/IZOXACYP 250 SC 0.24 L/ha**

Susceptible: *Polygonum persicaria* (POLPE), *Capsella bursa-pastoris* (CAPBP), *Stellaria media* (STEME), *Solanum nigrum* (SOLNI),

Moderately Susceptible: *Thlaspi arvense* (THLAR), *Amaranthus retroflexus* (AMARE), *Anthemis arvensis* (ANTAR), *Viola arvensis* (VIOAR), *Tripleurospermum mar. inodorum* (MATIN), *Chenopodium album* (CHEAL), *Echinochloa crus-galli* (ECHCG), *Brassica napus* (self-sown plant) (BRSNW)

**Dose CHR/H/IZOXACYP 250 SC 0.28 L/ha**

Susceptible: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE), *Thlaspi arvense* (THLAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Stellaria media* (STEME), *Amaranthus retroflexus* (AMARE), *Echinochloa crus-galli* (ECHCG), *Solanum nigrum* (SOLNI),

Moderately Susceptible: *Viola arvensis* (VIOAR), *Brassica napus* (self-sown plant) (BRSNW)

**MAIZE – POSTEMERGENCE APPLICATION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Product code (L, kg/ha)** | **EPPO code** | **Scientific name** | **DA-A** | **Pest stage** | **Average** | **Efficacy** |
| CHR/H/IZOXACYP 250 SC 0.20 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 64.96 | MT |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 7.92 | T |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 72.40 | MS |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 70.01 | MS |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 73.52 | MS |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 83.92 | MS |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 68.70 | MT |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 51.56 | T |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 71.50 | MS |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 82.50 | MS |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 79.86 | MS |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 58.26 | T |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 91.00 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 55.02 | T |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | 63.55 | MT |
| CHR/H/IZOXACYP 250 SC 0.25 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 76.21 | MS |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 23.24 | T |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 84.55 | MS |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 82.91 | MS |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 90.43 | S |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 89.51 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 81.13 | MS |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 62.97 | MT |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 84.67 | MS |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 90.02 | S |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 87.97 | S |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 69.85 | MT |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 96.25 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 73.60 | MS |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | 76.77 | MS |
| CHR/H/IZOXACYP 250 SC 0.30 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 85.42 | S |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 28.85 | T |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 89.93 | S |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 95.14 | S |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 98.30 | S |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 93.44 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 87.93 | S |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 71.13 | MS |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 96.25 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 99.05 | S |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 95.97 | S |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 78.38 | MS |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 97.72 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 79.98 | MS |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | 91.73 | S |
| CHR/H/IZOXACYP 250 SC 0.35 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 89.93 | S |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 35.13 | T |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 93.52 | S |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 99.38 | S |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 99.58 | S |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 96.87 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 94.60 | S |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 83.98 | MS |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 97.58 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 100.00 | S |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 97.88 | S |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 87.85 | S |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 99.08 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 89.22 | S |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | 94.72 | S |
| CHR/H/IZOXACYP 250 SC 0.40 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 97.25 | S |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 58.50 | T |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 100.00 | S |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 100.00 | S |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 100.00 | S |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 97.90 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 100.00 | S |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 97.40 | S |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 100.00 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 100.00 | S |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 100.00 | S |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 97.00 | S |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 100.00 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 100.00 | S |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | - | - |
| Adengo 315 SC 0.33 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 93.60 | S |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 97.31 | S |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 98.97 | S |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 99.31 | S |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 100.00 | S |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 100.00 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 94.80 | S |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 96.63 | S |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 96.67 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 100.00 | S |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 99.80 | S |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 86.88 | S |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 99.42 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 91.73 | S |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | 98.55 | S |

On the basis of submitted research, it is possible to state that CHR/H/IZOXACYP 250 SC used at dose controlled:

**Dose CHR/H/IZOXACYP 250 SC 0.20 L/ha**

Susceptible: *Stellaria media* (STEME)

Moderately Susceptible: *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE), *Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Sinapsis arvensis* (SINAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN),

Moderately Tolerant: *Chenopodium album* (CHEAL), *Amaranthus retroflexus* (AMARE), *Solanum nigrum* (SOLNI),

Tolerant: *Polygonum convolvulus* (POLCO), *Echinochloa crus-galli* (ECHCG), *Veronica hederifolia (VERHE), Brassica napus* (self-sown plant) (BRSNW)

**Dose CHR/H/IZOXACYP 250 SC 0.25 L/ha**

Susceptible: *Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Stellaria media* (STEME),

Moderately Susceptible: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE), *Amaranthus retroflexus* (AMARE), *Solanum nigrum* (SOLNI), *Sinapsis arvensis* (SINAR), *Brassica napus* (self-sown plant) (BRSNW),

Moderately Tolerant: *Echinochloa crus-galli* (ECHCG), *Veronica hederifolia (VERHE),*

Tolerant: *Polygonum convolvulus* (POLCO)

**Dose CHR/H/IZOXACYP 250 SC 0.30 L/ha**

Susceptible: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE),*Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Solanum nigrum* (SOLNI), *Sinapsis arvensis* (SINAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Stellaria media* (STEME), *Brassica napus* (self-sown plant) (BRSNW), *Amaranthus retroflexus* (AMARE)

Moderately Susceptible: *Echinochloa crus-galli* (ECHCG), *Veronica hederifolia (VERHE), Brassica napus* (self-sown plant) (BRSNW),

Tolerant: *Polygonum convolvulus* (POLCO)

**Dose CHR/H/IZOXACYP 250 SC 0.35 L/ha**

Susceptible: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE),*Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Solanum nigrum* (SOLNI), *Sinapsis arvensis* (SINAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Veronica hederifolia (VERHE), Stellaria media* (STEME), *Brassica napus* (self-sown plant) (BRSNW), *Amaranthus retroflexus* (AMARE)

Moderately Susceptible: *Echinochloa crus-galli* (ECHCG)

Tolerant: *Polygonum convolvulus* (POLCO)

**Dose CHR/H/IZOXACYP 250 SC 0.40 L/ha**

Susceptible: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE),*Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Solanum nigrum* (SOLNI), *Sinapsis arvensis* (SINAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Veronica hederifolia (VERHE), Stellaria media* (STEME), *Brassica napus* (self-sown plant) (BRSNW), *Amaranthus retroflexus* (AMARE), *Echinochloa crus-galli* (ECHCG)

Tolerant: *Polygonum convolvulus* (POLCO)

Herbicide CHR/H/IZOXACYP 250 SC has demonstrated good crop tolerance to maize. Therefore concluded that CHR/H/IZOXACYP 250 SC is safe usage at proposed rate and this support the label claim for the use in maize.

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

According to the above, the plant protection product CHR/H/IZOXACYP 250 SC can be approved to the market and use in Poland according to proposed range of use – GAP.

Based on submitted data the following regulation on the label is proposed:

Poland

Maize:

Recommended dose at:

0.28 L/ha of CHR/H/IZOXACYP 250 SC – preemergence application once a season in maize, which are corresponding to 70 g a.s./ha (isoxaflutole),

0.30 L/ha of CHR/H/IZOXACYP 250 SC – postemergence application once a season in maize, which are corresponding to 75 g a.s./ha (isoxaflutole).

The product CHR/H/IZOXACYP 250 SC should be use once per season at spring pre- and postemergence. To avoid resistance, products contain active substance with the same group shouldn’t be used year after year on the same field.

CHR/H/IZOXACYP 250 SC is to be applied in spring:

BBCH 00-09 and BBCH 11-13 in maize.

Recommended volume of water 200-300 L/ha (maize)

Recommended medium droplet spraying

Use of CHR/H/IZOXACYP 250 SC according to the proposed GAP does not represent a hazard to rotational crops and does not justify a specific labelling. CHR/H/IZOXACYP 250 SC is not persistent in soil nor is it taken up by succeeding crops.

|  |  |
| --- | --- |
| Comments of zRMS: | In the Polish label following weed species can be accepted.   * **for pre-emergence use:** recommended dose – 0.28 L/ha   *Susceptible*: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE), *Thlaspi arvense* (THLAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Stellaria media* (STEME), *Amaranthus retroflexus* (AMARE), *Echinochloa crus-galli* (ECHCG), *Solanum nigrum* (SOLNI),  *Moderately Susceptible:* *Viola arvensis* (VIOAR), *Brassica napus* (self-sown plant) (BRSNW)   * **for post-emergence use:** recommended dose – 0.30 L/ha   *Susceptible:* *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE), *Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Solanum nigrum* (SOLNI), *Sinapsis arvensis* (SINAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Stellaria media* (STEME), *Brassica napus* (self-sown plant) (BRSNW), *Amaranthus retroflexus* (AMARE)  *Moderately Susceptible*: *Echinochloa crus-galli* (ECHCG), *Veronica hederifolia* (VERHE), *Brassica napus* (self-sown plant) (BRSNW),  *Tolerant:* *Polygonum convolvulus* (POLCO) |

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

### Impact on succeeding crops (KCP 6.5.1)

*According to EPPO PP 1/207 (2) Effects on succeeding crops:*

No separate studies have been carried out concerning the influence of product CHR/H/IZOXACYP on succeeding plants. The owner of the product CHR/H/IZOXACYP and of its registration documentation is referring to available sources in literature treating on herbicide isoxaflutole.

|  |  |  |
| --- | --- | --- |
| **Waiting period before planting succeeding crops** | | **Overall waiting period proposed by zRMS for CHR/H/IZOXACYP 250 SC** |
| **Crop group** | **Led by isoxaflutole** |
| Leafy vegetables | 34 days | CHR/H/IZOXACYP degrades in the soil during the growing season without endangering rotational crops.  For CHR/H/IZOXACYP no waiting period is necessary as long as succeeding crops are sown after harvest of the treated crops. However, it is recommended to plough the soil before sowing the succeeding crop when sowing is indented in the autumn directly of treated crop. |
| Root vegetables | 34 days |
| Oilseed | NR |
| Cereals | 34 days |

**Table 3.5‑1: PEC-values and TER-calculation of test product CHR/H/IZOXACYP 250 SC based on NOER-values.**

| **Succeeding crop(1)** | **Days after application(2)** | **NOER**  **mg/ha (3)** | **PEC(4)** | | **TER(5)** | |
| --- | --- | --- | --- | --- | --- | --- |
| **mg/kg soil e.g. 5 cm** | **mg/kg soil e.g. 20 cm** | **NOER/PEC**  **e.g. 5 cm** | **NOER/PEC**  **e.g. 20 cm** |
| *Pisum sativum* | 14 | 17526 | 0.6315 | 0.1579 | 27753 | 111013 |
| *Helianthus annuus* | 14 | 650.87 | 0.6315 | 0.1579 | 1030.7 | 4122.7 |
| *Daucus carota* | 14 | 1952.6 | 0.6315 | 0.1579 | 3092.0 | 12368 |
| *Linum usitatissimum* | 14 | 52590 | 0.6315 | 0.1579 | 83278 | 333114 |
| *Loilium perenne* | 14 | 5846.0 | 0.6315 | 0.1579 | 9257.3 | 37029 |
| *Avena sativa* | 14 | 15778 | 0.6315 | 0.1579 | 249854 | 999416 |
| *Pisum sativum* | 21 | 17526 | 0.6315 | 0.1579 | 27753 | 111013 |
| *Helianthus annuus* | 21 | 5846.0 | 0.6315 | 0.1579 | 9257.3 | 37029 |
| *Daucus carota* | 21 | 5846.0 | 0.6315 | 0.1579 | 9257.3 | 37029 |
| *Linum usitatissimum* | 21 | 17526 | 0.6315 | 0.1579 | 27753 | 111013 |
| *Loilium perenne* | 21 | 15778 | 0.6315 | 0.1579 | 249854 | 999416 |
| *Avena sativa* | 21 | 52590 | 0.6315 | 0.1579 | 83278 | 333114 |

(1) possible following crops in a regular crop rotation

(2) adequate value for following crop in a regular crop rotation

(3) NOER-values of succeeding crops

(4) PEC (soil depth e.g. 5/20 cm)

(5) TER (soil depth e.g. 5/20 cm)

The TER values of CHR/H/IZOXACYP 250 SC exceed a trigger value 1 , then no further trials are required.

|  |  |
| --- | --- |
| Comments of zRMS: | Mobility of isoxaflutole, which is retained at the soil surface where it can be taken up by surface-germinating weed seeds. Isoxaflutole has a very short soil half-life and rapidly degrades to a stable and phytotoxic metabolite, diketonitrile (DKN). Further degradation of DKN produces a nonbiologically active benzoic acid (BA) metabolite. The DKN, which has a laboratory soil half-life of 20-30 days, is more mobile and is taken up by the roots. In addition to influencing the soil behaviour of IFT and DKN, the greater lipophilicity of IFT leads to greater uptake by seed, shoot and root tissues. In both plants and soil, the DKN is converted to the herbicidally inactive benzoic acid. This degradation is more rapid in maize than in susceptible weed species and this contributes to the mechanism of selectivity, together with the greater sowing depth of the crop.  No separate studies have been carried out concerning the influence of product CHR/H/IZOXACYP on succeeding plants. The owner of the product CHR/H/IZOXACYP and of its registration documentation is referring to available sources in literature treating on herbicide isoxaflutole. PEC-values and TER-calculation of test product CHR/H/IZOXACYP 250 SC based on NOER-values were presented for: *Pisum sativum, Helianthus annuus, Daucus carota, Linum usitatissimum, Loilium perenne, Avena sativa, Pisum sativum, Helianthus annuus, Daucus carota, Linum usitatissimum, Loilium perenne* and *Avena sativa.* The TER values of CHR/H/IZOXACYP 250 SC exceed a trigger value 1, then no further trials are required.  P**recautions and recommendations that are contained in the Polish label design:** ZRMs agree with Applicant. So, proposed entry in the label should be accepted. *CHR/H/IZOXACYP degrades in the soil during the growing season without endangering rotational crops. For CHR/H/IZOXACYP no waiting period is necessary as long as succeeding crops are sown after harvest of the treated crops. However, it is recommended to plough the soil before sowing the succeeding crop when sowing is indented in the autumn directly of treated crop.* |

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

No specific studies were conducted to fill this data point.

No phytotoxic effects were observed in the commissioned trials. Tested herbicides did not influence on yield, degree of plant lodging and tillering, weight of 1000 grains regardless of herbicide dose) it is expected the product is safe for plants of adjacent crops.

CHR/H/IZOXACYP effectively controlled dicotyledons plants therefore users must exercise caution to avoid drift or vapors which may cause discoloration and damage to non-target foliage.

According to M. Czarnynoga, study code G-87-20 and A. Wróbel, study code G-88-20, please find results for seedling emergence and vegetative vigour below. For details for those two studies please refer to Appendix 8.

**Table 3.5-2 Assessment of the risk for non-target plants due to the use of CHR/H/IZOXACYP 250 SC in maize**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Intended use | | Maize BBCH 00-13 | | | |  |
| Active substance/product | | CHR/H/IZOXACYP | | | |  |
| Application rate (g/ha) | | 1 × 473.3 | | | |  |
| MAF | | 1.0 | | | |  |
| Test species | ER50 (g/ha) | | Drift values | PERoff‑field  (g/ha) | TER  criterion: TER ≥ 5 | System |
| *Pisum sativum* | 97.01 | | 2.77% | 13.11 | 7.400 | 21 d  Vegetative vigour |
| *Helianthus annuus* | 24.90 | | 2.77% | 13.11 | **1.899** | 21 d  Vegetative vigour |
| *Daucus carota* | 14.97 | | 2.77% | 13.11 | **1.142** | 21 d  Vegetative vigour |
| *Linum usitatissimum* | 158.5 | | 2.77% | 13.11 | 12.09 | 21 d  Vegetative vigour |
| *Lolium perenne* | 473.3 | | 2.77% | 13.11 | 36.11 | 21 d  Vegetative vigour |
| *Avena sativa* | 242.4 | | 2.77% | 13.11 | 18.49 | 21 d  Vegetative vigour |
| *Pisum sativum* | 473.36 | | 2.77% | 13.11 | 36.11 | 14 d  Seedling emergence |
| *Helianthus annuus* | 259.11 | | 2.77% | 13.11 | 19.77 | 14 d  Seedling emergence |
| *Daucus carota* | 69.312 | | 2.77% | 13.11 | 5.287 | 14 d  Seedling emergence |
| *Linum usitatissimum* | 375.48 | | 2.77% | 13.11 | 28.64 | 14 d  Seedling emergence |
| *Lolium perenne* | 473.36 | | 2.77% | 13.11 | 36.11 | 14 d  Seedling emergence |
| *Avena sativa* | 473.36 | | 2.77% | 13.11 | 36.11 | 14 d  Seedling emergence |

MAF: Multiple application factor; PER: Predicted environmental rate; TER: toxicity to exposure ratio. TER values shown in bold fall below the relevant trigger.

In order to reduce the off-field exposure, risk mitigation measures can be implemented. These correspond to unsprayed in-field buffer strips of a given width and/or the usage of drift reducing nozzles. The results of the risk assessment using typical mitigation measures (no-spray buffer zones of 5 or 10 m; drift-reducing nozzles with reduction by 50 %, 75 %, or 90 %) are summarised in the following table.

**Table 3.5-3 Risk assessment for non-target terrestrial plants due to the use of CHR/H/IZOXACYP 250 SC in maize considering risk mitigation (in-field no-spray buffer zones, and drift-reducing nozzles)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Intended use | | Maize (BBCH 00-13) | | | |
| Active substance/product | | CHR/H/IZOXACYP 250 SC | | | |
| Application rate (g/ha) | | 1 × 473.3 | | | |
| MAF | | 1.0 | | | |
| Buffer strip  (m) | Drift values  (%) | PERoff-field  (g/ha) | PERoff-field  50 % drift red.  (g/ha) | PERoff-field  75 % drift red.  (g/ha) | PERoff-field  90 % drift red.  (g/ha) |
| 1 | 2.77 | 13.11 | 6.56 | 3.28 | 1.31 |
| 5 | 0.57 | 2.697 | 1.348 | 0.674 | 0.27 |
| 10 | 0.29 | 1.372 | 0.686 | 0.343 | 0.137 |
| Toxicity value | | TER | | | |
| **ER50 (Daucus carota) = 14.97 g fp/ha** | | criterion: TER ≥ 5 | | | |
| 1 | | **1.142** | **2.284** | **4.568** | 11.42 |
| 5 | | 5.551 | 11.101 | 22.022 | 55.51 |
| 10 | | 10.911 | 21.822 | 43.644 | 109.11 |

MAF: Multiple application factor; PER: Predicted environmental rates; TER: toxicity to exposure ratio. Criteria values shown in bold breach the relevant trigger.

Based on the predicted rates of CHR/H/IZOXACYP 250 SC in off-field areas, the TER values describing the risk for non-target plants following exposure to CHR/H/IZOXACYP 250 SC according to the GAP of the formulation CHR/H/IZOXACYP 250 SC achieve the acceptability criteria TER ≥ 5 with applying:

- 5 m buffer zone

- 1 m and use of 90% drift reducing nozzles

|  |  |
| --- | --- |
| Comments of zRMS: | CHR/H/IZOXACYP effectively controlled dicotyledons plants therefore users must exercise caution to avoid drift or vapors which may cause discoloration and damage to non-target foliage.  ZRMs agree with Applicant that based on the predicted rates of CHR/H/IZOXACYP 250 SC in off-field areas, the TER values de-scribing the risk for non-target plants following exposure to CHR/H/IZOXACYP 250 SC according to the GAP of the formulation CHR/H/IZOXACYP 250 SC achieve the acceptability criteria TER ≥ 5 with applying:  - 5 m buffer zone  - 1 m and use of 90% drift reducing nozzles |

****Tank cleaning****

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

* Immediately after spraying drain tank completely. Any contamination on the outside of the spraying equipment should be removed by washing with clean water.
* Rinse inside of tank with clean water and flush through boom and hoses using at least one tenth of the spray tank volume. Drain completely.
* Fill the tank with clean water and add one of the cleaning agents recommended for clean-up of spraying equipment. Agitate for a minimum of 10 min. and then flush the boom and hoses with the cleaning solution. Nozzles and filters should be removed and cleaned up separately with a recommended cleaning agent.
* Rinse the tank with clean water and flush through the boom and hoses using at least one tenth of the spray tank volume. Drain tank completely.
* CHR/H/IZOXACYP 250 SC is non-corrosive to equipment, non-flammable and non-volatile.

According to Report M. Patrzałek, Study code: ICB/11/2021, the effectiveness of cleaning was done regardts to Efficacy Guideline 305:

**Effectiveness of cleaning.**

The study was conducted according to Efficacy Guideline 305 and and Standard Operational Procedure SPB/39. The mixture of test item was prepared at a concentration of 0.2% (w/v), then was poured into 3 polyethylene bottles and allowed to stand at temperature (18- 28°C) to next day, but not longer than 24 h. After that, the bottles were rinsed by the tap water. Then the bottles were rinsed with acetonitrile which were analysed for active ingredient content. Three different rinsing procedures were used.

**Single rinse procedure**

a) The bottle was shaken, then the solution was discarded,

b) 10 mL of tap water was added, the bottle was inverted twice, and the rinsing was

discarded,

c) 10 mL of acetonitrile was added, and the bottle was shaken to coat all surfaces. The

acetonitrile was analysed for the active substance content.

**Double rinse procedure**

a) The bottle was shaken, then the solution was discarded,

b) 10 mL of tap water was added, the bottle was inverted twice, and the rinsing was

discarded,

c) point b) was repeated,

d) 10 mL of acetonitrile was added, and the bottle was shaken to coat all surfaces. The

acetonitrile was analysed for the active substance content.

**Triple rinse procedure.**

a) The bottle was shaken, then the solution was discarded,

b) 10 mL of tap water was added, the bottle was inverted twice, and the rinsing was

discarded,

c) point b) was repeated twice,

d) 10 mL of acetonitrile was added, and the bottle was shaken to coat all surfaces. The

acetonitrile was analysed for the active substance content.

**Results**

Results of effectiveness of cleaning are presented in table below.

**Table 3.5-4 Percentage of isoxaflutole removed from the bottle**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Solution | Active ingredient removed – the bottle [%] | | | |
| Measurement 1 | Measurement 2 | Measurement 3 | Average |
| Solution 1 (Single rinse procedure) | 99.89 | 99.87 | 99.87 | 99.88 |
| Solution 2 (Double rinse procedure) | 99.91 | 99.90 | 99.91 | 99.91 |
| Solution 3 (Triple rinse procedure) | 99.91 | 99.90 | 99.91 | 99.91 |

|  |  |
| --- | --- |
| Comments of zRMS: | Applicant presented results for cleaning procedure. Triple washing with water was sufficient to remove isoxaflutole to below the limit of quantification in a small-scale jar test. The cleaning procedures proposed by the applicant are therefore acceptable. |

### Impact on beneficial and other non-target organisms (KCP 6.5.3)

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

**Compatibility with current management practices including IPM**

Not applicable

Summary and conclusion

Not applicable

|  |  |
| --- | --- |
| Comments of zRMS: | There are no specific recommendations regarding IPM systems on the label. For detailed consideration of risks to beneficial organisms please see the ecotocology section B section 9. |

## Other/special studies

Not performed

|  |  |
| --- | --- |
| Comments of zRMS: | ZRMs accepted |

## List of test facilities including the corresponding certificates

Table 3.5‑5: List of test facilities

| Test facility | Address | Certificate (Yes or No) |
| --- | --- | --- |
| SynTech Research Poland Sp. z o.o. | ul. Jagiellońska 69/1, 85-027 Bydgoszcz, Poland | Yes |
| A.T Sp. z o.o. | ul. Przemysłowa 3, 88-300 Mogilno, Poland | Yes |
| Poznań University of Life Sciences, Research and Education Center Gorzyń | ul. Wojska Polskiego 28, 60-637  Poznań, Poland | Yes |

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

List of data submitted by the applicant and relied on

| **Data point** | **Author(s)** | **Year** | **Title Company Report No.  Source (where different from company) GLP or GEP status Published or not** | **Data Vertebrate study**  **Y/N** | **Owner** |
| --- | --- | --- | --- | --- | --- |
| KCP 6.4 | Joanna Guzińska | 2021 | Selectivity evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied pre-emergence to maize, Poland, 2021.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno    Report no.: A.T/2021/052/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.4 | Joanna Guzińska | 2021 | Selectivity evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied pre-emergence to maize, Poland, 2021.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2021/053/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.4 | Agnieszka Faligowska | 2021 | The evaluation of selectivity of herbicide CHR/H/IZOXACYP in maize  Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/21/K/17/Zł/01  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.4 | Agnieszka Faligowska | 2021 | The evaluation of selectivity of herbicide CHR/H/IZOXACYP in maize  Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/21/K/17/Gr/02  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.4 | Zdzisław Jaskólski | 2022 | Selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) pre-emergence in maize.  SynTech Research Poland Sp. z o.o.  69/1 Jagiellonska  85-027 Bydgoszcz  Report no.: CHR\_H\_IZOXACYP22\_SEL\_PL01  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.4 | Zdzisław Jaskólski | 2022 | Selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) pre-emergence in maize.  SynTech Research Poland Sp. z o.o.  69/1 Jagiellonska  85-027 Bydgoszcz  Report no.: CHR\_H\_IZOXACYP22\_SEL\_PL02  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.4 | Zdzisław Jaskólski | 2022 | Selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) pre-emergence in maize.  SynTech Research Poland Sp. z o.o.  69/1 Jagiellonska  85-027 Bydgoszcz  Report no.: CHR\_H\_IZOXACYP22\_SEL\_PL03  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.4 | Zdzisław Jaskólski | 2022 | Selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) pre-emergence in maize.  SynTech Research Poland Sp. z o.o.  69/1 Jagiellonska  85-027 Bydgoszcz  Report no.: CHR\_H\_IZOXACYP22\_SEL\_PL04  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Zdzisław Jaskólski | 2021 | Efficacy and selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) pre-emergence in maize  SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz  Report no.: SRPL21-433-336FE  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Zdzisław Jaskólski | 2021 | Efficacy and selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) pre-emergence in maize  SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz  Report no.: SRPL21-434-336FE  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Zdzisław Jaskólski | 2021 | Efficacy and selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) pre-emergence in maize  SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz  Report no.: SRPL21-435-336FE  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Zdzisław Jaskólski | 2021 | Efficacy and selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) pre-emergence in maize  SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz  Report no.: SRPL21-436-336FE  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Joanna Guzińska | 2022 | Efficacy evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied into maize to control of weeds,  Poland, 2022.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2022/002/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Joanna Guzińska | 2022 | Efficacy evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied into maize to control of weeds,  Poland, 2022.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2022/003/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Joanna Guzińska | 2022 | Efficacy evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied into maize to control of weeds,  Poland, 2022.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2022/004/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Joanna Guzińska | 2022 | Efficacy evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied into maize to control of weeds,  Poland, 2022.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2022/005/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Joanna Guzińska | 2022 | Efficacy evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied into maize to control of weeds,  Poland, 2022.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2022/006/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Robert Idziak | 2022 | Assessment of efficacy of herbicide CHR/H/IZOXACYP 250 SC  applied preemergence in maize  Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/22/K/20/Br/01  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Robert Idziak | 2022 | Assessment of efficacy of herbicide CHR/H/IZOXACYP 250 SC  applied preemergence in maize  Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/22/K/20/Zł/02  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Robert Idziak | 2022 | Assessment of efficacy of herbicide CHR/H/IZOXACYP 250 SC  applied preemergence in maize  Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/22/K/20/Gr/03  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Robert Idziak | 2022 | Assessment of efficacy of herbicide CHR/H/IZOXACYP 250 SC  applied preemergence in maize  Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/22/K/20/Ce/04  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Robert Idziak | 2022 | Assessment of efficacy of herbicide CHR/H/IZOXACYP 250 SC  applied preemergence in maize  Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/22/K/20/Mr/05  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.4 | Joanna Guzińska | 2021 | Selectivity evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied post-emergence to maize,  Poland, 2021.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2021/060/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.4 | Joanna Guzińska | 2021 | Selectivity evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied post-emergence to maize,  Poland, 2021.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2021/061/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.4 | Joanna Guzińska | 2021 | Selectivity evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied post-emergence to maize,Poland, 2021.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2021/062/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.4 | Joanna Guzińska | 2020 | Selectivity evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied into maize, Poland, 2020.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2020/083/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.4 | Joanna Guzińska | 2020 | Selectivity evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied into maize, Poland, 2020.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2020/084/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.4 | Zdzisław Jaskólski | 2021 | Selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) post-emergence in maize.  SynTech Research Poland Sp. z o.o.  Jagiellońska 69/1 Bydgoszcz  Report no.: SRPL21-442-336FE  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.4 | Zdzisław Jaskólski | 2021 | Selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) post-emergence in maize.  SynTech Research Poland Sp. z o.o.  Jagiellońska 69/1 Bydgoszcz  Report no.: SRPL21-443-336FE  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.4 | Zdzisław Jaskólski | 2021 | Selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) post-emergence in maize.  SynTech Research Poland Sp. z o.o.  Jagiellońska 69/1 Bydgoszcz  Report no.: SRPL21-444-336FE  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Joanna Guzińska | 2020 | Efficacy evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied into maize to control of weeds, Poland, 2020.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2020/081/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Joanna Guzińska | 2020 | Efficacy evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied into maize to control of weeds, Poland, 2020.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2020/082/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Joanna Guzińska | 2021 | Efficacy evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied into maize to control of weeds, Poland, 2021.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2021/054/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Joanna Guzińska | 2021 | Efficacy evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied into maize to control of weeds, Poland, 2021.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2021/055/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Joanna Guzińska | 2021 | Efficacy evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied into maize to control of weeds, Poland, 2021.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2021/056/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Joanna Guzińska | 2021 | Efficacy evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied into maize to control of weeds, Poland, 2021.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2021/057/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Joanna Guzińska | 2020 | Efficacy evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied into maize to control of weeds, Poland, 2021.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2021/059/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Joanna Guzińska | 2020 | Efficacy evaluation of herbicide CHR/H/IZOXACYP 250 SC when applied into maize to control of weeds, Poland, 2021.  A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno  Report no.: A.T/2021/103/KK  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Zdzisław Jaskólski | 2021 | Efficacy and selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) post-emergence in maize.  SynTech Research Poland Sp. z o.o.  Jagiellońska 69/1 Bydgoszcz  Report no.: SRPL21-437-336FE  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Zdzisław Jaskólski | 2021 | Efficacy and selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) post-emergence in maize.  SynTech Research Poland Sp. z o.o.  Jagiellońska 69/1 Bydgoszcz  Report no.: SRPL21-438-336FE  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Zdzisław Jaskólski | 2021 | Efficacy and selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) post-emergence in maize.  SynTech Research Poland Sp. z o.o.  Jagiellońska 69/1 Bydgoszcz  Report no.: SRPL21-439-336FE  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Zdzisław Jaskólski | 2021 | Efficacy and selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) post-emergence in maize.  SynTech Research Poland Sp. z o.o.  Jagiellońska 69/1 Bydgoszcz  Report no.: SRPL21-440-336FE  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Zdzisław Jaskólski | 2021 | Efficacy and selectivity of CHR/H/IZOXACYP (Izoxaflutole g/L) post-emergence in maize.  SynTech Research Poland Sp. z o.o.  Jagiellońska 69/1 Bydgoszcz  Report no.: SRPL21-441-336FE  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Robert Idziak | 2022 | Assessment of efficacy of herbicide CHR/H/IZOXACYP 250 SC applied post-emergence in maize  Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/22/K/20/Jab/01  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Robert Idziak | 2022 | Assessment of efficacy of herbicide CHR/H/IZOXACYP 250 SC applied post-emergence in maize  Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/22/K/20/Mał/02  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |
| KCP 6.2 | Robert Idziak | 2022 | Assessment of efficacy of herbicide CHR/H/IZOXACYP 250 SC applied post-emergence in maize  Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/22/K/20/NW/03  GEP - yes  Unpublished | N | Chemirol Sp. z o.o. |

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

Not applicable

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

List of data submitted by the applicant and not relied on

Not applicable

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

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

Not applicable

| **Data point** | **Author(s)** | **Year** | **Title Company Report No.  Source (where different from company) GLP or GEP status Published or not** | **Vertebrate study**  **Y/N** | **Owner** |
| --- | --- | --- | --- | --- | --- |
| n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a |

# Appendix 2 Additional information provided by the applicant

**COMPARISON OF CLIMATIC AND AGRICULTURAL CONDITIONS IN POLAND AND THE CZECH REPUBLIC IN REFERENCE TO REGISTRATION OF PLANT PROTECTION PRODUCT CHR/H/IZOXACYP 250 SC**

1. **Introduction**

The purpose of the following document is to compare climatic and agricultural conditions of Poland and the Czech Republic in order to enable data from efficacy and phytotoxicity trials conducted in Poland to be used for registration purposes of spring, foliar applied, cereal herbicide CHR/H/IZOXACYP 250 SC in the Czech Republic.

1. **Plant protection products under consideration**
   1. **General**

The efficacy and phytotoxicity studies were conducted in Poland in 2020, 2021 and 2022 in maize on the plant protection product CHR/H/IZOXACYP 250 SC containing the active substance isoxaflutole 250 g/L and a standard herbicides Adengo 315 SC containing the active substances thiencarbazone-methyl 90 g/L and isoxaflutole 225 g/L.Total of 30 efficacy (14 preemergence trilas in maize, 16 postemergence trials in maize) and 16 phytotoxicity (8 preemergence trilas in maize, 8 postemergence trials in maize) GEP trials were carried out to assess the product’s efficacy and phytotoxic potential.

* 1. **Products’ characteristics:**

Table 1. Products’ characteristics

|  |  |  |
| --- | --- | --- |
| **PRODUCT** | **CHR/H/IZOXACYP 250 SC** | Adengo 315 SC |
| **active substance content** | isoxaflutole 250 g/L | 315 g/L  (thiencarbazone-methyl 90 g/L + isoxaflutole 225 g/L) |
| **formulation** | SC – Suspension Concentrate | SC – Suspension Concentrate |

The following information originates from Conclusion on the peer review of the pesticide risk assessment of the active substance *Isoxaflutole\_RAR\_01\_Volume\_1\_2015-01-28\_san.pdf* for the active substance isoxaflutole.

Table 2. Properties of active substances

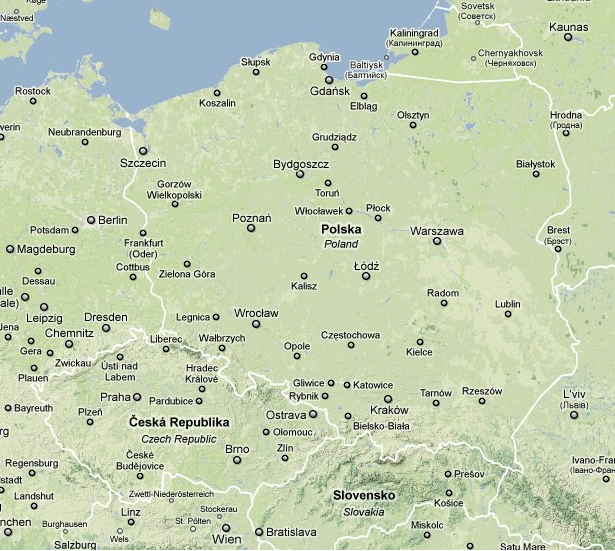
|  |  |
| --- | --- |
| **active substance common name** | Isoxaflutole |
| **active substance chemical name** | 5-cyclopropyl-4-(2-methylsulfonyl-4-trifluoromethyl-benzoyl)-isoxazole |
| **function** | It is a systemic herbicide that is readily absorbed through the plant roots and shoots. Laboratory studies indicate that uptake is more efficient via the roots than the shoots. Following uptake, isoxaflutole is very xylem mobile from root uptake and phloem mobile from shoot uptake and will accumulate in the leaf margins and tips. Germinating seedlings that contact the product either do not emerge or emerge white and stop growing. Isoxaflutole may also be adsorbed by foliage and roots of already emerged weeds and will injure or control young weeds that are emerged at application. |
| **mode of action** | 4-HPPD inhibition |
| **application** | apply from the phase, between growth stage BBCH 00-13 in maize |

1. **Climatic conditions**

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

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

Figure 1. Location of Poland and the Czech Republic



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

Figure 2. Location of climate stations

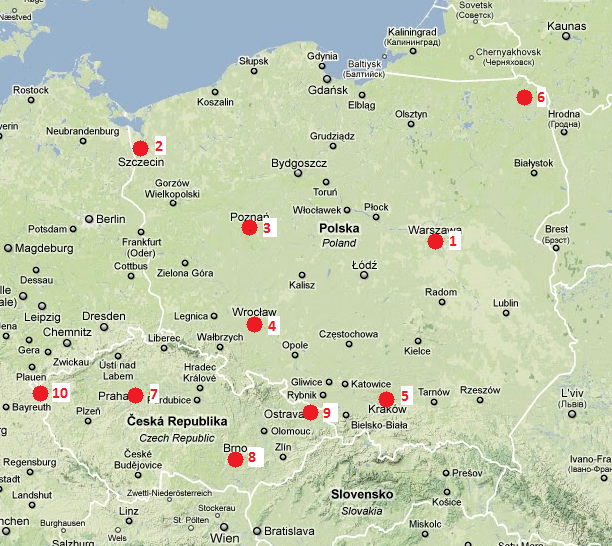


Table 3. Parameters of climate stations

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

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

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

* 1. **Average monthly temperature**

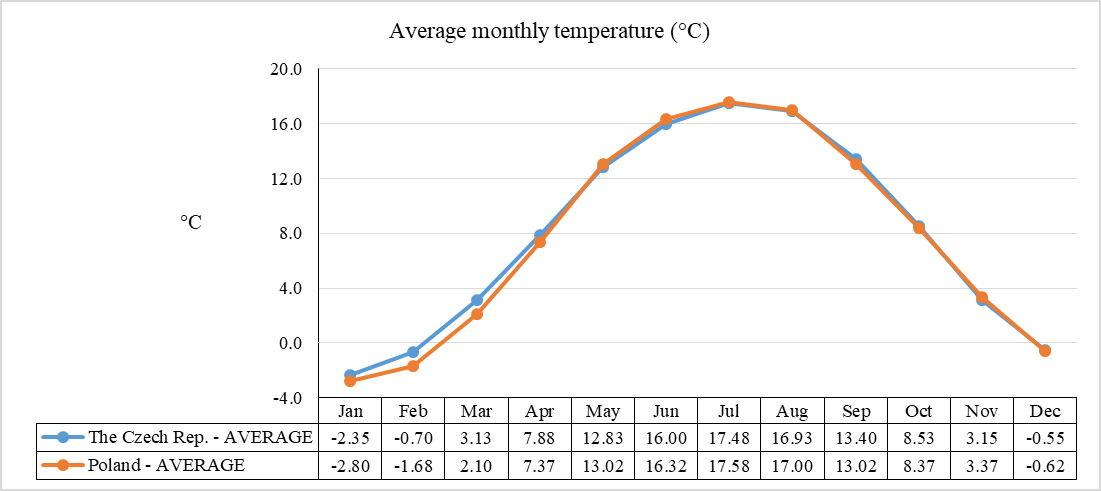
Table 4. Average monthly temperature data

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

data source:

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

Figure 3. Average monthly temperature graph



The table and graph above show that average temperature in Poland and in the Czech Republic is very similar. There are slight differences only in the winter months. The time which is of most importance to the application of product CHR/H/IZOXACYP 250 SC is spring. In the months of March through June there are a very close correlations between average temperatures in Poland and in the Czech Republic.

**3.2 Average maximum monthly temperature**

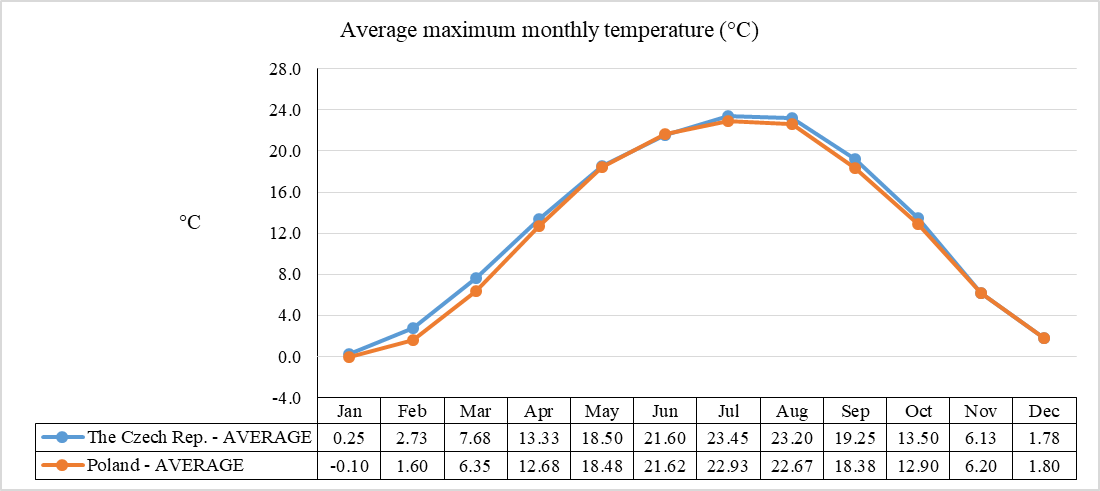
Table 5. Average maximum monthly temperature data

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

data source:

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

Figure 4. Average maximum monthly temperature graph



The table and graph above present the average maximum temperature in each month. It is clear that maximum temperature in Poland and in the Czech Republic is very similar. In spring months that are crucial to the application of product CHR/H/IZOXACYP 250 SC average maximum temperature in both countries differs by no more than 1.33°C in March.

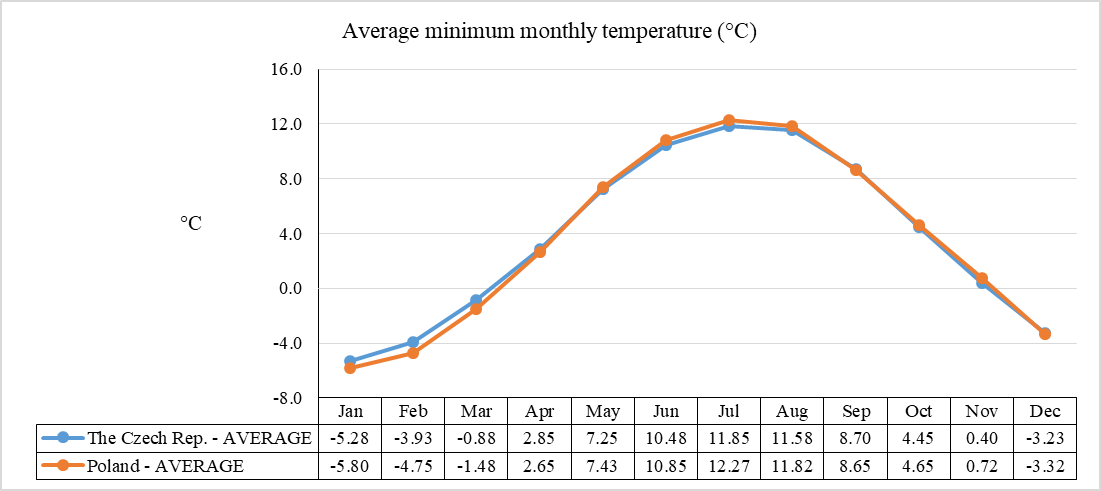
**3.3 Average minimum monthly temperatures**

Table 6. Average minimum monthly temperature data

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

data source:

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

Figure 5. Average minimum monthly temperature graph

Average minimum monthly temperature in Poland and in the Czech Republic follows almost the same pattern, therefore, it is comparable. The table and graph above show that minimum monthly temperature in Poland and in the Czech Republic is very similar. There are slight differences only in the winter months. The time which is of most importance to the application of product CHR/H/IZOXACYP 250 SC is spring. In the months of March through June there are a very close correlations between average temperatures in Poland and in the Czech Republic.

**3.3 Average monthly precipitation sum**

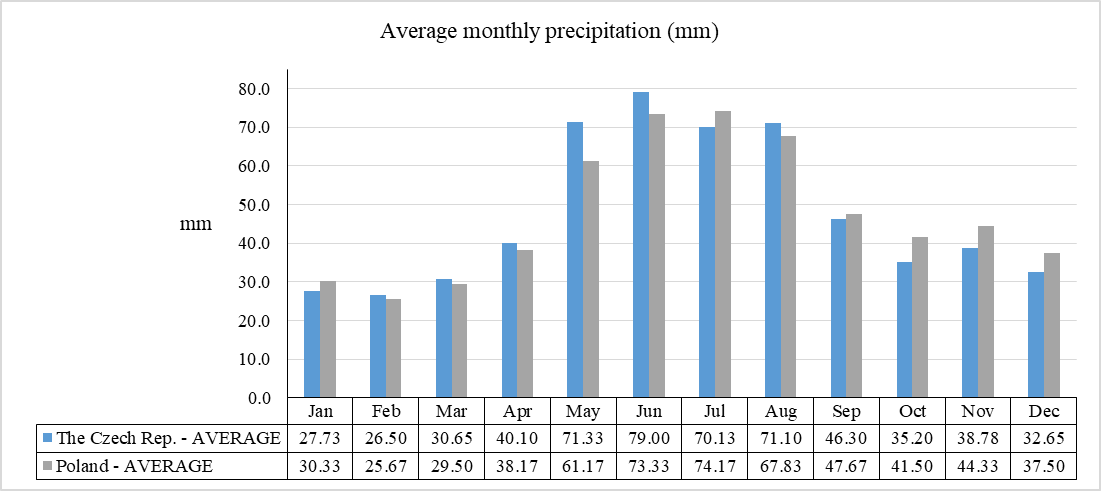
Table 7. Average monthly precipitation sum data

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

data source:

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

Figure 6. Average monthly precipitation sum graph



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

1. **Soil conditions**

**Poland**  
Maize requirements are much smaller than wheat. It could be cultivated on almost all soils with exception of cold, wet and very heavy or very light soils. Also mountain soil are not appropriate for maize. The best soils are fertile and deep soils of high OM content. Requirements according to soil pH are small and maize could be cultivated within wide range of 5-7.5.

**Czech Republic**

Soil requirements of maize are much smaller than those on temperature. Only heavy and cold soils are unsuitable as these prevent early sowing. Light soils are suitable only in wet regions and require higher doses of nutrients. Aspect of the field should be to the south or related and maize is generally avoided on higher slopes due to high erosion risk.

1. **Agricultural practice**

**5.1 Maize sowing timing**

According to the MOCA study in Poland sowing of maize takes place usually between 1st of April to 15th of May depending on the region. In Czech Republic sowing maize take place in the same time.

**5.2 Maize growth and development**

Figure 9. Phenological crop calendar for maize in Poland

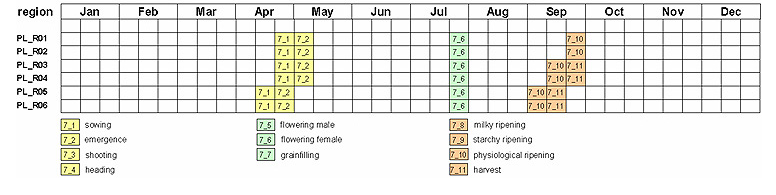
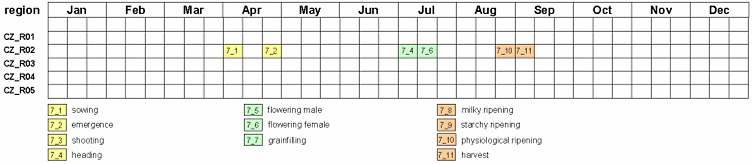


Figure 10. Phenological crop calendar for maize in the Czech Republic



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

**5.3 Timing of application**

According to *Isoxaflutole\_RAR\_01\_Volume\_1\_2015-01-28\_san.pdf* isoxaflutole is applied up to maximum rate 100 g a.s./ha between growth stage BBCH 00-13 of the maize, once per season, in 150-400 L water/ha.

**5.4 Target weeds**

**5.4.1 Weed spectrum in Europe**

According to Shroeder et al. (1993) Table 8. the most abundant weeds in maize are:

|  |  |
| --- | --- |
| **Weeds** | **% max. result (78 point.)\*** |
| ***Echinochloa crus-galli***  ***Chenopodium album***  ***Amaranthus retroflexus***  ***Solanum nigrum***  ***Stellaria pumila***  ***Convolvulus arvensis***  ***Digitaria sanguinalis***  ***Polygonum persicaria***  ***Polygonum aviculare***  ***Sorghum halepense***  ***Stellaria media***  ***Fallopia convolvulus***  ***Capsella bursa-pastoris***  ***Sonchus arvensis***  ***Cynodon dactylon*** | **65**  **62**  **50**  **44**  **43**  **42**  **41**  **38**  **35**  **32**  **31**  **30**  **25**  **25**  **23** |

**5.4.2 Weed spectrum in the Czech Republic**

According to Losová et al. (2008) Table 9. the most abundant weeds in the Czech Republic in cereals are:

Table 9. Weed abundance in cereals in the Czech Republic

|  |  |
| --- | --- |
| **Weed species** | **% of vegetation plots in which the species was recorded\*** |
| ***Viola arvensis***  ***Stellaria media***  ***Fallopia convolvulus (Polygonum convolvulus)***  ***Tripleurospermum inodorum (Matricaria inodora)***  ***Capsella bursa-pastoris***  ***Cirsium arvense***  ***Myosotis arvensis***  ***Galium aparine***  ***Polygonum aviculare***  ***Thlaspi arvense***  ***Elytrigia repens (Agropyron repens)***  ***Chenopodium album***  ***Veronica persica*** | 79  71  67  65  64  61  58  57  57  56  52  52  51 |

**\*** data from2696 plots that were between 12 and 100 m2 in size and sampled on arable land

**5.4.3. Weed species controlled by CHR/H/IZOXACYP 250 SC**

The following table lists weeds that were included in efficacy studies of product CHR/H/IZOXACYP 250 SC. These weeds were present in experimental plots and their sensitivity depended on the dose of the product applied.

Table 12. Weed species and their sensitivity to CHR/H/IZOXACYP 250 SC

The obtained data in performed trials show that CHR/H/IZOXACYP 250 SC provides benefits against the most important weeds in maize as shown in the table below.

The following table describes the effectiveness of weeds:

|  |  |
| --- | --- |
| S (Susceptible) | > 85% (within each trial the average must be higher than 85%) |
| MS (Moderately Susceptible) | 70 – 85% |
| MT (Moderately Tolerant ) | 60 – 70% |
| T (Tolerant) | < 60% |

**The following table shows the average sensitivity of weeds in maize:**

**MAIZE – PREEMERGENCE APPLICATION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Product code (L, kg/ha)** | **EPPO code** | **Scientific name** | **DA-A** | **Pest stage** | **Average** | **Efficacy** |
| CHR/H/IZOXACYP 250 SC 0.16 L/ha | CHEAL | *Chenopodium album* | 22-29 DA-A | BBCH 00 | 69.72 | MT |
| ANTAR | *Anthemis arvensis* | 22-28 DA-A | BBCH 00 | 73.02 | MS |
| POLPE | *Polygonum persicaria* | 28-39 DA-A | BBCH 00 | 75.52 | MS |
| THLAR | *Thlaspi arvense* | 22-28 DA-A | BBCH 00 | 73.18 | MS |
| VIOAR | *Viola arvensis* | 22-29 DA-A | BBCH 00 | 67.30 | MT |
| ECHCG | *Echinochloa crus-galli* | 22-29 DA-A | BBCH 00 | 72.41 | MS |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 00 | 76.48 | MS |
| MATIN | *Tripleurospermum inodorum* | 22-28 DA-A | BBCH 00 | 61.95 | MT |
| STEME | *Stellaria media* | 22-28 DA-A | BBCH 00 | 73.15 | MS |
| BRSNW | *Brassica napus (self-sown plant)* | 27-28 DA-A | BBCH 00 | 58.11 | T |
| AMARE | *Amaranthus retroflexus* | 22-28 DA-A | BBCH 00 | 68.44 | MT |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 00 | 78.23 | MS |
| CHR/H/IZOXACYP 250 SC 0.20 L/ha | CHEAL | *Chenopodium album* | 22-29 DA-A | BBCH 00 | 76.12 | MS |
| ANTAR | *Anthemis arvensis* | 22-28 DA-A | BBCH 00 | 78.37 | MS |
| POLPE | *Polygonum persicaria* | 28-39 DA-A | BBCH 00 | 82.20 | MS |
| THLAR | *Thlaspi arvense* | 22-28 DA-A | BBCH 00 | 76.77 | MS |
| VIOAR | *Viola arvensis* | 22-29 DA-A | BBCH 00 | 71.50 | MS |
| ECHCG | *Echinochloa crus-galli* | 22-29 DA-A | BBCH 00 | 75.10 | MS |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 00 | 81.95 | MS |
| MATIN | *Tripleurospermum inodorum* | 22-28 DA-A | BBCH 00 | 70.26 | MS |
| STEME | *Stellaria media* | 22-28 DA-A | BBCH 00 | 78.37 | MS |
| BRSNW | *Brassica napus (self-sown plant)* | 27-28 DA-A | BBCH 00 | 67.70 | MT |
| AMARE | *Amaranthus retroflexus* | 22-28 DA-A | BBCH 00 | 75.86 | MS |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 00 | 82.07 | MS |
| CHR/H/IZOXACYP 250 SC 0.24 L/ha | CHEAL | *Chenopodium album* | 22-29 DA-A | BBCH 00 | 83.50 | MS |
| ANTAR | *Anthemis arvensis* | 22-28 DA-A | BBCH 00 | 83.15 | MS |
| POLPE | *Polygonum persicaria* | 28-39 DA-A | BBCH 00 | 87.65 | S |
| THLAR | *Thlaspi arvense* | 22-28 DA-A | BBCH 00 | 81.90 | MS |
| VIOAR | *Viola arvensis* | 22-29 DA-A | BBCH 00 | 76.78 | MS |
| ECHCG | *Echinochloa crus-galli* | 22-29 DA-A | BBCH 00 | 81.19 | MS |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 00 | 88.43 | S |
| MATIN | *Tripleurospermum inodorum* | 22-28 DA-A | BBCH 00 | 81.83 | MS |
| STEME | *Stellaria media* | 22-28 DA-A | BBCH 00 | 86.22 | S |
| BRSNW | *Brassica napus (self-sown plant)* | 27-28 DA-A | BBCH 00 | 73.88 | MS |
| AMARE | *Amaranthus retroflexus* | 22-28 DA-A | BBCH 00 | 84.84 | MS |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 00 | 86.23 | S |
| CHR/H/IZOXACYP 250 SC 0.28 L/ha | CHEAL | *Chenopodium album* | 22-29 DA-A | BBCH 00 | 89.43 | S |
| ANTAR | *Anthemis arvensis* | 22-28 DA-A | BBCH 00 | 87.73 | S |
| POLPE | *Polygonum persicaria* | 28-39 DA-A | BBCH 00 | 92.65 | S |
| THLAR | *Thlaspi arvense* | 22-28 DA-A | BBCH 00 | 87.13 | S |
| VIOAR | *Viola arvensis* | 22-29 DA-A | BBCH 00 | 83.81 | MS |
| ECHCG | *Echinochloa crus-galli* | 22-29 DA-A | BBCH 00 | 86.69 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 00 | 94.18 | S |
| MATIN | *Tripleurospermum inodorum* | 22-28 DA-A | BBCH 00 | 86.53 | S |
| STEME | *Stellaria media* | 22-28 DA-A | BBCH 00 | 91.20 | S |
| BRSNW | *Brassica napus (self-sown plant)* | 27-28 DA-A | BBCH 00 | 81.86 | MS |
| AMARE | *Amaranthus retroflexus* | 22-28 DA-A | BBCH 00 | 91.72 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 00 | 90.93 | S |
| Adengo 315 SC 0.33 L/ha | CHEAL | *Chenopodium album* | 22-29 DA-A | BBCH 00 | 91.63 | S |
| ANTAR | *Anthemis arvensis* | 22-28 DA-A | BBCH 00 | 91.53 | S |
| POLPE | *Polygonum persicaria* | 28-39 DA-A | BBCH 00 | 98.93 | S |
| THLAR | *Thlaspi arvense* | 22-28 DA-A | BBCH 00 | 92.95 | S |
| VIOAR | *Viola arvensis* | 22-29 DA-A | BBCH 00 | 81.30 | MS |
| ECHCG | *Echinochloa crus-galli* | 22-29 DA-A | BBCH 00 | 89.99 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 00 | 95.88 | S |
| MATIN | *Tripleurospermum inodorum* | 22-28 DA-A | BBCH 00 | 76.28 | MS |
| STEME | *Stellaria media* | 22-28 DA-A | BBCH 00 | 84.96 | MS |
| BRSNW | *Brassica napus (self-sown plant)* | 27-28 DA-A | BBCH 00 | 87.00 | S |
| AMARE | *Amaranthus retroflexus* | 22-28 DA-A | BBCH 00 | 87.12 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 00 | 86.93 | S |

On the basis of submitted research, it is possible to state that CHR/H/IZOXACYP 250 SC used at dose controlled:

**Dose CHR/H/IZOXACYP 250 SC 0.16 L/ha**

Moderately Susceptible: *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE), *Thlaspi arvense* (THLAR), *Stellaria media* (STEME), *Capsella bursa-pastoris* (CAPBP), *Echinochloa crus-galli* (ECHCG), *Solanum nigrum* (SOLNI),

Moderately Tolerant: *Chenopodium album* (CHEAL), *Viola arvensis* (VIOAR), *Tripleurospermum mar. inodorum* (MATIN), *Amaranthus retroflexus* (AMARE),

Tolerant: *Brassica napus* (self-sown plant) (BRSNW)

**Dose CHR/H/IZOXACYP 250 SC 0.20 L/ha**

Moderately Susceptible: *Polygonum persicaria* (POLPE), *Thlaspi arvense* (THLAR), *Capsella bursa-pastoris* (CAPBP), *Stellaria media* (STEME), *Amaranthus retroflexus* (AMARE), *Anthemis arvensis* (ANTAR), *Viola arvensis* (VIOAR), *Tripleurospermum mar. inodorum* (MATIN), *Chenopodium album* (CHEAL), *Echinochloa crus-galli* (ECHCG), *Solanum nigrum* (SOLNI),

Tolerant: *Brassica napus* (self-sown plant) (BRSNW)

**Dose CHR/H/IZOXACYP 250 SC 0.24 L/ha**

Susceptible: *Polygonum persicaria* (POLPE), *Capsella bursa-pastoris* (CAPBP), *Stellaria media* (STEME), *Solanum nigrum* (SOLNI),

Moderately Susceptible: *Thlaspi arvense* (THLAR), *Amaranthus retroflexus* (AMARE), *Anthemis arvensis* (ANTAR), *Viola arvensis* (VIOAR), *Tripleurospermum mar. inodorum* (MATIN), *Chenopodium album* (CHEAL), *Echinochloa crus-galli* (ECHCG), *Brassica napus* (self-sown plant) (BRSNW)

**Dose CHR/H/IZOXACYP 250 SC 0.28 L/ha**

Susceptible: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE), *Thlaspi arvense* (THLAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Stellaria media* (STEME), *Amaranthus retroflexus* (AMARE), *Echinochloa crus-galli* (ECHCG), *Solanum nigrum* (SOLNI),

Moderately Susceptible: *Viola arvensis* (VIOAR), *Brassica napus* (self-sown plant) (BRSNW)

**MAIZE – POSTEMERGENCE APPLICATION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Product code (L, kg/ha)** | **EPPO code** | **Scientific name** | **DA-A** | **Pest stage** | **Average** | **Efficacy** |
| CHR/H/IZOXACYP 250 SC 0.20 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 64.96 | MT |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 7.92 | T |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 72.40 | MS |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 70.01 | MS |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 73.52 | MS |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 83.92 | MS |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 68.70 | MT |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 51.56 | T |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 71.50 | MS |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 82.50 | MS |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 79.86 | MS |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 58.26 | T |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 91.00 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 55.02 | T |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | 63.55 | MT |
| CHR/H/IZOXACYP 250 SC 0.25 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 76.21 | MS |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 23.24 | T |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 84.55 | MS |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 82.91 | MS |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 90.43 | S |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 89.51 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 81.13 | MS |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 62.97 | MT |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 84.67 | MS |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 90.02 | S |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 87.97 | S |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 69.85 | MT |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 96.25 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 73.60 | MS |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | 76.77 | MS |
| CHR/H/IZOXACYP 250 SC 0.30 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 85.42 | S |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 28.85 | T |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 89.93 | S |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 95.14 | S |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 98.30 | S |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 93.44 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 87.93 | S |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 71.13 | MS |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 96.25 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 99.05 | S |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 95.97 | S |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 78.38 | MS |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 97.72 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 79.98 | MS |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | 91.73 | S |
| CHR/H/IZOXACYP 250 SC 0.35 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 89.93 | S |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 35.13 | T |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 93.52 | S |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 99.38 | S |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 99.58 | S |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 96.87 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 94.60 | S |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 83.98 | MS |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 97.58 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 100.00 | S |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 97.88 | S |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 87.85 | S |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 99.08 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 89.22 | S |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | 94.72 | S |
| CHR/H/IZOXACYP 250 SC 0.40 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 97.25 | S |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 58.50 | T |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 100.00 | S |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 100.00 | S |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 100.00 | S |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 97.90 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 100.00 | S |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 97.40 | S |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 100.00 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 100.00 | S |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 100.00 | S |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 97.00 | S |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 100.00 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 100.00 | S |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | - | - |
| Adengo 315 SC 0.33 L/ha | CHEAL | *Chenopodium album* | 25-28 DA-A | BBCH 10-16 | 93.60 | S |
| POLCO | *Polygonum convolvulus* | 25-28 DA-A | BBCH 10-16 | 97.31 | S |
| ANTAR | *Anthemis arvensis* | 26-28 DA-A | BBCH 10-14 | 98.97 | S |
| POLPE | *Polygonum persicaria* | 25-28 DA-A | BBCH 10-14 | 99.31 | S |
| THLAR | *Thlaspi arvense* | 25-28 DA-A | BBCH 10-16 | 100.00 | S |
| VIOAR | *Viola arvensis* | 25-28 DA-A | BBCH 10-21 | 100.00 | S |
| SOLNI | *Solanum nigrum* | 27-28 DA-A | BBCH 10-14 | 94.80 | S |
| ECHCG | *Echinochloa crus-galli* | 25-28 DA-A | BBCH 10-14 | 96.63 | S |
| SINAR | *Sinapsis arvensis* | 27-28 DA-A | BBCH 10-14 | 96.67 | S |
| CAPBP | *Capsella bursa-pastoris* | 27-28 DA-A | BBCH 10-14 | 100.00 | S |
| MATIN | *Tripleurospermum inodorum* | 27-28 DA-A | BBCH 10-30 | 99.80 | S |
| VERHE | *Veronica hederifolia* | 25-28 DA-A | BBCH 10-14 | 86.88 | S |
| STEME | *Stellaria media* | 25-28 DA-A | BBCH 10-31 | 99.42 | S |
| BRSNW | *Brassica napus* (self-sown plant) | 25-28 DA-A | BBCH 10-16 | 91.73 | S |
| AMARE | *Amaranthus retroflexus* | 26-28 DA-A | BBCH 10-16 | 98.55 | S |

On the basis of submitted research, it is possible to state that CHR/H/IZOXACYP 250 SC used at dose controlled:

**Dose CHR/H/IZOXACYP 250 SC 0.20 L/ha**

Susceptible: *Stellaria media* (STEME)

Moderately Susceptible: *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE), *Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Sinapsis arvensis* (SINAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN),

Moderately Tolerant: *Chenopodium album* (CHEAL), *Amaranthus retroflexus* (AMARE), *Solanum nigrum* (SOLNI),

Tolerant: *Polygonum convolvulus* (POLCO), *Echinochloa crus-galli* (ECHCG), *Veronica hederifolia (VERHE), Brassica napus* (self-sown plant) (BRSNW)

**Dose CHR/H/IZOXACYP 250 SC 0.25 L/ha**

Susceptible: *Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Stellaria media* (STEME),

Moderately Susceptible: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE), *Amaranthus retroflexus* (AMARE), *Solanum nigrum* (SOLNI), *Sinapsis arvensis* (SINAR), *Brassica napus* (self-sown plant) (BRSNW),

Moderately Tolerant: *Echinochloa crus-galli* (ECHCG), *Veronica hederifolia (VERHE),*

Tolerant: *Polygonum convolvulus* (POLCO)

**Dose CHR/H/IZOXACYP 250 SC 0.30 L/ha**

Susceptible: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE),*Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Solanum nigrum* (SOLNI), *Sinapsis arvensis* (SINAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Stellaria media* (STEME), *Brassica napus* (self-sown plant) (BRSNW), *Amaranthus retroflexus* (AMARE)

Moderately Susceptible: *Echinochloa crus-galli* (ECHCG), *Veronica hederifolia (VERHE), Brassica napus* (self-sown plant) (BRSNW),

Tolerant: *Polygonum convolvulus* (POLCO)

**Dose CHR/H/IZOXACYP 250 SC 0.35 L/ha**

Susceptible: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE),*Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Solanum nigrum* (SOLNI), *Sinapsis arvensis* (SINAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Veronica hederifolia (VERHE), Stellaria media* (STEME), *Brassica napus* (self-sown plant) (BRSNW), *Amaranthus retroflexus* (AMARE)

Moderately Susceptible: *Echinochloa crus-galli* (ECHCG)

Tolerant: *Polygonum convolvulus* (POLCO)

**Dose CHR/H/IZOXACYP 250 SC 0.40 L/ha**

Susceptible: *Chenopodium album* (CHEAL), *Anthemis arvensis* (ANTAR), *Polygonum persicaria* (POLPE),*Thlaspi arvense* (THLAR), *Viola arvensis* (VIOAR), *Solanum nigrum* (SOLNI), *Sinapsis arvensis* (SINAR), *Capsella bursa-pastoris* (CAPBP), *Tripleurospermum mar. inodorum* (MATIN), *Veronica hederifolia (VERHE), Stellaria media* (STEME), *Brassica napus* (self-sown plant) (BRSNW), *Amaranthus retroflexus* (AMARE), *Echinochloa crus-galli* (ECHCG)

Tolerant: *Polygonum convolvulus* (POLCO)

In summary, it may be stated that the most problematic weeds species in maize in Poland and in the Czech Republic are comparable and they are almost all controlled by CHR/H/IZOXACYP 250 SC. Therefore product CHR/H/IZOXACYP 250 SC is expected to be equally highly efficient in both Poland and in the Czech Republic.

1. **Conclusion**

Poland and the Czech Republic are neighboring countries. Both lie in central Europe in the moderate climate zone. They share not only the border but also important climatic characteristics. Yearly temperature and precipitation patterns are very similar in both counties. This has influence on the agricultural practice in these countries and on the development of cultivated crops. Maize which is of interest to the authors of this report, go through its development phases at relatively close calendar dates. What is more, the greatest weed problems are posed by almost the same weed species in both countries. All of these and many more are targeted by isoxaflutole which is the active substances of product CHR/H/IZOXACYP 250 SC.

In conclusion, authors of this report state that Poland and the Czech Republic share many elements of climatic and agricultural conditions. This allows efficacy and phytotoxicity study results acquired in Poland to be used in registration procedures of a spring, foliar applied, maize herbicide CHR/H/IZOXACYP 250 SC in the Czech Republic.

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

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Test report/ research number (1)** | **Trial location (2); Crop cultivar;**  **F/G (3);**  **N/A (4)** | **Testing Unit (5)** | **Test method (6);**  **Plot size;**  **Sample size (7)** | **Treatment** | | | |
| **Growth stage (8)** | **Interval** | **Total number** | **Spray volume (L/ha)** |
| **A.T/2021/052/KK** | Grzebienisko / Poland  maize/ Invictus  F  N | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 8.0 m = 20.0 m2 | BBCH 01-05 | n/a | 1 | 200 L/ha |
| **A.T/2021/053/KK** | Studzieniec/ Poland  maize/ Farmezzo  F  N | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 8.0 m = 20.0 m2 | BBCH 00 | n/a | 1 | 300 L/ha |
| **AH/21/K/17/Zł/01** | Złotniki/ Poland  maize/ Farmodena  F  N | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | EPPO PP 1/50(4)  3.0 m x 10.0 m 30.0 m2 | BBCH 06 | n/a | 1 | 250 L/ha |
| **AH/21/K/17/Gr/02** | Gorzyń/ Poland  maize/ DKC3350  F  N | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | EPPO PP 1/50(4)  2.5 m x 10.0 m = 28.0 m2 | BBCH 03 | n/a | 1 | 200 L/ha |
| **CHR\_H\_IZOXACYP22\_SEL\_PL01** | Nagady/Poland  maize/ Ligato  F  N | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 8.0 m = 24.0 m2 | BBCH 00 | n/a | 1 | 200 L/ha |
| **CHR\_H\_IZOXACYP22\_SEL\_PL02** | Rąblów/Poland  maize/ PIONEER P8307  F  N | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 8.0 m = 24.0 m2 | BBCH 00 | n/a | 1 | 200 L/ha |
| **CHR\_H\_IZOXACYP22\_SEL\_PL03** | Tonowo /Poland  maize/ Rosomak  F  N | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 8.0 m = 24.0 m2 | BBCH 05 | n/a | 1 | 200 L/ha |
| **CHR\_H\_IZOXACYP22\_SEL\_PL04** | Dochanowo /Poland  maize/ SY Calo  F  N | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 8.0 m = 24.0 m2 | BBCH 05 | n/a | 1 | 300 L/ha |
| **SRPL21-433-336FE** | Wąwolnica/ Poland  maize/ PIONEER P8307  F  N | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 5.0 m = 15.0 m2 | BBCH 00 | n/a | 1 | 300 L/ha |
| **SRPL21-434-336FE** | Jankowice Wielkie/ Poland  maize/ SY Calo F  N | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 5.0 m = 15.0 m2 | BBCH 00 | n/a | 1 | 300 L/ha |
| **SRPL21-435-336FE** | Jabłowo Pałuckie/ Poland  maize/ DKC 3595  F  N | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 5.0 m = 15.0 m2 | BBCH 03 | n/a | 1 | 300 L/ha |
| **SRPL21-436-336FE** | Gietrzwałd / Poland  maize/ Cedro (FAO 200)  F  N | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 5.0 m = 15.0 m2 | BBCH 00 | n/a | 1 | 200 L/ha |
| **A.T/2022/002/KK** | Kocanowo/ Poland  maize/ ES Faraday  F  N | A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 5.0 m = 12.5 m2 | BBCH 03-06 | n/a | 1 | 200 L/ha |
| **A.T/2022/003/KK** | Zielątkowo / Poland  maize/ DKC 3595  F  N | A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 5.0 m = 12.5 m2 | BBCH 03-06 | n/a | 1 | 200 L/ha |
| **A.T/2022/004/KK** | Kopaszyn / Poland  maize/ ES Constellation  F  N | A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 5.0 m = 12.5 m2 | BBCH 05 | n/a | 1 | 200 L/ha |
| **A.T/2022/005/KK** | Dąbrówka / Poland  maize/ Baobi  F  N | A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 5.0 m = 12.5 m2 | BBCH 07-09 | n/a | 1 | 200 L/ha |
| **A.T/2022/006/KK** | Trzeciewnica / Poland  maize/ DKC3079  F  N | A.T Sp. z o.o.  ul. Przemysłowa 3  88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 5.0 m = 12.5 m2 | BBCH 07 | n/a | 1 | 200 L/ha |
| **AH/22/K/20/Br/01** | Brody / Poland  maize/ Farmfire  F  N | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | EPPO PP 1/50(4)  2.5 m x 10.0 m = 25.0 m2 | BBCH 00 | n/a | 1 | 230 L/ha |
| **AH/22/K/20/Zł/02** | Złotniki / Poland  maize/ Farmfire  F  N | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | EPPO PP 1/50(4)  3.0 m x 10.0 m = 30.0 m2 | BBCH 00 | n/a | 1 | 200 L/ha |
| **AH/22/K/20/Gr/03** | Gorzyń / Poland  maize/ Farmodena  F  N | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | EPPO PP 1/50(4)  2.8 m x 10.0 m = 28.0 m2 | BBCH 00 | n/a | 1 | 300 L/ha |
| **AH/22/K/20/Ce/04** | Cerekwica / Poland  maize/ Pioneer P8255  F  N | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | EPPO PP 1/50(4)  3.0 m x 10.0 m = 30.0 m2 | BBCH 00 | n/a | 1 | 200 L/ha |
| **AH/22/K/20/Mr/05** | Kokoszczyn / Poland  maize/ DKC 3350  F  N | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | EPPO PP 1/50(4)  3.0 m x 10.0 m = 30.0 m2 | BBCH 00 | n/a | 1 | 230 L/ha |
| **A.T/2021/060/KK** | Grzebienisko/ Poland  maize/Invictus F  N | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 8.0 m = 20.0 m2 | BBCH 11-12 | n/a | 1 | 200 L/ha |
| **A.T/2021/061/KK** | Mirosław /Poland  maize/ Legion  F  N | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 8.0 m = 20.0 m2 | BBCH 12-13 | n/a | 1 | 300 L/ha |
| **A.T/2021/062/KK** | Orzelski Młyn /Poland  maize/ Amavit F  N | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 8.0 m = 20.0 m2 | BBCH 11-12 | n/a | 1 | 200 L/ha |
| **A.T/2020/083/KK** | Zamarte /Poland  maize/ SM Hubal  F  N | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | EPPO PP 1/50(3)  2.5 m x 8.0 m = 20.0 m2 | BBCH 12-13 | n/a | 1 | 200 L/ha |
| **A.T/2020/084/KK** | Nowe Młodochowo /Poland  maize/ Abelardo  F  N | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | EPPO PP 1/50(3)  2.5 m x 9.0 m = 22.5 m2 | BBCH 11-12 | n/a | 1 | 200 L/ha |
| **SRPL21-442-336FE** | Rąblów /Poland  maize/ PIONEER P8307  F  N | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 8.0 m = 24.0 m2 | BBCH 12-13 | n/a | 1 | 250 L/ha |
| **SRPL21-443-336FE** | Gietrzwałd /Poland  maize/ Opoka FAO 240  F  N | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 8.0 m = 24.0 m2 | BBCH 11-13 | n/a | 1 | 200 L/ha |
| **SRPL21-444-336FE** | Jabłowo Pałuckie /Poland  maize/ DKC 3595  F  N | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 7.0 m = 21.0 m2 | BBCH 12-13 | n/a | 1 | 300 L/ha |
| **A.T/2020/081/KK** | Kocanowo/ Poland  maize/ LG 32.16  F  N | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | EPPO PP 1/50(3)  2.5 m x 5.0 m = 12.5 m2 | BBCH 11-12 | n/a | 1 | 200 L/ha |
| **A.T/2020/082/KK** | Dąbrówka/ Poland  maize/ SM Hubal  F  N | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | EPPO PP 1/50(3)  2.5 m x 6.0 m = 15.0 m2 | BBCH 12-13 | n/a | 1 | 200 L/ha |
| **A.T/2021/054/KK** | Wymysłowo / Poland  maize/ LG 3216  F  N | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 5.0 m = 12.5 m2 | BBCH 11-12 | n/a | 1 | 200 L/ha |
| **A.T/2021/055/KK** | Batorowo/ Poland  maize/ ES Yakari  F  N | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 5.0 m = 12.5 m2 | BBCH 12-13 | n/a | 1 | 200 L/ha |
| **A.T/2021/056/KK** | Kopaszyn/ Poland  maize/ Luigi  F  N | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 5.0 m = 12.5 m2 | BBCH 12-13 | n/a | 1 | 200 L/ha |
| **A.T/2021/057/KK** | Nowy Dwór/ Poland  maize/ Ambrosini  F  N | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 5.0 m = 12.5 m2 | BBCH 12-13 | n/a | 1 | 200 L/ha |
| **A.T/2021/059/KK** | Stare Gralewo/ Poland  maize/ Sm Piast  F  N | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 5.0 m = 12.5 m2 | BBCH 12-13 | n/a | 1 | 200 L/ha |
| **A.T/2021/103/KK** | Borkowo Kościelne / Poland  maize/ Opoka  F  N | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | EPPO PP 1/50(4)  2.5 m x 5.0 m = 12.5 m2 | BBCH 11-12 | n/a | 1 | 300 L/ha |
| **SRPL21-437-336FE** | Rąblów / Poland  maize/ PIONEER P8307  F  N | SynTech Research Poland Sp. z o.o ul. Jagiellonska 69/1 85-027 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 5.0 m = 15.0 m2 | BBCH 12-13 | n/a | 1 | 300 L/ha |
| **SRPL21-438-336FE** | Jankowice Wielkie/ Poland  maize/ SY Talisman  F  N | SynTech Research Poland Sp. z o.o ul. Jagiellonska 69/1 85-027 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 5.0 m = 15.0 m2 | BBCH 12-13 | n/a | 1 | 300 L/ha |
| **SRPL21-439-336FE** | Jabłowo Pałuckie / Poland  maize/ DKC 3595  F  N | SynTech Research Poland Sp. z o.o ul. Jagiellonska 69/1 85-027 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 5.0 m = 15.0 m2 | BBCH 12-13 | n/a | 1 | 300 L/ha |
| **SRPL21-440-336FE** | Naglady / Poland  maize/ Cedro  F  N | SynTech Research Poland Sp. z o.o ul. Jagiellonska 69/1 85-027 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 5.0 m = 15.0 m2 | BBCH 12-13 | n/a | 1 | 200 L/ha |
| **SRPL21-441-336FE** | Osowka / Poland  maize/ PIONEER  F  N | SynTech Research Poland Sp. z o.o ul. Jagiellonska 69/1 85-027 Bydgoszcz | EPPO PP 1/50(4)  3.0 m x 5.0 m = 15.0 m2 | BBCH 12-13 | n/a | 1 | 300 L/ha |
| **AH/22/K/20/Jab/01** | Jabłowo Pałuckie / Poland  maize/ DKC3595  F  N | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | EPPO PP 1/50(4)  3.0 m x 5.0 m = 15.0 m2 | BBCH 11-13 | n/a | 1 | 300 L/ha |
| **AH/22/K/20/Mał/02** | Małujowice / Poland  maize/ Ułan  F  N | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | EPPO PP 1/50(4)  3.0 m x 5.0 m = 15.0 m2 | BBCH 11-12 | n/a | 1 | 300 L/ha |
| **AH/22/K/20/NW/03** | Nowa Wieś / Poland  maize/ Subito  F  N | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | EPPO PP 1/50(4)  3.0 m x 5.0 m = 15.0 m2 | BBCH 11-12 | n/a | 1 | 300 L/ha |

**Notes:**

(1): test report number including the year of establishing the trial

(2): precise place of the trial followed by the country

(3): F= field trial, G=protected crop, specify

(4): N=Natural infestation, A= Artificial inoculation

(5): Trial responsible entity/ officially recognized organization

(6): Test guideline used

(7): Sample size per plot

(8): Crop growth stage at application timing

# Appendix 4 Summary of data on effectiveness trials per use

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test report (1)** | **Crop/ cultivar**  **Harmful organism/ weed species or intended use** | **Assessed part and variable (2)**  **no / m2** | **Untreated**  **BBCH (during application)** | **Efficacy treatments (3)** | | | | **Remarks (4)** |
| **Product** | | **Standard (s)** | |
| **name** | **Dose [L,kg//ha]** | **name** | **dose [L/ha]** |
| **SRPL21-433-336FE** | maize/ PIONEER P8307  CHEAL  ECHCG  VIOAR  VERPE  GERPU | CHEAL 7.25  ECHCG 7.75  VIOAR 15.75  VERPE 5.75  GERPU 5.25 | CHEAL BBCH 00  ECHCG BBCH 00  VIOAR BBCH 00  VERPE BBCH 00  GERPU BBCH 00 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.16 L/ha  0.20 L/ha  0.24 L/ha  0.28 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  26.05.2021  Assessment date:  17.06.2021  24.06.2021  08.07.2021  05.08.2021 |
| **SRPL21-434-336FE** | maize/ SY Calo  CHEAL  POLPE  STEME  AMARE  ECHCG | CHEAL 6.3  POLPE 6.0  STEME 7.5  AMARE 7.0  ECHCG 6.0 | CHEAL BBCH 00  POLPE BBCH 00  STEME BBCH 00  AMARE BBCH 00  ECHCG BBCH 00 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.16 L/ha  0.20 L/ha  0.24 L/ha  0.28 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  13.05.2021  Assessment date:  31.05.2021  07.06.2021  21.06.2021  19.07.2021 |
| **SRPL21-435-336FE** | maize/ DKC 3595  STEME  AMARE  MATIN  ANTAR  CAPBP  BRSNW  CHEAL | STEME 7.0  AMARE 12.0  MATIN 10.0  ANTAR 8.0  CAPBP 5.0  BRSNW 6.0  CHEAL 19.0 | STEME BCBH 00  AMARE BBCH 00  MATIN BBCH 00  ANTAR BBCH 00  CAPBP BBCH 00  BRSNW BBCH 00  CHEAL BBCH 00 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.16 L/ha  0.20 L/ha  0.24 L/ha  0.28 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  17.05.2021  Assessment date:  24.05.2021  31.05.2021  14.06.2021  12.07.2021 |
| **SRPL21-436-336FE** | maize/ Cedro (FAO 200)  THLAR  VIOAR  BRSNW  MATIN  CHEAL | THLAR 7.0  VIOAR 14.75  BRSNW 11.5  MATIN 12.0  CHEAL 10.25 | THALR BBCH 00  VIOAR BBCH 00  BRSNW BBCH 00  MATIN BBCH 00  CHEAL BBCH 00 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.16 L/ha  0.20 L/ha  0.24 L/ha  0.28 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  17.05.2021  Assessment date:  31.05.2021  07.06.2021  14.06.2021  28.06.2021  26.07.2021 |
| **A.T/2022/002/KK** | maize/ ES Faraday  POLPE  BRSNW  STEME  CAPBP  SOLNI | POLPE 24.0  BRSNW 5.0  STEME 5.0  CAPBP 5.0  SOLNI 7.0 | POLPE BBCH 00  BRSNW BBCH 00  STEME BBCH 00  CAPBP BBCH 00  SOLNI BBCH 00 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.16 L/ha  0.20 L/ha  0.24 L/ha  0.28 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  28.04.2022  Assessment date:  28.04.2022  13.05.2022  25.05.2022  14.07.2022 |
| **A.T/2022/003/KK** | maize/ DKC 3595  CHEAL  POLCO  POLAV  POLPE  VERPE  VIOAR  ANTAR  THLAR  AMARE  RUMAC | CHEAL 6.0  POLCO 5.0  POLAV 6.0  POLPE 9.0  VERPE 8.0  VIOAR 6.0  ANTAR 3.0  THLAR 3.0  AMARE 5.0  RUMAC 7.0 | CHEAL BBCH 00  POLCO BBCH 00  POLAV BBCH 00  POLPE BBCH 00  VERPE BBCH 00  VIOAR BBCH 00  ANTAR BBCH 00  THLAR BBCH 00  AMARE BBCH 00  RUMAC BBCH 00 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.16 L/ha  0.20 L/ha  0.24 L/ha  0.28 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  06.05.2022  Assessment date:  06.05.2022  16.05.2022  03.06.2022  11.07.2022 |
| **A.T/2022/004/KK** | maize/ ES Constellation  POLPE  CHEAL  POLCO  CAPBP | POLPE 5.0  CHEAL 42.0  POLCO 5.0  CAPBP 7.0 | POLPE BBCH 00  CHEAL BBCH 00  POLCO BBCH 00  CAPBP BBCH 00 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.16 L/ha  0.20 L/ha  0.24 L/ha  0.28 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  06.05.2022  Assessment date:  06.05.2022  19.05.2022  03.06.2022  18.07.2022 |
| **A.T/2022/005/KK** | maize/ Baobi  SOLNI  CHEAL  POLCO  ECHCG  POLAV | SOLNI 15.0  CHEAL 5.0  POLCO 5.0  ECHCG 5.0  POLAV 5.0 | SOLNI BBCH 00  CHEAL BBCH 00  POLCO BBCH 00  ECHCG BBCH 00  POLAV BBCH 00 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.16 L/ha  0.20 L/ha  0.24 L/ha  0.28 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  12.05.2022  Assessment date:  12.05.2022  19.05.2022  09.06.2022  05.07.2022  03.08.2022 |
| **A.T/2022/006/KK** | maize/ DKC3079  CHEAL  ECHCG  POLCO  POLAV  POLPE  AMARE | CHEAL 5.0  ECHCG 5.0  POLCO 5.0  POLAV 5.0  POLPE 5.0  AMARE 5.0 | CHEAL BBCH 00  ECHCG BBCH 00  POLCO BBCH 00  POLAV BBCH 00  POLPE BBCH 00  AMARE BBCH 00 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.16 L/ha  0.20 L/ha  0.24 L/ha  0.28 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  11.05.2022  Assessment date:  11.05.2022  17.05.2022  08.06.2022  25.07.2022 |
| **AH/22/K/20/Br/01** | maize/ Farmfire  SOLNI  ANTAR  THLAR  CAPBP  CHEAL  ECHCG  VIOAR  VERHE  POLPE  BRSNW | SOLNI 5.0  ANTAR 5.0  THLAR 7.0  CAPBP 6.0  CHEAL 7.0  ECHCG 5.0  VIOAR 5.0  VERHE 5.0  POLPE 5.0  BRSNW 5.0 | SOLNI BBCH 00  ANTAR BBCH 00  THLAR BBCH 00  CAPBP BBCH 00  CHEAL BBCH 00  ECHCG BBCH 00  VIOAR BBCH 00  VERHE BBCH 00  POLPE BBCH 00  BRSNW BBCH 00 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.16 L/ha  0.20 L/ha  0.24 L/ha  0.28 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  06.05.2022  Assessment date:  20.05.2022  03.06.2022 |
| **AH/22/K/20/Zł/02** | maize/ Farmfire  CHEAL  BRSNW  LYCAR  GERPU  ECHCG  ANTAR  VIOAR  SOLNI  THLAR  POLAV  CAPBP | CHEAL 15.0  BRSNW 5.0  LYCAR 5.0  GERPU 16.0  ECHCG 5.0  ANTAR 8.0  VIOAR7.0  SOLNI 5.0  THLAR 6.0  POLAV 5.0  CAPBP 5.0 | CHEAL BBCH 00  BRSNW BBCH 00  LYCAR BBCH 00  GERPU BBCH 00  ECHCG BBCH 00  ANTAR BBCH 00  VIOAR BBCH 00  SOLNI BBCH 00  THLAR BBCH 00  POLAV BBCH 00  CAPBP BBCH 00 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.16 L/ha  0.20 L/ha  0.24 L/ha  0.28 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  29.04.2022  Assessment date:  13.05.2022  27.05.2022 |
| **AH/22/K/20/Gr/03** | maize/ Farmodena  CHEAL  THLAR  ANTAR  SOLNI  POLCO  VIOAR  VERHE  CAPBP  ECHCG | CHEAL 5.0  THLAR 9.0  ANTAR 5  SOLNI 6.0  POLCO 6.0  VIOAR 5.0  VERHE 5.0  CAPBP 6.0  ECHCG 21.0 | CHEAL BBCH 00  THLAR BBCH 00  ANTAR BBCH 00  SOLNI BBCH 00  POLCO BBCH 00  VIOAR BBCH 00  VERHE BBCH 00  CAPBP BBCH 00  ECHCG BBCH 00 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.16 L/ha  0.20 L/ha  0.24 L/ha  0.28 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  10.05.2022  Assessment date:  23.05.2022  06.06.2022 |
| **AH/22/K/20/Ce/04** | maize/ Pioneer P8255  ECHCG  MATIN  STEME  AMARE  CHEAL  VIOAR  VERHE  LAMPU  ANTAR  THLAR | ECHCG 5.0  MATIN 5.0  STEME 5.0  AMARE 5.0  CHEAL 35.0  VIOAR 7.0  VERHE 5.0  LAMPU 5.0  ANTAR 5.0  THLAR 5.0 | ECHCG BBCH 00  MATIN BBCH 00  STEME BBCH 00  AMARE BBCH 00  CHEAL BBCH 00  VIOAR BBCH 00  VERHE BBCH 00  LAMPU BBCH 00  ANTAR BBCH 00  THLAR BBCH 00 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.16 L/ha  0.20 L/ha  0.24 L/ha  0.28 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  04.05.2022  Assessment date:  12.05.2022  26.05.2022 |
| **AH/22/K/20/Mr/05** | maize/ DKC 3350  ECHCG  MATIN  STEME  AMARE  VIOAR  LAMPU  SOLNI | ECHCG 28.0  MATIN 5.0  STEME 6.0  AMARE 5.0  VIOAR 6.0  LAMPU 5.0  SOLNI 5.0 | ECHCG BBCH 00  MATIN BBCH 00  STEME BBCH 00  AMARE BBCH 00  VIOAR BBCH 00  LAMPU BBCH 00  SOLNI BBCH 00 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.16 L/ha  0.20 L/ha  0.24 L/ha  0.28 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  11.05.2022  Assessment date:  25.05.2022  08.06.2022 |
| **A.T/2020/081/KK** | maize/ LG 32.16  CHEAL  POLCO  POLPE  THLAR  VIOAR  GERPU  ECHCG  STEME | CHEAL 35  POLCO 5  POLPE 5  THLAR 5  VIOAR 5  GERPU 5  ECHCG 5  STEME 7  BRSNW 5 | CHEAL BBCH 10-14  POLCO BBCH 10-12  POLPE BBCH 10-14  THALR BBCH 12-14  VIOAR BBCH 10-12  GERPU BBCH 10-12  ECHCG BBCH 10-12  VERHE BBCH 10-11  STEME BBCH 10-11  BRSNW BBCH 10-11 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.25 L/ha  0.30 L/ha  0.35 L/ha  0.40 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  15.05.2020  Assessment date:  15.05.2020  29.05.2020  09.06.2020  16.07.2020 |
| **A.T/2020/082/KK** | maize/ SM Hubal  CHEAL  POLCO  ANTAR  VIOAR  SOLNI  ECHCG  SINAR  CAPBP  MATIN | CHEAL 20  POLCO 5  ANTAR 5  VIOAR 7  SOLNI 5  ECHCG 10  SINAR 5  CAPBP 5  MATIN 6 | CHEAL BBCH 12-14  POLCO BBCH 12-14  ANTAR BBCH 12-14  VIOAR BBCH 12-14  SOLNI BBCH 12-14  ECHCG BBCH 11-13  SINAR BBCH 11-13  CAPBP BBCH 12-13  MATIN BBCH 10-12 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.25 L/ha  0.30 L/ha  0.35 L/ha  0.40 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  26.05.2020  Assessment date:  26.05.2020  08.06.2020  22.06.2020  27.07.2020 |
| **A.T/2021/054/KK** | maize/ LG 3216  ECHCG  CHEAL  STEME  VERPE  LAMAM  SOLNI  SINAR  THLAR | ECHCG 5  CHEAL 7  STEME 6  VIOAR 5  VERPE 5  LAMAM 5  SOLNI 5  SINAR 5  THLAR 5 | ECHCG BBCH 10-11  CHEAL BBCH 10-11  STEME BBCH 10-12  VIOAR BBCH 10-11  VERPE BBCH 10-12  LAMAM BBCH 10-12  SOLNI BBCH 10-12  SINAR BBCH 10-12  THLAR BBCH 10-12 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.20 L/ha  0.25 L/ha  0.30 L/ha  0.35 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  19.05.2021  Assessment date:  19.05.2021  01.06.2021  15.06.2021  16.07.2021 |
| **A.T/2021/055/KK** | maize/ ES Yakari  CHEAL  THLAR  ANTAR  VIOAR  ECHCG  STEME  BRSNW  CAPBP  MATIN  AMARE  PAPRH  DESSO  POLCO  POLAV | CHEAL 6  THLAR 5  ANTAR 5  VIOAR 5  ECHCG 19  STEME 5  BRSNW 10  CAPBP 5  MATIN 5  AMARE 5  PAPRH 5  DESSO 5  POLCO 5  POLAV 5 | CHEAL BBCH 10-14  THLAR BBCH 12-14  ANATR BBCH10-12  VIOAR BBCH 10-12  ECHCG BBCH 10-13  STEME BBCH 10-14  BRSNW BBCH 12-16  CAPBP BBCH 12-14  MATIN BBCH 10-12  AMARE BBCH 12-14  PAPRH BBCH 14-16  DESSO BBCH 12-14  POLCO BBCH 12-14  POLAV BBBCH 12-14 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.20 L/ha  0.25 L/ha  0.30 L/ha  0.35 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  26.05.2021  Assessment date:  26.05.2021  08.06.2021  21.06.2021  15.07.2021 |
| **A.T/2021/056/KK** | maize/ Luigi  CHEAL  POLPE  POLCO  POLAV  GALAP  CAPBP  VIOAR  VERHE  MATIN  ECHCG  STEME | CHEAL 8  POLPE 6  POLCO 5  POLAV 5  GALAP 5  CAPBP 6  VIOAR 6  VERHE 5  MATIN 5  ECHCG 5  STEME 5 | CHEAL BBCH 11-12  POLPE BBCH 11-12  POLCO BBCH 11-12  POLAV BBCH 11-12  GALAP BBCH 11-12  CAPBP BBCH 11-13  VIOAR BBCH 11-13  VERHE BBCH 11-13  MATIN BBCH 11-12  ECHCG BBCH 11-12  STEME BBCH 11-12 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.20 L/ha  0.25 L/ha  0.30 L/ha  0.35 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  26.05.2021  Assessment date:  26.05.2021  09.06.2021  23.06.2021  09.07.2021 |
| **A.T/2021/057/KK** | maize/ Ambrosini  CHEAL  POLCO  POLPE  ECHCG  GASPA  SETVI  CAPBP  SOLNI  SINAR  ANTAR | CHEAL 10  POLCO 5  POLPE 5  ECHCG 7  GASPA 5  SETVI 8  CAPBP 5  SOLNI 5  SINAR 5  ANTAR 5 | CHEAL BBCH 12-14  POLCO BBCH 12-14  POLPE BBCH 12-14  ECHCG BBCH 11-13  GASPA BBCH 12-14  SETVI BBCH 11-13  CAPBP BBCH 12-14  SOLNI BBCH 12-14  SOINAR BBCH 12-14  ANTAR BBCH 12-14 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.20 L/ha  0.25 L/ha  0.30 L/ha  0.35 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  31.05.2021  Assessment date:  31.05.2021  14.06.2021  28.06.2021  28.07.2021 |
| **A.T/2021/059/KK** | maize/ Sm Piast  CHEAL  POLCO  VIOAR  BRSNW  CAPBP  MATIN  POLPE  AMARE  THLAR | CHEAL 11  POLCO 11  VIOAR 11  BRSNW 5  CAPBP 6  MATIN 5  POLPE 5  AMARE 6  THLAR 5 | CHEAL BBCH 12-16  POLCO BBCH 10-12  VIOAR BBCH 10-21  BRSNW BBCH 10-14  CAPBP BBCH 10-14  MATIN BBCH 10-14  POLPE BBCH 10-14  AMARE BBCH 10-14  THLAR BBCH 12-14 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.20 L/ha  0.25 L/ha  0.30 L/ha  0.35 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  27.05.2021  Assessment date:  27.05.2021  07.06.2021  24.06.2021  28.07.2021 |
| **A.T/2021/103/KK** | maize/ Opoka  CHEAL  VIOAR  VERHE  STEME  POLCO  MATIN  POLPE  SOLNI  ANTAR | CHEAL 7  VIOAR 28  VERHE 7  STEME 5  POLCO 5  MATIN 5  POLPE 5  SOLNI 5  ANTAR 5 | CHEAL BBCH 10-14  VIOAR BBCH 10-14  VERHE BBCH 10-14  STEME BBCH 18-31  POLCO BBCH 10-12  MATIN BBCH 21-30  POLPE BBCH 10-12  SOLNI BBCH 10-12  ANTAR BBCH 10-12 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.20 L/ha  0.25 L/ha  0.30 L/ha  0.35 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  24.06.2021  Assessment date:  21.06.2021  08.07.2021  22.07.2021  06.08.2021 |
| **SRPL21-437-336FE** | maize/ PIONEER P8307  CHEAL  ECHCG  VERPE  GASCI  CONAR | CHEAL 11  ECHCG 8  VERPE 5.25  GASCI 6.25  CONAR 5 | CHEAL BBCH 12-14  ECHCG BBCH 11-14  VERPE BBCH 12-14  GESCI BBCH 12-14  CONAR BBCH 11-13 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.20 L/ha  0.25 L/ha  0.30 L/ha  0.35 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  15.06.2021  Assessment date:  15.06.2021  22.06.2021  29.06.2021  13.07.2021  10.08.2021 |
| **SRPL21-438-336FE** | maize/ SY Talisman  CHEAL  POLPE  POLCO  AMARE | CHEAL 8.8  POLPE 5.8  POLCO 6.8  AMARE 9.0 | CHEAL BBCH 12  POLPE BBCH 12-13  POLCO BBCH 12-13  AMARE BBCH 14 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.20 L/ha  0.25 L/ha  0.30 L/ha  0.35 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  28.04.2021  Assessment date:  28.04.2021  05.05.2021  12.05.2021  26.05.2021  23.06.2021 |
| **SRPL21-439-336FE** | maize/ DKC 3595  AMARE  MATIN  SINAR  VERHT  ANTAR  CHEAL  POLPE | AMARE 10.0  MATIN 7.0  SINAR 6.0  VERHT 12  ANTAR 5.0  CHEAL 30.0  POLPE 21.0 | AMARE BBCH 12-13  MATIN BBCH 11-13  SINAR BBCH 12-13  VERHT BBCH 13-14  ANTAR BBCH 12  CHEAL BBCH 11-13  POLPE BBCH 11-12 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.20 L/ha  0.25 L/ha  0.30 L/ha  0.35 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  02.06.2021  Assessment date:  02.06.2021  09.06.2021  16.06.2021  30.06.2021  28.07.2021 |
| **SRPL21-440-336FE** | maize/ Cedro  THLAR  ANTAR  ECHCG  STEME  AMARE  CHEAL | THLAR 5.5  ANTAR 5.0  ECHCG 18.25  STEME 8.0  AMARE 7.0  CHEAL 11.75 | THLAR BBCH 12-16  ANTAR BBCH 12-14  ECHCG BBCH 11-13  STEME BBCH 10-14  AMARE BBCH 12-16 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.20 L/ha  0.25 L/ha  0.30 L/ha  0.35 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  07.06.2021  Assessment date:  07.06.2021  14.06.2021  21.06.2021  05.07.2021  02.08.2021 |
| **SRPL21-441-336FE** | maize/ PIONEER  POLPE  THLAR  ECHCG  CAPBP  AMARE  SINAR  POLAV  CHEAL  GASCI | POLPE 7.0  THLAR 5.5  ECHCG 9.0  CAPBP 5.5  AMARE 6.0  SINAR 9.0  POLAV 9.75  CHEAL 11.0  GASCI 5.75 | POLPE BBCH 12-13  THLAR BBCH 12-13  ECHCG BBCH 11-13  CAPBP BBCH 12-13  AMARE BBCH 12-13  SINAR BBCH 12-13  POLAV BBCH 12-13  CHEAL BBCH 12-13  GASCI BBCH 12-13 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.20 L/ha  0.25 L/ha  0.30 L/ha  0.35 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  01.06.2021  Assessment date:  01.06.2021  08.06.2021  15.06.2021  29.06.2021  27.07.2021 |
| **AH/22/K/20/Jab/01** | maize/ DKC3595  SINAR  VERHE  BRSNW  XANST | SINAR 7.0  VERHE 9.0  BRSNW 6.0  XANST 7.0 | SINAR BBCH 10-13  VERHE BBCH 12-14  BRSNW BBCH 10-14  XANST BBCH 12-14 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.20 L/ha  0.25 L/ha  0.30 L/ha  0.35 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  22.06.2022  Assessment date:  06.07.2022  20.07.2022 |
| **AH/22/K/20/Mał/02** | maize/ Ułan  SOLNI  VERHE  BRSNW  DIGSA | SOLNI 5.0  VERHE 6.0  BRSNW 8.0  DIGSA 5.0 | SOLNI BBCH 10-11  VERHE BBCH 10-12  BRSNW BBCH 11-12  DIGSA BBCH 11-13 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.20 L/ha  0.25 L/ha  0.30 L/ha  0.35 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  21.06.2022  Assessment date:  05.07.2022  19.07.2022 |
| **AH/22/K/20/NW/03** | maize/ Subito  SOLNI  VERHE  BRSNW  XANST | SOLNI 6.0  VERHE 5.0  BRSNW 5.0  XANST 6.0 | SOLNI BBCH 09-11  VERHE BBCH 10-11  BRSNW BBCH 09-10  XANST BBCH 09-11 | CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC  CHR/H/IZOXACYP 250 SC | 0.20 L/ha  0.25 L/ha  0.30 L/ha  0.35 L/ha | Adengo 315 SC | 0.33 L/ha | Application date:  12.07.2022  Assessment date:  26.07.2022  09.08.2022 |

**Notes:**

1): Test report number including the year of establishing the trial

(2): Plant part assessed and criteria for assessment

(3): efficacy or intended effect

(4): Relevant conclusions on effectiveness

# Appendix 5 Summary of detailed data on herbicide effectiveness trials

**PREEMERGENCE APPLICATION IN MAIZE**

*Table 1. The efficacy of CHR/H/IZOXACYP 250 SC in control of CHEAL*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Chenopodium album* CHEAL** | | | | | | | | | | | |  |  |  |
| Report code | | | **SRPL21-433-336FE** | **SRPL21-434-336FE** | **SRPL21-435-336FE** | **SRPL21-436-336FE** | **A.T/2022/003/KK** | **A.T/2022/004/KK** | **A.T/2022/005/KK** | **A.T/2022/006/KK** | **AH/22/K/20/Br/01** | **AH/22/K/20/Zł/02** | **AH/22/K/20/Gr/03** | **AH/22/K/20/Ce/04** |  |  |  |
| Application date | | | 26.05.2021 | 13.05.2021 | 17.05.2021 | 17.05.2021 | 06.05.2022 | 06.05.2022 | 12.05.2022 | 11.05.2022 | 06.05.2022 | 29.04.2022 | 10.05.2022 | 04.05.2022 |  |  |  |
| Crop stage in application | | | BBCH 00 | BBCH 00 | BBCH 03 | BBCH 00 | BBCH 03-06 | BBCH 05 | BBCH 07-09 | BBCH 07 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Pest stage | | | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Assessment date | | | 24.06.2021 | 07.06.2021 | 14.06.2021 | 14.06.2021 | 03.06.2022 | 03.06.2022 | 09.06.2022 | 08.06.2022 | 03.06.2022 | 27.05.2022 | 06.06.2022 | 26.05.2022 |  |  |  |
| Days after application DA-A | | | 29 DA-A | 25 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 27 DA-A | 22 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 17.0 | 11.0 | 19.0 | 11.0 | 10.0 | 42.0 | 12.0 | 5.0 | 25.0 | 17.0 | 6.0 | 45.0 | 18.3 | 5.0 | 45.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.16 | 50.00 | 55.00 | 70.00 | 37.50 | 72.50 | 72.50 | 85.00 | 72.50 | 94.00 | 63.30 | 90.50 | 73.80 | 69.72 | 37.50 | 94.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.20 | 62.50 | 61.30 | 82.50 | 51.30 | 78.10 | 80.50 | 91.30 | 77.50 | 94.80 | 65.30 | 91.30 | 77.00 | 76.12 | 51.30 | 94.80 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.24 | 70.00 | 72.50 | 99.00 | 68.80 | 82.50 | 88.00 | 96.80 | 85.80 | 95.00 | 73.50 | 91.80 | 78.30 | 83.50 | 68.80 | 99.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.28 | 78.80 | 82.50 | 100.00 | 88.80 | 88.80 | 90.00 | 98.00 | 91.30 | 95.80 | 85.30 | 93.00 | 80.80 | 89.43 | 78.80 | 100.00 |
| 6 | Adengo 315 SC | 0.33 | 85.00 | 97.00 | 100.00 | 73.80 | 94.40 | 97.50 | 100.00 | 96.30 | 98.00 | 83.00 | 93.30 | 81.30 | 91.63 | 73.80 | 100.00 |
| LSD(P=.05) | | | 4.120 | 5.890 | 6.611 | 5.930 | 5.340 | 2.990 | 5.050 | 4.510 | 2.510 | 6.100 | 3.650 | 3.780 |  |  |  |

*Table 2. The efficacy of CHR/H/IZOXACYP 250 SC in control of ANTAR*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Anthemis arvensis* ANTAR** | | | | | |  |  |  |
| Report code | | | **SRPL21-435-336FE** | **A.T/2022/003/KK** | **AH/22/K/20/Br/01** | **AH/22/K/20/Zł/02** | **AH/22/K/20/Gr/03** | **AH/22/K/20/Ce/04** |  |  |  |
| Application date | | | 17.05.2021 | 06.05.2022 | 06.05.2022 | 29.04.2022 | 10.05.2022 | 04.05.2022 |  |  |  |
| Crop stage in application | | | BBCH 03 | BBCH 03-06 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Pest stage | | | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Assessment date | | | 14.06.2021 | 03.06.2022 | 03.06.2022 | 27.05.2022 | 06.06.2022 | 26.05.2022 |  |  |  |
| Days after application DA-A | | | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 27 DA-A | 22 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 8.0 | 5.0 | 6.0 | 8.0 | 6.0 | 5.0 | 6.3 | 5.0 | 8.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.16 | 62.50 | 62.50 | 92.50 | 64.80 | 85.30 | 70.50 | 73.02 | 62.50 | 92.50 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.20 | 75.00 | 70.80 | 93.80 | 68.30 | 88.30 | 74.00 | 78.37 | 68.30 | 93.80 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.24 | 82.50 | 79.50 | 94.80 | 73.80 | 90.30 | 78.00 | 83.15 | 73.80 | 94.80 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.28 | 87.50 | 85.00 | 95.80 | 86.00 | 91.30 | 80.80 | 87.73 | 80.80 | 95.80 |
| 6 | Adengo 315 SC | 0.33 | 100.00 | 93.80 | 96.30 | 86.50 | 91.80 | 80.80 | 91.53 | 80.80 | 100.00 |
| LSD(P=.05) | | | 6.521 | 4.870 | 3.050 | 5.830 | 2.600 | 3.450 |  |  |  |

*Table 3. The efficacy of CHR/H/IZOXACYP 250 SC in control of POLPE*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Persicaria maculosa POLPE** | | | | | |  |  |  |
| Report code | | | **SRPL21-434-336FE** | **A.T/2022/002/KK** | **A.T/2022/003/KK** | **A.T/2022/004/KK** | **A.T/2022/006/KK** | **AH/22/K/20/Br/01** |  |  |  |
| Application date | | | 13.05.2021 | 28.04.2022 | 06.05.2022 | 06.05.2022 | 11.05.2022 | 06.05.2022 |  |  |  |
| Crop stage in application | | | BBCH 00 | BBCH 03-06 | BBCH 03-06 | BBCH 05 | BBCH 07 | BBCH 00 |  |  |  |
| Pest stage | | | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Assessment date | | | 21.06.2021 | 25.05.2022 | 03.06.2022 | 03.06.2022 | 08.06.2022 | 03.06.2022 |  |  |  |
| Days after application DA-A | | | 39 DA-A | 27 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 10.3 | 24.0 | 9.0 | 7.0 | 5.0 | 6.0 | 10.2 | 5.0 | 24.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.16 | 80.00 | 71.00 | 72.50 | 71.30 | 66.50 | 91.80 | 75.52 | 66.50 | 91.80 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.20 | 86.30 | 80.30 | 78.10 | 80.00 | 75.00 | 93.50 | 82.20 | 75.00 | 93.50 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.24 | 98.00 | 86.00 | 80.00 | 86.30 | 81.30 | 94.30 | 87.65 | 80.00 | 98.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.28 | 100.00 | 90.00 | 93.10 | 92.50 | 85.00 | 95.30 | 92.65 | 85.00 | 100.00 |
| 6 | Adengo 315 SC | 0.33 | 100.00 | 97.50 | 100.00 | 100.00 | 98.80 | 97.30 | 98.93 | 97.30 | 100.00 |
| LSD(P=.05) | | | 3.090 | 3.360 | 5.080 | 2.540 | 4.070 | 4.900 |  |  |  |

*Table 4. The efficacy of CHR/H/IZOXACYP 250 SC in control of THLAR*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Thlapsi arvense THLAR** | | | | | |  |  |  |
| Report code | | | **SRPL21-436-336FE** | **A.T/2022/003/KK** | **AH/22/K/20/Br/01** | **AH/22/K/20/Zł/02** | **AH/22/K/20/Gr/03** | **AH/22/K/20/Ce/04** |  |  |  |
| Application date | | | 17.05.2021 | 06.05.2022 | 06.05.2022 | 29.04.2022 | 10.05.2022 | 04.05.2022 |  |  |  |
| Crop stage in application | | | BBCH 00 | BBCH 03-06 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Pest stage | | | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Assessment date | | | 14.06.2021 | 03.06.2022 | 03.06.2022 | 27.05.2022 | 06.06.2022 | 26.05.2022 |  |  |  |
| Days after application DA-A | | | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 27 DA-A | 22 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 8.3 | 5.0 | 8.0 | 6.0 | 9.0 | 5.0 | 6.9 | 5.0 | 9.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.16 | 96.50 | 32.50 | 94.30 | 60.80 | 85.50 | 69.50 | 73.18 | 32.50 | 96.50 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.20 | 99.50 | 40.00 | 95.50 | 62.50 | 89.80 | 73.30 | 76.77 | 40.00 | 99.50 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.24 | 100.00 | 56.30 | 95.50 | 71.50 | 91.30 | 76.80 | 81.90 | 56.30 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.28 | 100.00 | 65.00 | 97.50 | 85.80 | 92.00 | 82.50 | 87.13 | 65.00 | 100.00 |
| 6 | Adengo 315 SC | 0.33 | 100.00 | 92.50 | 98.80 | 87.30 | 93.30 | 85.80 | 92.95 | 85.80 | 100.00 |
| LSD(P=.05) | | | 1.780 | 6.520 | 3.510 | 4.980 | 3.320 | 4.040 |  |  |  |

*Table 5. The efficacy of CHR/H/IZOXACYP 250 SC in control of VIOAR*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Viola arvensis VIOAR** | | | | | | | |  |  |  |
| Report code | | | **SRPL21-433-336FE** | **SRPL21-436-336FE** | **A.T/2022/003/KK** | **AH/22/K/20/Br/01** | **AH/22/K/20/Zł/02** | **AH/22/K/20/Gr/03** | **AH/22/K/20/Ce/04** | **AH/22/K/20/Mr/05** |  |  |  |
| Application date | | | 26.05.2021 | 17.05.2021 | 06.05.2022 | 06.05.2022 | 29.04.2022 | 10.05.2022 | 04.05.2022 | 11.05.2022 |  |  |  |
| Crop stage in application | | | BBCH 00 | BBCH 00 | BBCH 03-06 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Pest stage | | | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Assessment date | | | 24.06.2021 | 14.06.2021 | 03.06.2022 | 03.06.2022 | 27.05.2022 | 06.06.2022 | 26.05.2022 | 08.06.2022 |  |  |  |
| Days after application DA-A | | | 29 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 27 DA-A | 22 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 18.5 | 14.8 | 7.0 | 7.0 | 8.0 | 7.0 | 9.0 | 6.0 | 9.7 | 6.0 | 18.5 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.16 | 52.50 | 99.00 | 0.00 | 97.00 | 49.80 | 91.30 | 70.30 | 78.50 | 67.30 | 0.00 | 99.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.20 | 58.80 | 100.00 | 11.30 | 97.30 | 63.00 | 90.80 | 74.00 | 76.80 | 71.50 | 11.30 | 100.00 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.24 | 66.30 | 100.00 | 26.30 | 98.00 | 70.00 | 92.50 | 79.80 | 81.30 | 76.78 | 26.30 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.28 | 85.00 | 100.00 | 36.30 | 98.80 | 86.00 | 93.30 | 85.80 | 85.30 | 83.81 | 36.30 | 100.00 |
| 6 | Adengo 315 SC | 0.33 | 85.00 | 100.00 | 53.80 | 99.30 | 87.50 | 93.50 | 85.50 | 45.80 | 81.30 | 45.80 | 100.00 |
| LSD(P=.05) | | | 4.930 | 1.080 | 12.420 | 1.760 | 15.420 | 3.620 | 3.210 | 48.060 |  |  |  |

*Table 6. The efficacy of CHR/H/IZOXACYP 250 SC in control of ECHCG*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Echinochloa crus-galli ECHCG** | | | | | | | | |  |  |  |
| Report code | | | **SRPL21-433-336FE** | **SRPL21-434-336FE** | **A.T/2022/005/KK** | **A.T/2022/006/KK** | **AH/22/K/20/Br/01** | **AH/22/K/20/Zł/02** | **AH/22/K/20/Gr/03** | **AH/22/K/20/Ce/04** | **AH/22/K/20/Mr/05** |  |  |  |
| Application date | | | 26.05.2021 | 13.05.2021 | 12.05.2022 | 11.05.2022 | 06.05.2022 | 29.04.2022 | 10.05.2022 | 04.05.2022 | 11.05.2022 |  |  |  |
| Crop stage in application | | | BBCH 00 | BBCH 00 | BBCH 07-09 | BBCH 07 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Pest stage | | | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Assessment date | | | 24.06.2021 | 07.06.2021 | 09.06.2022 | 08.06.2022 | 03.06.2022 | 27.05.2022 | 06.06.2022 | 26.05.2022 | 08.06.2022 |  |  |  |
| Days after application DA-A | | | 29 DA-A | 25 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 27 DA-A | 22 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 16.0 | 8.0 | 7.0 | 5.0 | 6.0 | 6.0 | 23.0 | 6.0 | 30.0 | 11.9 | 5.0 | 30.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.16 | 57.50 | 37.50 | 91.30 | 72.50 | 96.00 | 57.80 | 85.30 | 80.30 | 73.50 | 72.41 | 37.50 | 96.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.20 | 63.80 | 45.00 | 95.00 | 72.50 | 97.50 | 61.30 | 86.50 | 81.80 | 72.50 | 75.10 | 45.00 | 97.50 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.24 | 75.00 | 52.50 | 97.00 | 86.30 | 98.50 | 67.80 | 90.00 | 83.30 | 80.30 | 81.19 | 52.50 | 98.50 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.28 | 80.00 | 67.50 | 97.00 | 87.50 | 99.30 | 86.80 | 91.30 | 85.30 | 85.50 | 86.69 | 67.50 | 99.30 |
| 6 | Adengo 315 SC | 0.33 | 95.00 | 95.00 | 100.00 | 95.00 | 99.50 | 88.30 | 91.80 | 85.80 | 59.50 | 89.99 | 59.50 | 100.00 |
| LSD(P=.05) | | | 3.560 | 5.440 | 5.120 | 5.260 | 2.330 | 4.160 | 4.950 | 2.500 | 32.930 |  |  |  |

*Table 7. The efficacy of CHR/H/IZOXACYP 250 SC in control of CAPBP*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Capsella bursa-pastoris CAPBP** | | | | | |  |  |  |
| Report code | | | **SRPL21-435-336FE** | **A.T/2022/002/KK** | **A.T/2022/004/KK** | **AH/22/K/20/Br/01** | **AH/22/K/20/Zł/02** | **AH/22/K/20/Gr/03** |  |  |  |
| Application date | | | 17.05.2021 | 28.04.2022 | 06.05.2022 | 06.05.2022 | 29.04.2022 | 10.05.2022 |  |  |  |
| Crop stage in application | | | BBCH 03 | BBCH 03-06 | BBCH 05 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Pest stage | | | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Assessment date | | | 14.06.2021 | 25.05.2022 | 03.06.2022 | 03.06.2022 | 27.05.2022 | 06.06.2022 |  |  |  |
| Days after application DA-A | | | 28 DA-A | 27 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 27 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 5.0 | 6.0 | 8.0 | 7.0 | 6.0 | 6.0 | 6.3 | 5.0 | 8.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.16 | 70.00 | 77.50 | 78.30 | 93.80 | 57.30 | 82.00 | 76.48 | 57.30 | 93.80 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.20 | 85.00 | 85.50 | 80.80 | 94.80 | 58.80 | 86.80 | 81.95 | 58.80 | 94.80 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.24 | 100.00 | 88.30 | 88.00 | 95.30 | 68.50 | 90.50 | 88.43 | 68.50 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.28 | 100.00 | 95.00 | 95.00 | 96.30 | 86.30 | 92.50 | 94.18 | 86.30 | 100.00 |
| 6 | Adengo 315 SC | 0.33 | 100.00 | 100.00 | 100.00 | 96.50 | 86.30 | 92.50 | 95.88 | 86.30 | 100.00 |
| LSD(P=.05) | | | 5.138 | 4.160 | 2.740 | 3.070 | 5.060 | 2.940 |  |  |  |

*Table 8. The efficacy of CHR/H/IZOXACYP 250 SC in control of MATIN*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Tripleurospermum inodorum MATIN** | | | |  |  |  |
| Report code | | | **SRPL21-435-336FE** | **SRPL21-436-336FE** | **AH/22/K/20/Ce/04** | **AH/22/K/20/Mr/05** |  |  |  |
| Application date | | | 17.05.2021 | 17.05.2021 | 04.05.2022 | 11.05.2022 |  |  |  |
| Crop stage in application | | | BBCH 03 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Pest stage | | | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Assessment date | | | 14.06.2021 | 14.06.2021 | 26.05.2022 | 08.06.2022 |  |  |  |
| Days after application DA-A | | | 28 DA-A | 28 DA-A | 22 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 10.0 | 13.3 | 6.0 | 5.0 | 8.6 | 5.0 | 13.3 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.16 | 70.00 | 30.00 | 77.30 | 70.50 | 61.95 | 30.00 | 77.30 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.20 | 83.75 | 47.50 | 77.80 | 72.00 | 70.26 | 47.50 | 83.75 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.24 | 98.50 | 72.50 | 80.50 | 75.80 | 81.83 | 72.50 | 98.50 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.28 | 100.00 | 82.50 | 82.30 | 81.30 | 86.53 | 81.30 | 100.00 |
| 6 | Adengo 315 SC | 0.33 | 100.00 | 78.80 | 83.30 | 43.00 | 76.28 | 43.00 | 100.00 |
| LSD(P=.05) | | | 6.425 | 5.100 | 2.760 | 45.750 |  |  |  |

*Table 9. The efficacy of CHR/H/IZOXACYP 250 SC in control of STEME*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Stellaria media STEME** | | | | |  |  |  |
| Report code | | | **SRPL21-434-336FE** | **SRPL21-435-336FE** | **A.T/2022/002/KK** | **AH/22/K/20/Ce/04** | **AH/22/K/20/Mr/05** |  |  |  |
| Application date | | | 13.05.2021 | 17.05.2021 | 28.04.2022 | 04.05.2022 | 11.05.2022 |  |  |  |
| Crop stage in application | | | BBCH 00 | BBCH 03 | BBCH 03-06 | BBCH 00 | BBCH 00 |  |  |  |
| Pest stage | | | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Assessment date | | | 07.06.2021 | 14.06.2021 | 25.05.2022 | 26.05.2022 | 08.06.2022 |  |  |  |
| Days after application DA-A | | | 25 DA-A | 28 DA-A | 27 DA-A | 22 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 11.5 | 7.0 | 5.0 | 6.0 | 6.0 | 7.1 | 5.0 | 11.5 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.16 | 65.00 | 73.75 | 85.00 | 72.00 | 70.00 | 73.15 | 65.00 | 85.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.20 | 71.30 | 86.25 | 91.30 | 74.50 | 68.50 | 78.37 | 68.50 | 91.30 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.24 | 80.00 | 100.00 | 95.00 | 80.30 | 75.80 | 86.22 | 75.80 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.28 | 87.50 | 100.00 | 100.00 | 86.00 | 82.50 | 91.20 | 82.50 | 100.00 |
| 6 | Adengo 315 SC | 0.33 | 95.00 | 100.00 | 100.00 | 85.80 | 44.00 | 84.96 | 44.00 | 100.00 |
| LSD(P=.05) | | | 4.120 | 5.278 | 3.300 | 4.600 | 46.140 |  |  |  |

*Table 10. The efficacy of CHR/H/IZOXACYP 250 SC in control of BRSNW*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Brassica napus BRSNW** | | | | |  |  |  |
| Report code | | | **SRPL21-435-336FE** | **SRPL21-436-336FE** | **A.T/2022/002/KK** | **AH/22/K/20/Br/01** | **AH/22/K/20/Zł/02** |  |  |  |
| Application date | | | 17.05.2021 | 17.05.2021 | 28.04.2022 | 06.05.2022 | 29.04.2022 |  |  |  |
| Crop stage in application | | | BBCH 03 | BBCH 00 | BBCH 03-06 | BBCH 00 | BBCH 00 |  |  |  |
| Pest stage | | | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Assessment date | | | 14.06.2021 | 14.06.2021 | 25.05.2022 | 03.06.2022 | 27.05.2022 |  |  |  |
| Days after application DA-A | | | 28 DA-A | 28 DA-A | 27 DA-A | 28 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 6.0 | 15.0 | 5.0 | 6.0 | 6.0 | 7.6 | 5.0 | 15.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.16 | 68.75 | 0.00 | 72.50 | 94.30 | 55.00 | 58.11 | 0.00 | 94.30 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.20 | 87.50 | 12.50 | 79.50 | 96.50 | 62.50 | 67.70 | 12.50 | 96.50 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.24 | 97.50 | 26.30 | 85.50 | 94.80 | 65.30 | 73.88 | 26.30 | 97.50 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.28 | 100.00 | 35.00 | 90.00 | 98.80 | 85.50 | 81.86 | 35.00 | 100.00 |
| 6 | Adengo 315 SC | 0.33 | 100.00 | 50.00 | 100.00 | 99.00 | 86.00 | 87.00 | 50.00 | 100.00 |
| LSD(P=.05) | | | 5.648 | 3.370 | 2.200 | 4.050 | 5.290 |  |  |  |

*Table 11. The efficacy of CHR/H/IZOXACYP 250 SC in control of AMARE*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Amaranthus retrofelxus AMARE** | | | | | |  |  |  |
| Report code | | | **SRPL21-434-336FE** | **SRPL21-435-336FE** | **A.T/2022/006/KK** | **AH/22/K/20/Ce/04** | **AH/22/K/20/Mr/05** | **A.T/2022/003/KK** |  |  |  |
| Application date | | | 13.05.2021 | 17.05.2021 | 11.05.2022 | 04.05.2022 | 11.05.2022 | 06.05.2022 |  |  |  |
| Crop stage in application | | | BBCH 00 | BBCH 03 | BBCH 07 | BBCH 00 | BBCH 00 | BBCH 03-06 |  |  |  |
| Pest stage | | | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Assessment date | | | 07.06.2021 | 14.06.2021 | 08.06.2022 | 26.05.2022 | 08.06.2022 | 03.06.2022 |  |  |  |
| Days after application DA-A | | | 25 DA-A | 28 DA-A | 28 DA-A | 22 DA-A | 28 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 10.0 | 12.0 | 5.0 | 5.0 | 5.0 | 6.0 | 7.2 | 5.0 | 12.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.16 | 57.50 | 76.25 | 62.50 | 67.50 | 72.50 | 74.40 | 68.44 | 57.50 | 76.25 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.20 | 65.00 | 83.75 | 77.50 | 71.80 | 72.30 | 84.80 | 75.86 | 65.00 | 84.80 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.24 | 71.30 | 96.25 | 100.00 | 76.00 | 78.00 | 87.50 | 84.84 | 71.30 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.28 | 83.80 | 100.00 | 100.00 | 85.30 | 84.30 | 96.90 | 91.72 | 83.80 | 100.00 |
| 6 | Adengo 315 SC | 0.33 | 92.50 | 100.00 | 100.00 | 86.30 | 44.50 | 99.40 | 87.12 | 44.50 | 100.00 |
| LSD(P=.05) | | | 5.350 | 6.493 | 10.040 | 2.360 | 46.350 | 3.720 |  |  |  |

*Table 12. The efficacy of CHR/H/IZOXACYP 250 SC in control of SOLNI*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Solanum nigrum SOLNI** | | | | | |  |  |  |
| Report code | | | **A.T/2022/002/KK** | **A.T/2022/005/KK** | **AH/22/K/20/Br/01** | **AH/22/K/20/Zł/02** | **AH/22/K/20/Gr/03** | **AH/22/K/20/Mr/05** |  |  |  |
| Application date | | | 28.04.2022 | 12.05.2022 | 06.05.2022 | 29.04.2022 | 10.05.2022 | 11.05.2022 |  |  |  |
| Crop stage in application | | | BBCH 03-06 | BBCH 07-09 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Pest stage | | | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 | BBCH 00 |  |  |  |
| Assessment date | | | 25.05.2022 | 09.06.2022 | 03.06.2022 | 27.05.2022 | 06.06.2022 | 08.06.2022 |  |  |  |
| Days after application DA-A | | | 27 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 27 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 8.0 | 13.0 | 5.0 | 6.0 | 6.0 | 5.0 | 7.2 | 5.0 | 13.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.16 | 75.50 | 83.50 | 87.80 | 58.80 | 85.80 | 78.00 | 78.23 | 58.80 | 87.80 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.20 | 80.80 | 90.00 | 91.80 | 61.00 | 89.30 | 79.50 | 82.07 | 61.00 | 91.80 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.24 | 85.80 | 98.00 | 91.80 | 68.30 | 90.50 | 83.00 | 86.23 | 68.30 | 98.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.28 | 88.00 | 100.00 | 94.00 | 86.00 | 91.80 | 85.80 | 90.93 | 85.80 | 100.00 |
| 6 | Adengo 315 SC | 0.33 | 100.00 | 100.00 | 94.80 | 87.00 | 92.00 | 47.80 | 86.93 | 47.80 | 100.00 |
| LSD(P=.05) | | | 2.520 | 3.280 | 3.330 | 4.920 | 2.500 | 50.910 |  |  |  |

**POSTEMERGENCE APPLICATION IN MAIZE**

*Table 13. The efficacy of CHR/H/IZOXACYP 250 SC in control of CHEAL 11-14 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Chenopodium album* CHEAL** | | | | | | | | | | | | |  |  |  |
| Report code | | | **A.T/2020/081/KK** | **A.T/2020/082/KK** | **A.T/2021/054/KK** | **A.T/2021/055/KK** | **A.T/2021/056/KK** | **A.T/2021/057/KK** | **A.T/2021/059/KK** | **A.T/2021/103/KK** | **SRPL21-437-336FE** | **SRPL21-438-336FE** | **SRPL21-439-336FE** | **SRPL21-440-336FE** | **SRPL21-441-336FE** |  |  |  |
| Application date | | | 15.05.2020 | 26.05.2020 | 19.05.2021 | 26.05.2021 | 26.05.2021 | 31.05.2021 | 27.05.2021 | 24.06.2021 | 15.06.2021 | 28.04.2021 | 02.06.2021 | 07.06.2021 | 01.06.2021 |  |  |  |
| Crop stage in application | | | BBCH 11-12 | BBBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 |  |  |  |
| Pest stage | | | BBCH 10-14 | BBCH 12-14 | BBCH 10-11 | BBCH 10-14 | BBCH 11-12 | BBCH 12-14 | BBCH 12-16 | BBCH 10-14 | BBCH 12-14 | BBCH 12 | BBCH 11-13 | BBCH 12-16 | BBCH 12-13 |  |  |  |
| Assessment date | | | 29.05.2020 | 08.06.2020 | 01.06.2021 | 08.06.2021 | 09.06.2021 | 14.06.2021 | 07.06.2021 | 08.07.2021 | 29.06.2021 | 12.05.2021 | 16.06.2021 | 21.06.2021 | 15.06.2021 |  |  |  |
| Days after application DA-A | | | 14 DA-A | 13 DA-A | 13 DA-A | 13 DA-A | 14 DA-A | 14 DA-A | 11 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 44.0 | 20.0 | 6.0 | 6.0 | 9.0 | 10.0 | 10.0 | 60.0 | 22.5 | 12.8 | 30.0 | 12.8 | 13.8 | 19.8 | 6.0 | 60.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 | - | - | 90.00 | 83.30 | 83.80 | 80.00 | 71.30 | 82.50 | 75.00 | 50.00 | 60.00 | 10.00 | 11.30 | 63.38 | 10.00 | 90.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 78.50 | 92.50 | 97.50 | 88.30 | 85.00 | 90.00 | 75.00 | 90.00 | 80.00 | 57.50 | 83.00 | 43.80 | 20.00 | 75.47 | 20.00 | 97.50 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 82.50 | 97.00 | 100.00 | 92.00 | 88.80 | 92.50 | 81.30 | 91.30 | 85.00 | 57.50 | 98.00 | 73.80 | 40.00 | 83.05 | 40.00 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 89.00 | 97.00 | 100.00 | 94.50 | 95.00 | 100.00 | 81.30 | 91.30 | 95.00 | 77.50 | 99.00 | 78.80 | 55.00 | 88.72 | 55.00 | 100.00 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 93.80 | 99.00 | - | - | - | - | - | - | - | - | - | - | - | 96.40 | 93.80 | 99.00 |
| 7 | Adengo 315 SC | 0.33 | 82.00 | 99.00 | 100.00 | 84.00 | 95.00 | 100.00 | 70.00 | 92.50 | 95.00 | 78.80 | 99.00 | 78.80 | 71.30 | 88.11 | 70.00 | 100.00 |
| LSD(P=.05) | | | 5.050 | 3.000 | 3.170 | 4.210 | 2.540 | 3.780 | 4.280 | 4.920 | - | 5.440 | 3.100 | 8.860 | 5.540 |  |  |  |

*Table 14. The efficacy of CHR/H/IZOXACYP 250 SC in control of CHEAL 25-28 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Chenopodium album* CHEAL** | | | | | | | | | | | | |  | | |  | | |  | |
| Report code | | | **A.T/2020/081/KK** | **A.T/2020/082/KK** | **A.T/2021/054/KK** | **A.T/2021/055/KK** | **A.T/2021/056/KK** | **A.T/2021/057/KK** | **A.T/2021/059/KK** | **A.T/2021/103/KK** | **SRPL21-437-336FE** | **SRPL21-438-336FE** | **SRPL21-439-336FE** | **SRPL21-440-336FE** | **SRPL21-441-336FE** |  |  | | |  | | |
| Application date | | | 15.05.2020 | 26.05.2020 | 19.05.2021 | 26.05.2021 | 26.05.2021 | 31.05.2021 | 27.05.2021 | 24.06.2021 | 15.06.2021 | 28.04.2021 | 02.06.2021 | 07.06.2021 | 01.06.2021 |  |  | | |  | | |
| Crop stage in application | | | BBCH 11-12 | BBBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 |  |  | | |  | | |
| Pest stage | | | BBCH 10-14 | BBCH 12-14 | BBCH 10-11 | BBCH 10-14 | BBCH 11-12 | BBCH 12-14 | BBCH 12-16 | BBCH 10-14 | BBCH 12-14 | BBCH 12 | BBCH 11-13 | BBCH 12-16 | BBCH 12-13 |  |  | | |  | | |
| Assessment date | | | 09.06.2020 | 22.06.2020 | 15.06.2021 | 21.06.2021 | 23.06.2021 | 28.06.2021 | 24.06.2021 | 22.07.2021 | 13.07.2021 | 26.05.2021 | 30.06.2021 | 05.07.2021 | 29.06.2021 |  |  | | |  | | |
| Days after application DA-A | | | 25 DA-A | 27 DA-A | 27 DA-A | 26 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | | **Min.** | | | **Max.** | |
| weeds density pcs/m2 | | | 45.0 | 20.0 | 6.0 | 6.0 | 9.0 | 15.0 | 10.0 | 6.0 | 41.3 | 13.3 | 30.0 | 13.0 | 18.8 | 17.9 | | 6.0 | | | 45.0 | |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  | | |  | |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | | 0.00 | |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 | - | - | 87.50 | 70.80 | 82.50 | 83.50 | 77.50 | 80.00 | 85.00 | 68.80 | 64.00 | 15.00 | 0.00 | 64.96 | | 0.00 | | | 87.50 | |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 77.80 | 90.00 | 95.00 | 83.00 | 85.00 | 90.00 | 76.30 | 88.80 | 90.00 | 81.30 | 81.00 | 42.50 | 10.00 | 76.21 | | 10.00 | | | 95.00 | |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 83.80 | 95.00 | 100.00 | 85.30 | 86.30 | 95.00 | 83.80 | 91.30 | 95.00 | 90.00 | 100.00 | 85.00 | 20.00 | 85.42 | | 20.00 | | | 100.00 | |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 88.80 | 97.00 | 100.00 | 89.50 | 90.00 | 100.00 | 87.50 | 91.30 | 100.00 | 95.00 | 100.00 | 90.00 | 40.00 | 89.93 | | 40.00 | | | 100.00 | |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 95.50 | 99.00 | - | - | - | - | - | - | - | - | - | - | - | 97.25 | | 95.50 | | | 99.00 | |
| 7 | Adengo 315 SC | 0.33 | 85.50 | 99.00 | 100.00 | 77.00 | 95.00 | 100.00 | 83.80 | 100.00 | 95.00 | 97.00 | 100.00 | 99.50 | 85.00 | 93.60 | | 77.00 | | | 100.00 | |
| LSD(P=.05) | | | 5.720 | 1.130 | 2.450 | 4.170 | 2.440 | 3.040 | 7.610 | 3.220 | - | 3.700 | 5.300 | 12.470 | - |  |  | | |  | | |

*Table 15. The efficacy of CHR/H/IZOXACYP 250 SC in control of POLCO 11-14 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Fallopia convolvulus* POLCO** | | | | | | | | |  | |  | |  | |
| Report code | | | **A.T/2020/081/KK** | **A.T/2020/082/KK** | **A.T/2021/055/KK** | **A.T/2021/056/KK** | **A.T/2021/057/KK** | **A.T/2021/059/KK** | **A.T/2021/103/KK** | **SRPL21-438-336FE** |  | |  | |  | |
| Application date | | | 15.05.2020 | 26.05.2020 | 26.05.2021 | 26.05.2021 | 31.05.2021 | 27.05.2021 | 24.06.2021 | 28.04.2021 |  | |  | |  | |
| Crop stage in application | | | BBCH 11-12 | BBBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 |  | |  | |  | |
| Pest stage | | | BBCH 10-12 | BBCH 12-14 | BBCH 12-14 | BBCH 11-12 | BBCH 12-14 | BBCH 12-16 | BBCH 10-14 | BBCH 12-13 |  | |  | |  | |
| Assessment date | | | 29.05.2020 | 08.06.2020 | 08.06.2021 | 09.06.2021 | 14.06.2021 | 07.06.2021 | 08.07.2021 | 12.05.2021 |  | |  | |  | |
| Days after application DA-A | | | 14 DA-A | 13 DA-A | 13 DA-A | 14 DA-A | 14 DA-A | 11 DA-A | 14 DA-A | 14 DA-A | **Average** | | **Min.** | | **Max.** | |
| weeds density pcs/m2 | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 9.0 | 6.0 | 10.0 | 6.3 | | 5.0 | | 10.0 | |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  | |  | |  | |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.00 | |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  |  | 0.00 | 15.00 | 20.00 | 0.00 | 0.00 | 13.80 | 8.13 | | 0.00 | | 20.00 | |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 45.00 | 51.30 | 15.00 | 20.00 | 16.30 | 0.00 | 0.00 | 21.30 | 21.11 | | 0.00 | | 51.30 | |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 54.50 | 56.30 | 22.50 | 27.50 | 47.50 | 0.00 | 5.00 | 30.00 | 30.41 | | 0.00 | | 56.30 | |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 64.50 | 62.50 | 30.00 | 61.30 | 50.00 | 21.30 | 30.00 | 36.30 | 44.49 | | 21.30 | | 64.50 | |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 71.80 | 68.80 | - | - | - | - | - | - | 70.30 | | 68.80 | | 71.80 | |
| 7 | Adengo 315 SC | 0.33 | 91.30 | 88.80 | 99.30 | 68.80 | 98.80 | 91.30 | 91.30 | 75.00 | 88.08 | | 68.80 | | 99.30 | |
| LSD(P=.05) | | | 8.630 | 5.360 | 5.060 | 19.170 | 18.960 | 2.540 | 7.240 | 8.790 |  | |  | |  | |

*Table 16. The efficacy of CHR/H/IZOXACYP 250 SC in control of POLCO 25-28 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Fallopia convolvulus* POLCO** | | | | | | | |  |  |  |
| Report code | | | **A.T/2020/081/KK** | **A.T/2020/082/KK** | **A.T/2021/055/KK** | **A.T/2021/056/KK** | **A.T/2021/057/KK** | **A.T/2021/059/KK** | **A.T/2021/103/KK** | **SRPL21-438-336FE** |  |  |  |
| Application date | | | 15.05.2020 | 26.05.2020 | 26.05.2021 | 26.05.2021 | 31.05.2021 | 27.05.2021 | 24.06.2021 | 28.04.2021 |  |  |  |
| Crop stage in application | | | BBCH 11-12 | BBBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 |  |  |  |
| Pest stage | | | BBCH 10-12 | BBCH 12-14 | BBCH 12-14 | BBCH 11-12 | BBCH 12-14 | BBCH 12-16 | BBCH 10-14 | BBCH 12-13 |  |  |  |
| Assessment date | | | 09.06.2020 | 22.06.2020 | 21.06.2021 | 23.06.2021 | 28.06.2021 | 24.06.2021 | 22.07.2021 | 26.05.2021 |  |  |  |
| Days after application DA-A | | | 25 DA-A | 27 DA-A | 26 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 5.0 | 5.0 |  | 5.0 | 6.0 | 10.0 | 6.0 | 10.3 | 6.8 | 5.0 | 10.3 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  |  | 0.00 | 30.00 | 0.00 | 0.00 | 0.00 | 17.50 | 7.92 | 0.00 | 30.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 39.50 | 31.30 | 15.00 | 46.30 | 22.50 | 0.00 | 0.00 | 31.30 | 23.24 | 0.00 | 46.30 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 50.80 | 35.00 | 22.50 | 50.00 | 30.00 | 0.00 | 0.00 | 42.50 | 28.85 | 0.00 | 50.80 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 63.50 | 40.00 | 30.00 | 60.00 | 30.00 | 0.00 | 10.00 | 47.50 | 35.13 | 0.00 | 63.50 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 67.00 | 50.00 | - | - | - | - | - | - | 58.50 | 50.00 | 67.00 |
| 7 | Adengo 315 SC | 0.33 | 91.50 | 99.00 | 100.00 | 95.50 | 100.00 | 100.00 | 100.00 | 92.50 | 97.31 | 91.50 | 100.00 |
| LSD(P=.05) | | | 7.010 | 6.960 | 1.990 | 5.360 | 10.340 | - | 2.810 | 6.340 |  |  |  |

*Table 17. The efficacy of CHR/H/IZOXACYP 250 SC in control of ANTAR13-14 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **ANTAR** | | | | | | |  | |  | |  | |
| Report code | | | **A.T/2020/082/KK** | **A.T/2021/055/KK** | **A.T/2021/057/KK** | **A.T/2021/103/KK** | **SRPL21-439-336FE** | **SRPL21-440-336FE** |  | |  | |  | |
| Application date | | | 26.05.2020 | 26.05.2021 | 31.05.2021 | 24.06.2021 | 02.06.2021 | 07.06.2021 |  | |  | |  | |
| Crop stage in application | | | BBBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 |  | |  | |  | |
| Pest stage | | | BBCH 12-14 | BBCH 10-12 | BBCH 12-14 | BBCH 10-12 | BBCH 12 | BBCH 12-14 |  | |  | |  | |
| Assessment date | | | 08.06.2020 | 08.06.2021 | 14.06.2021 | 08.07.2021 | 16.06.2021 | 21.06.2021 |  | |  | |  | |
| Days after application DA-A | | | 13 DA-A | 13 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | **Average** | | **Min.** | | **Max.** | |
| weeds density pcs/m2 | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.3 | 5.0 | | 5.0 | | 5.3 | |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  | |  | |  | |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.00 | |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 | - | 84.50 | 75.00 | 77.50 | 56.00 | 61.30 | 70.86 | | 56.00 | | 84.50 | |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 95.00 | 88.30 | 81.80 | 85.00 | 73.00 | 75.00 | 83.02 | | 73.00 | | 95.00 | |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 99.00 | 91.30 | 87.50 | 90.00 | 81.00 | 91.30 | 90.02 | | 81.00 | | 99.00 | |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 99.00 | 94.00 | 91.30 | 90.00 | 90.00 | 93.80 | 93.02 | | 90.00 | | 99.00 | |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 99.00 | - | - | - | - | - | 99.00 | | 99.00 | | 99.00 | |
| 7 | Adengo 315 SC | 0.33 | 99.00 | 100.00 | 95.00 | 95.00 | 99.00 | 93.80 | 96.97 | | 93.80 | | 100.00 | |
| LSD(P=.05) | | | - | 2.660 | 3.730 | 3.450 | 7.500 | 4.840 |  | |  | |  | |

*Table 18. The efficacy of CHR/H/IZOXACYP 250 SC in control of ANTAR 26-28 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **ANTAR** | | | | | | |  | |  | |  | |
| Report code | | | **A.T/2020/082/KK** | **A.T/2021/055/KK** | **A.T/2021/057/KK** | **A.T/2021/103/KK** | **SRPL21-439-336FE** | **SRPL21-440-336FE** |  | |  | |  | |
| Application date | | | 26.05.2020 | 26.05.2021 | 31.05.2021 | 24.06.2021 | 02.06.2021 | 07.06.2021 |  | |  | |  | |
| Crop stage in application | | | BBBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 |  | |  | |  | |
| Pest stage | | | BBCH 12-14 | BBCH 10-12 | BBCH 12-14 | BBCH 10-12 | BBCH 12 | BBCH 12-14 |  | |  | |  | |
| Assessment date | | | 22.06.2020 | 21.06.2021 | 28.06.2021 | 22.07.2021 | 30.06.2021 | 05.07.2021 |  | |  | |  | |
| Days after application DA-A | | | 27 DA-A | 26 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | | **Min.** | | **Max.** | |
| weeds density pcs/m2 | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.5 | 5.1 | | 5.0 | | 5.5 | |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  | |  | |  | |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.00 | |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  | 79.00 | 80.00 | 80.00 | 58.00 | 65.00 | 72.40 | | 58.00 | | 80.00 | |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 100.00 | 84.80 | 87.50 | 83.50 | 74.00 | 77.50 | 84.55 | | 74.00 | | 100.00 | |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 100.00 | 87.80 | 93.00 | 87.50 | 80.00 | 91.30 | 89.93 | | 80.00 | | 100.00 | |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 100.00 | 89.00 | 98.00 | 91.30 | 89.00 | 93.80 | 93.52 | | 89.00 | | 100.00 | |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 100.00 | - | - | - | - | - | 100.00 | | 100.00 | | 100.00 | |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 93.80 | 98.97 | | 93.80 | | 100.00 | |
| LSD(P=.05) | | | - | 3.790 | 4.430 | 3.290 | 6.500 | 7.540 |  | |  | |  | |

*Table 19. The efficacy of CHR/H/IZOXACYP 250 SC in control of POLPE 11-14 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Persicaria maculosa* POLPE** | | | | | | | |  |  |  |
| Report code | | | **A.T/2020/081/KK** | **A.T/2021/056/KK** | **A.T/2021/057/KK** | **A.T/2021/059/KK** | **A.T/2021/103/KK** | **SRPL21-438-336FE** | **SRPL21-439-336FE** | **SRPL21-441-336FE** |  |  |  |
| Application date | | | 15.05.2020 | 26.05.2021 | 31.05.2021 | 27.05.2021 | 24.06.2021 | 28.04.2021 | 02.06.2021 | 01.06.2021 |  |  |  |
| Crop stage in application | | | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 |  |  |  |
| Pest stage | | | BBCH 10-14 | BBCH 11-12 | BBCH 12-14 | BBCH 10-14 | BBCH 10-12 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 |  |  |  |
| Assessment date | | | 29.05.2020 | 09.06.2021 | 14.06.2021 | 07.06.2021 | 08.07.2021 | 12.05.2021 | 16.06.2021 | 15.06.2021 |  |  |  |
| Days after application DA-A | | | 14 DA-A | 14 DA-A | 14 DA-A | 11 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 7.0 | 6.0 | 5.0 | 5.0 | 5.0 | 8.5 | 21.0 | 7.3 | 8.1 | 5.0 | 21.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  | 80.00 | 95.80 | 80.00 | 80.00 | 43.80 | 65.00 | 10.00 | 64.94 | 10.00 | 95.80 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 91.50 | 81.30 | 98.00 | 88.00 | 88.80 | 52.50 | 81.00 | 62.50 | 80.45 | 52.50 | 98.00 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 95.80 | 85.00 | 98.00 | 95.00 | 93.80 | 61.30 | 99.00 | 80.00 | 88.49 | 61.30 | 99.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 99.50 | 92.50 | 99.00 | 95.00 | 98.50 | 68.80 | 99.00 | 100.00 | 94.04 | 68.80 | 100.00 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 100.00 | - | - | - | - | - | - | - | 100.00 | 100.00 | 100.00 |
| 7 | Adengo 315 SC | 0.33 | 91.80 | 95.00 | 99.00 | 98.00 | 98.80 | 76.30 | 99.00 | 92.50 | 93.80 | 76.30 | 99.00 |
| LSD(P=.05) | | | 2.940 | 2.810 | 2.810 | 3.820 | 3.330 | 6.340 | 6.100 | 3.560 |  |  |  |

*Table 20. The efficacy of CHR/H/IZOXACYP 250 SC in control of POLPE 25-28 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Persicaria maculosa* POLPE** | | | | | | | |  |  |  |
| Report code | | | **A.T/2020/081/KK** | **A.T/2021/056/KK** | **A.T/2021/057/KK** | **A.T/2021/059/KK** | **A.T/2021/103/KK** | **SRPL21-438-336FE** | **SRPL21-439-336FE** | **SRPL21-441-336FE** |  |  |  |
| Application date | | | 15.05.2020 | 26.05.2021 | 31.05.2021 | 27.05.2021 | 24.06.2021 | 28.04.2021 | 02.06.2021 | 01.06.2021 |  |  |  |
| Crop stage in application | | | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 |  |  |  |
| Pest stage | | | BBCH 10-14 | BBCH 11-12 | BBCH 12-14 | BBCH 10-14 | BBCH 10-12 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 |  |  |  |
| Assessment date | | | 09.06.2020 | 23.06.2021 | 28.06.2021 | 24.06.2021 | 22.07.2021 | 26.05.2021 | 30.06.2021 | 29.06.2021 |  |  |  |
| Days after application DA-A | | | 25 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 7.0 | 6.0 | 5.0 | 5.0 | 5.0 | 9.0 | 21.0 | 7.8 | 8.2 | 5.0 | 21.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  | 82.50 | 92.00 | 87.50 | 97.80 | 61.30 | 69.00 | 0.00 | 70.01 | 0.00 | 97.80 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 90.80 | 90.00 | 98.00 | 92.50 | 99.50 | 82.50 | 80.00 | 30.00 | 82.91 | 30.00 | 99.50 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 98.30 | 95.00 | 100.00 | 95.00 | 100.00 | 92.80 | 100.00 | 80.00 | 95.14 | 80.00 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 95.00 | 100.00 | 100.00 | 99.38 | 95.00 | 100.00 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 100.00 | - | - | - | - | - | - | - | 100.00 | 100.00 | 100.00 |
| 7 | Adengo 315 SC | 0.33 | 99.50 | 100.00 | 100.00 | 100.00 | 100.00 | 95.00 | 100.00 | 100.00 | 99.31 | 95.00 | 100.00 |
| LSD(P=.05) | | | 2.100 | 4.760 | 2.030 | 3.140 | 1.690 | 4.830 | 4.800 | - |  |  |  |

*Table 21. The efficacy of CHR/H/IZOXACYP 250 SC in control of THLAR 13-14 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Thlapsi arvense* THLAR** | | | | | |  |  |  |
| Report code | | | **A.T/2020/081/KK** | **A.T/2021/054/KK** | **A.T/2021/055/KK** | **A.T/2021/059/KK** | **SRPL21-440-336FE** | **SRPL21-441-336FE** |  |  |  |
| Application date | | | 15.05.2020 | 19.05.2021 | 26.05.2021 | 27.05.2021 | 07.06.2021 | 01.06.2021 |  |  |  |
| Crop stage in application | | | BBCH 11-12 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 |  |  |  |
| Pest stage | | | BBCH 12-14 | BBCH 10-12 | BBCH 12-14 | BBCH 12-14 | BBCH 12-16 | BBCH 12-13 |  |  |  |
| Assessment date | | | 29.05.2020 | 01.06.2021 | 08.06.2021 | 07.06.2021 | 21.06.2021 | 15.06.2021 |  |  |  |
| Days after application DA-A | | | 14 DA-A | 13 DA-A | 13 DA-A | 11 DA-A | 14 DA-A | 14 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 7.0 | 5.0 | 5.0 | 5.0 | 6.0 | 5.8 | 5.6 | 5.0 | 7.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  | 80.00 | 77.80 | 80.00 | 72.50 | 45.00 | 71.06 | 45.00 | 80.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 97.00 | 87.50 | 97.80 | 90.00 | 88.80 | 66.30 | 87.90 | 66.30 | 97.80 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 100.00 | 95.00 | 97.00 | 95.00 | 96.50 | 70.00 | 92.25 | 70.00 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 100.00 | 95.00 | 100.00 | 95.00 | 100.00 | 72.50 | 93.75 | 72.50 | 100.00 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 100.00 | - | - | - | - | - | 100.00 | 100.00 | 100.00 |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 100.00 | 100.00 | 98.00 | 100.00 | 80.00 | 96.33 | 80.00 | 100.00 |
| LSD(P=.05) | | | 1.690 | 3.720 | 2.320 | 3.420 | 3.620 | 6.170 |  |  |  |

*Table 22. The efficacy of CHR/H/IZOXACYP 250 SC in control of THLAR 25-28 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Thlapsi arvense* THLAR** | | | | | | |  | |  | |  | |
| Report code | | | **A.T/2020/081/KK** | **A.T/2021/054/KK** | **A.T/2021/055/KK** | **A.T/2021/059/KK** | **SRPL21-440-336FE** | **SRPL21-441-336FE** |  | |  | |  | |
| Application date | | | 15.05.2020 | 19.05.2021 | 26.05.2021 | 27.05.2021 | 07.06.2021 | 01.06.2021 |  | |  | |  | |
| Crop stage in application | | | BBCH 11-12 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 |  | |  | |  | |
| Pest stage | | | BBCH 12-14 | BBCH 10-12 | BBCH 12-14 | BBCH 12-14 | BBCH 12-16 | BBCH 12-13 |  | |  | |  | |
| Assessment date | | | 09.06.2020 | 15.06.2021 | 21.06.2021 | 24.06.2021 | 05.07.2021 | 29.06.2021 |  | |  | |  | |
| Days after application DA-A | | | 25 DA-A | 27 DA-A | 26 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | | **Min.** | | **Max.** | |
| weeds density pcs/m2 | | | 7.0 | 5.0 | 5.0 | 5.0 | 6.0 | 6.5 | 5.8 | | 5.0 | | 7.0 | |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  | |  | |  | |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.00 | |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  | 83.30 | 80.00 | 83.00 | 81.30 | 40.00 | 73.52 | | 40.00 | | 83.30 | |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 97.50 | 90.00 | 90.00 | 92.50 | 93.80 | 78.80 | 90.43 | | 78.80 | | 97.50 | |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 100.00 | 95.00 | 100.00 | 97.50 | 97.30 | 100.00 | 98.30 | | 95.00 | | 100.00 | |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 100.00 | 97.50 | 100.00 | 100.00 | 100.00 | 100.00 | 99.58 | | 97.50 | | 100.00 | |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 100.00 | - | - | - | - | - | 100.00 | | 100.00 | | 100.00 | |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | | 100.00 | | 100.00 | |
| LSD(P=.05) | | | 1.990 | 3.280 | 3.720 | 3.280 | 3.740 | 2.520 |  | |  | |  | |

*Table 23. The efficacy of CHR/H/IZOXACYP 250 SC in control of VIOAR 11-14 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Viola arvensis* VIOAR** | | | | | | |  |  |  |
| Report code | | | **A.T/2020/081/KK** | **A.T/2020/082/KK** | **A.T/2021/054/KK** | **A.T/2021/055/KK** | **A.T/2021/056/KK** | **A.T/2021/059/KK** | **A.T/2021/103/KK** |  |  |  |
| Application date | | | 15.05.2020 | 26.05.2020 | 19.05.2021 | 26.05.2021 | 26.05.2021 | 27.05.2021 | 24.06.2021 |  |  |  |
| Crop stage in application | | | BBCH 11-12 | BBBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-12 |  |  |  |
| Pest stage | | | BBCH 10-12 | BBCH 12-14 | BBCH 10-11 | BBCH 10-12 | BBCH 11-13 | BBCH 10-21 | BBCH 10-14 |  |  |  |
| Assessment date | | | 29.05.2020 | 08.06.2020 | 01.06.2021 | 08.06.2021 | 09.06.2021 | 07.06.2021 | 08.07.2021 |  |  |  |
| Days after application DA-A | | | 14 DA-A | 13 DA-A | 13 DA-A | 13 DA-A | 14 DA-A | 11 DA-A | 14 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 6.0 | 7.0 | 5.0 | 5.0 | 5.0 | 10.0 | 28.0 | 9.4 | 5.0 | 28.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  |  | 90.00 | 90.30 | 72.50 | 80.00 | 57.50 | 78.06 | 57.50 | 90.30 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 89.30 | 92.50 | 95.00 | 96.30 | 72.50 | 91.30 | 87.50 | 89.20 | 72.50 | 96.30 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 92.50 | 95.00 | 100.00 | 98.80 | 75.00 | 90.00 | 87.50 | 91.26 | 75.00 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 98.30 | 95.00 | 100.00 | 100.00 | 75.00 | 91.30 | 86.30 | 92.27 | 75.00 | 100.00 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 100.00 | 97.00 | - | - | - | - | - | 98.50 | 97.00 | 100.00 |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 99.00 | 100.00 | 100.00 | 75.00 | 91.30 | 91.30 | 93.80 | 75.00 | 100.00 |
| LSD(P=.05) | | | 2.730 | 2.840 | 3.160 | 3.260 | 2.440 | 2.900 | 3.520 |  |  |  |

*Table 24. The efficacy of CHR/H/IZOXACYP 250 SC in control of VIOAR 25-28 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Viola arvensis* VIOAR** | | | | | | |  |  |  |
| Report code | | | **A.T/2020/081/KK** | **A.T/2020/082/KK** | **A.T/2021/054/KK** | **A.T/2021/055/KK** | **A.T/2021/056/KK** | **A.T/2021/059/KK** | **A.T/2021/103/KK** |  |  |  |
| Application date | | | 15.05.2020 | 26.05.2020 | 19.05.2021 | 26.05.2021 | 26.05.2021 | 27.05.2021 | 24.06.2021 |  |  |  |
| Crop stage in application | | | BBCH 11-12 | BBBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-12 |  |  |  |
| Pest stage | | | BBCH 10-12 | BBCH 12-14 | BBCH 10-11 | BBCH 10-12 | BBCH 11-13 | BBCH 10-21 | BBCH 10-14 |  |  |  |
| Assessment date | | | 09.06.2020 | 22.06.2020 | 15.06.2021 | 21.06.2021 | 23.06.2021 | 24.06.2021 | 22.07.2021 |  |  |  |
| Days after application DA-A | | | 25 DA-A | 27 DA-A | 27 DA-A | 26 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 7.0 | 7.0 | 5.0 | 5.0 | 5.0 | 9.0 | 30.0 | 9.7 | 5.0 | 30.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  |  | 92.50 | 79.50 | 82.50 | 81.30 | 83.80 | 83.92 | 79.50 | 92.50 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 87.80 | 90.00 | 98.00 | 85.80 | 85.00 | 90.00 | 90.00 | 89.51 | 85.00 | 98.00 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 93.00 | 92.50 | 100.00 | 90.00 | 91.30 | 93.80 | 93.50 | 93.44 | 90.00 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 95.80 | 95.00 | 100.00 | 95.00 | 100.00 | 97.30 | 95.00 | 96.87 | 95.00 | 100.00 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 98.80 | 97.00 | - | - | - | - | - | 97.90 | 97.00 | 98.80 |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| LSD(P=.05) | | | 4.070 | 1.990 | 2.530 | 3.420 | 2.440 | 3.270 | 4.340 |  |  |  |

*Table 25. The efficacy of CHR/H/IZOXACYP 250 SC in control of SOLNI 13-14 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Solanum nigrum SOLNI** | | | | | |  |  |  |
| Report code | | | **A.T/2020/082/KK** | **A.T/2021/054/KK** | **A.T/2021/057/KK** | **A.T/2021/103/KK** | **AH/22/K/20/Mał/02** | **AH/22/K/20/NW/03** |  |  |  |
| Application date | | | 26.05.2020 | 19.05.2021 | 31.05.2021 | 24.06.2021 | 21.06.2022 | 12.07.2022 |  |  |  |
| Crop stage in application | | | BBBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 11-12 | BBCH 11-12 | BBCH 11-12 |  |  |  |
| Pest stage | | | BBCH 12-14 | BBCH 10-12 | BBCH 12-14 | BBCH 10-12 | BBCH 10-11 | BBCH 09-11 |  |  |  |
| Assessment date | | | 08.06.2020 | 01.06.2021 | 14.06.2021 | 08.07.2021 | 05.07.2022 | 26.07.2022 |  |  |  |
| Days after application DA-A | | | 13 DA-A | 13 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 6.0 | 5.2 | 5.0 | 6.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 | - | 82.50 | 80.00 | 75.00 | 39.00 | 30.00 | 61.3 | 30.0 | 82.5 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 90.00 | 95.00 | 90.00 | 85.00 | 51.00 | 46.00 | 76.2 | 46.0 | 95.0 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 92.50 | 100.00 | 95.00 | 90.00 | 58.00 | 55.00 | 81.8 | 55.0 | 100.0 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 99.00 | 100.00 | 100.00 | 90.00 | 59.00 | 55.00 | 83.8 | 55.0 | 100.0 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 99.00 | - | - | - | - | - | 99.0 | 99.0 | 99.0 |
| 7 | Adengo 315 SC | 0.33 | 99.00 | 98.00 | 100.00 | 92.50 | 59.00 | 50.00 | 83.1 | 50.0 | 100.0 |
| LSD(P=.05) | | | 1.990 | 3.060 | 4.080 | 4.450 | 6.400 | 6.200 |  |  |  |

*Table 26. The efficacy of CHR/H/IZOXACYP 250 SC in control of SOLNI 27-28 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Solanum nigrum SOLNI** | | | | | |  |  |  |
| Report code | | | **A.T/2020/082/KK** | **A.T/2021/054/KK** | **A.T/2021/057/KK** | **A.T/2021/103/KK** | **AH/22/K/20/Mał/02** | **AH/22/K/20/NW/03** |  |  |  |
| Application date | | | 26.05.2020 | 19.05.2021 | 31.05.2021 | 24.06.2021 | 21.06.2022 | 12.07.2022 |  |  |  |
| Crop stage in application | | | BBBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 11-12 | BBCH 11-12 | BBCH 11-12 |  |  |  |
| Pest stage | | | BBCH 12-14 | BBCH 10-12 | BBCH 12-14 | BBCH 10-12 | BBCH 10-11 | BBCH 09-11 |  |  |  |
| Assessment date | | | 22.06.2020 | 15.06.2021 | 28.06.2021 | 22.07.2021 | 19.07.2022 | 09.08.2022 |  |  |  |
| Days after application DA-A | | | 27 DA-A | 27 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 6.0 | 5.2 | 5.0 | 6.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  | 80.00 | 83.50 | 80.00 | 60.00 | 40.00 | 68.7 | 40.0 | 83.5 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 92.50 | 90.00 | 90.00 | 88.00 | 63.80 | 62.50 | 81.1 | 62.5 | 92.5 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 95.00 | 100.00 | 97.50 | 92.50 | 68.80 | 73.80 | 87.9 | 68.8 | 100.0 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 100.00 | 100.00 | 100.00 | 95.00 | 85.30 | 87.30 | 94.6 | 85.3 | 100.0 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 100.00 | - | - | - | - | - | 100.0 | 100.0 | 100.0 |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 100.00 | 100.00 | 98.00 | 83.50 | 87.30 | 94.8 | 83.5 | 100.0 |
| LSD(P=.05) | | | 1.990 | 3.410 | 2.450 | 4.540 | 3.870 | 4.750 |  |  |  |

*Table 27. The efficacy of CHR/H/IZOXACYP 250 SC in control of ECHCG 13-14 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Echinochloa crus-galli* ECHCG** | | | | | | | | |  | |  | |  | |
| Report code | | | **A.T/2020/081/KK** | **A.T/2020/082/KK** | **A.T/2021/054/KK** | **A.T/2021/055/KK** | **A.T/2021/056/KK** | **A.T/2021/057/KK** | **SRPL21-437-336FE** | **SRPL21-440-336FE** | **SRPL21-441-336FE** |  |  | |  | |
| Application date | | | 15.05.2020 | 26.05.2020 | 19.05.2021 | 26.05.2021 | 26.05.2021 | 31.05.2021 | 15.06.2021 | 07.06.2021 | 01.06.2021 |  |  | |  | |
| Crop stage in application | | | BBCH 11-12 | BBBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 |  |  | |  | |
| Pest stage | | | BBCH 10-12 | BBCH 11-13 | BBCH 10-11 | BBCH 10-13 | BBCH 11-12 | BBCH 11-13 | BBCH 12-14 | BBCH 11-13 | BBCH 11-13 |  |  | |  | |
| Assessment date | | | 29.05.2020 | 08.06.2020 | 01.06.2021 | 08.06.2021 | 09.06.2021 | 14.06.2021 | 29.06.2021 | 21.06.2021 | 15.06.2021 |  |  | |  | |
| Days after application DA-A | | | 14 DA-A | 13 DA-A | 13 DA-A | 13 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | **Average** | **Min.** | | **Max.** | |
| weeds density pcs/m2 | | | 8.0 | 10.0 | 6.0 | 18.0 | 5.0 | 7.0 | 22.8 | 21.0 | 14.5 | 12.5 | 5.0 | | 22.8 | |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  |  | |  | |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  |  | 75.80 | 79.30 | 60.00 | 65.00 | 45.00 | 8.80 | 5.00 | 48.41 | 5.00 | | 79.30 | |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 65.80 | 85.00 | 84.80 | 84.00 | 75.00 | 68.80 | 55.00 | 26.30 | 10.00 | 61.63 | 10.00 | | 85.00 | |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 78.00 | 92.50 | 92.80 | 88.00 | 75.00 | 73.80 | 61.30 | 26.30 | 13.80 | 66.83 | 13.80 | | 92.80 | |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 82.80 | 96.00 | 97.80 | 91.30 | 85.00 | 78.80 | 75.00 | 63.80 | 25.00 | 77.28 | 25.00 | | 97.80 | |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 93.50 | 95.00 | - | - | - | - | - | - | - | 94.25 | 93.50 | | 95.00 | |
| 7 | Adengo 315 SC | 0.33 | 91.80 | 97.00 | 100.00 | 96.00 | 97.50 | 88.80 | 90.00 | 93.80 | 83.80 | 93.19 | 83.80 | | 100.00 | |
| LSD(P=.05) | | | 5.380 | 3.130 | 2.940 | 3.550 | 5.630 | 9.900 | 4.830 | 13.140 | 6.900 |  |  | |  | |

*Table 28. The efficacy of CHR/H/IZOXACYP 250 SC in control of ECHCG 25-28 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Echinochloa crus-galli* ECHCG** | | | | | | | | | |  | |  | |  | |
| Report code | | | **A.T/2020/081/KK** | **A.T/2020/082/KK** | **A.T/2021/054/KK** | **A.T/2021/055/KK** | **A.T/2021/056/KK** | **A.T/2021/057/KK** | **SRPL21-437-336FE** | **SRPL21-440-336FE** | **SRPL21-441-336FE** |  | |  | |  | |
| Application date | | | 15.05.2020 | 26.05.2020 | 19.05.2021 | 26.05.2021 | 26.05.2021 | 31.05.2021 | 15.06.2021 | 07.06.2021 | 01.06.2021 |  | |  | |  | |
| Crop stage in application | | | BBCH 11-12 | BBBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 |  | |  | |  | |
| Pest stage | | | BBCH 10-12 | BBCH 11-13 | BBCH 10-11 | BBCH 10-13 | BBCH 11-12 | BBCH 11-13 | BBCH 12-14 | BBCH 11-13 | BBCH 11-13 |  | |  | |  | |
| Assessment date | | | 09.06.2020 | 22.06.2020 | 15.06.2021 | 21.06.2021 | 23.06.2021 | 28.06.2021 | 13.07.2021 | 05.07.2021 | 29.06.2021 |  | |  | |  | |
| Days after application DA-A | | | 25 DA-A | 27 DA-A | 27 DA-A | 26 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | | **Min.** | | **Max.** | |
| weeds density pcs/m2 | | | 8.0 | 12.0 | 6.0 | 19.0 | 5.0 | 9.0 | 26.0 | 21.0 | 18.3 | 13.8 | | 5.0 | | 26.0 | |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |  | |  | |  | |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | | 0.00 | |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  |  | 75.80 | 68.30 | 78.00 | 75.00 | 50.00 | 13.80 | 0.00 | 51.56 | | 0.00 | | 78.00 | |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 69.50 | 82.50 | 82.30 | 75.80 | 83.50 | 81.80 | 60.00 | 26.30 | 5.00 | 62.97 | | 5.00 | | 83.50 | |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 82.30 | 88.00 | 89.00 | 83.80 | 87.80 | 88.00 | 65.00 | 26.30 | 30.00 | 71.13 | | 26.30 | | 89.00 | |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 86.30 | 96.00 | 94.00 | 87.50 | 95.00 | 92.00 | 75.00 | 80.00 | 50.00 | 83.98 | | 50.00 | | 96.00 | |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 95.80 | 99.00 | - | - | - | - | - | - | - | 97.40 | | 95.80 | | 99.00 | |
| 7 | Adengo 315 SC | 0.33 | 94.30 | 99.00 | 99.80 | 93.30 | 100.00 | 96.80 | 95.00 | 96.50 | 95.00 | 96.63 | | 93.30 | | 100.00 | |
| LSD(P=.05) | | | 9.650 | 2.770 | 3.870 | 5.360 | 4.770 | 4.250 | - | 9.740 | - |  | |  | |  | |

*Table 29. The efficacy of CHR/H/IZOXACYP 250 SC in control of SINAR 13-14 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Sinapsis arvense SINAR** | | | | | |  |  |  |
| Report code | | | **A.T/2020/082/KK** | **A.T/2021/054/KK** | **A.T/2021/057/KK** | **SRPL21-439-336FE** | **SRPL21-441-341FE** | **AH/22/K/20/Jab/01** |  |  |  |
| Application date | | | 26.05.2020 | 19.05.2021 | 31.05.2021 | 02.06.2021 | 01.06.2021 | 22.06.2022 |  |  |  |
| Crop stage in application | | | BBBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-13 |  |  |  |
| Pest stage | | | BBCH 11-13 | BBCH 10-12 | BBCH 12-14 | BBCH 12-13 | BBCH 12-13 | BBCH 10-13 |  |  |  |
| Assessment date | | | 08.06.2020 | 01.06.2021 | 14.06.2021 | 16.06.2021 | 15.06.2021 | 06.07.2022 |  |  |  |
| Days after application DA-A | | | 13 DA-A | 13 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 5.0 | 5.0 | 5.0 | 6.0 | 10.5 | 5.0 | 6.1 | 5.0 | 10.5 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  | 85.00 | 90.00 | 73.00 | 61.30 | 33.00 | 68.5 | 33.0 | 90.0 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 96.00 | 92.50 | 95.00 | 84.00 | 80.00 | 46.00 | 82.3 | 46.0 | 96.0 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 98.00 | 95.00 | 95.00 | 98.00 | 86.30 | 55.00 | 87.9 | 55.0 | 98.0 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 100.00 | 100.00 | 100.00 | 99.00 | 90.00 | 63.00 | 92.0 | 63.0 | 100.0 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 100.00 | - | - | - | - | - | 100.0 | 100.0 | 100.0 |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 100.00 | 100.00 | 99.00 | 87.50 | 63.00 | 91.6 | 63.0 | 100.0 |
| LSD(P=.05) | | | 1.870 | 2.290 | 3.090 | 4.200 | 6.260 | 4.600 |  |  |  |

*Table 30. The efficacy of CHR/H/IZOXACYP 250 SC in control of SINAR 27-28 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Sinapsis arvense SINAR** | | | | | |  |  |  |
| Report code | | | **A.T/2020/082/KK** | **A.T/2021/054/KK** | **A.T/2021/057/KK** | **SRPL21-439-336FE** | **SRPL21-441-341FE** | **AH/22/K/20/Jab/01** |  |  |  |
| Application date | | | 26.05.2020 | 19.05.2021 | 31.05.2021 | 02.06.2021 | 01.06.2021 | 22.06.2022 |  |  |  |
| Crop stage in application | | | BBBCH 12-13 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-13 |  |  |  |
| Pest stage | | | BBCH 11-13 | BBCH 10-12 | BBCH 12-14 | BBCH 12-13 | BBCH 12-13 | BBCH 10-13 |  |  |  |
| Assessment date | | | 22.06.2020 | 15.06.2021 | 28.06.2021 | 30.06.2021 | 29.06.2021 | 20.07.2022 |  |  |  |
| Days after application DA-A | | | 27 DA-A | 27 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 5.0 | 5.0 | 5.0 | 6.0 | 11.8 | 6.0 | 6.5 | 5.0 | 11.8 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 | - | 90.00 | 92.00 | 73.00 | 50.00 | 52.50 | 71.50 | 50.00 | 92.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 100.00 | 95.00 | 95.00 | 83.00 | 70.00 | 65.00 | 84.67 | 65.00 | 100.00 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 77.50 | 96.25 | 77.50 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 85.50 | 97.58 | 85.50 | 100.00 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 100.00 | - | - | - | - | - | 100.00 | 100.00 | 100.00 |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 100.00 | 100.00 | 100.00 | 95.00 | 85.00 | 96.67 | 85.00 | 100.00 |
| LSD(P=.05) | | | - | 1.910 | 1.910 | 3.400 | - | 4.500 |  |  |  |

*Table 31. The efficacy of CHR/H/IZOXACYP 250 SC in control of CAPBP 11-14 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Capsella bursa-pastoris* CAPBP** | | | | | |  |  |  |
| Report code | | | **A.T/2020/082/KK** | **A.T/2021/055/KK** | **A.T/2021/056/KK** | **A.T/2021/057/KK** | **A.T/2021/059/KK** | **SRPL21-441-341FE** |  |  |  |
| Application date | | | 26.05.2020 | 26.05.2021 | 26.05.2021 | 31.05.2021 | 27.05.2021 | 01.06.2021 |  |  |  |
| Crop stage in application | | | BBBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 |  |  |  |
| Pest stage | | | BBCH 12-13 | BBCH 12-14 | BBCH 11-13 | BBCH 12-14 | BBCH 10-14 | BBCH 12-13 |  |  |  |
| Assessment date | | | 08.06.2020 | 08.06.2021 | 09.06.2021 | 14.06.2021 | 07.06.2021 | 15.06.2021 |  |  |  |
| Days after application DA-A | | | 13 DA-A | 13 DA-A | 14 DA-A | 14 DA-A | 11 DA-A | 14 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 6.0 | 5.0 | 5.0 | 5.0 | 5.0 | 6.3 | 5.4 | 5.0 | 6.3 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  | 100.00 | 70.00 | 95.00 | 71.30 | 46.30 | 76.52 | 46.30 | 100.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 91.30 | 100.00 | 70.00 | 99.00 | 82.50 | 65.00 | 84.63 | 65.00 | 100.00 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 95.00 | 100.00 | 80.00 | 99.00 | 88.80 | 70.00 | 88.80 | 70.00 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 99.00 | 100.00 | 90.00 | 99.00 | 98.80 | 73.80 | 93.43 | 73.80 | 100.00 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 99.00 | - | - | - | - | - | 99.00 | 99.00 | 99.00 |
| 7 | Adengo 315 SC | 0.33 | 99.00 | 100.00 | 90.00 | 99.00 | 100.00 | 80.00 | 94.67 | 80.00 | 100.00 |
| LSD(P=.05) | | | 1.720 | - | 4.220 | - | 4.160 | 6.090 |  |  |  |

*Table 32. The efficacy of CHR/H/IZOXACYP 250 SC in control of CAPBP 27-28 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Capsella bursa-pastoris* CAPBP** | | | | | |  |  |  |
| Report code | | | **A.T/2020/082/KK** | **A.T/2021/055/KK** | **A.T/2021/056/KK** | **A.T/2021/057/KK** | **A.T/2021/059/KK** | **SRPL21-441-341FE** |  |  |  |
| Application date | | | 26.05.2020 | 26.05.2021 | 26.05.2021 | 31.05.2021 | 27.05.2021 | 01.06.2021 |  |  |  |
| Crop stage in application | | | BBBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 |  |  |  |
| Pest stage | | | BBCH 12-13 | BBCH 12-14 | BBCH 11-13 | BBCH 12-14 | BBCH 10-14 | BBCH 12-13 |  |  |  |
| Assessment date | | | 22.06.2020 | 21.06.2021 | 23.06.2021 | 28.06.2021 | 24.06.2021 | 29.06.2021 |  |  |  |
| Days after application DA-A | | | 27 DA-A | 26 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 6.0 | 5.0 | 5.0 | 5.0 | 5.0 | 6.8 | 5.5 | 5.0 | 6.8 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  | 95.00 | 85.00 | 90.00 | 87.50 | 55.00 | 82.50 | 55.00 | 95.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 95.00 | 97.50 | 91.30 | 95.00 | 95.00 | 66.30 | 90.02 | 66.30 | 97.50 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 97.50 | 100.00 | 97.80 | 100.00 | 99.00 | 100.00 | 99.05 | 97.50 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 100.00 | - | - | - | - | - | 100.00 | 100.00 | 100.00 |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| LSD(P=.05) | | | 3.720 | 3.620 | 2.320 | 3.450 | 3.380 | 2.520 |  |  |  |

*Table 33. The efficacy of CHR/H/IZOXACYP 250 SC in control of MATIN 11-14 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Tripleurospermum inodorum* MATIN** | | | | | |  |  |  |
| Report code | | | **A.T/2020/082/KK** | **A.T/2021/055/KK** | **A.T/2021/056/KK** | **A.T/2021/059/KK** | **A.T/2021/103/KK** | **SRPL21-439-336FE** |  |  |  |
| Application date | | | 26.05.2020 | 26.05.2021 | 26.05.2021 | 27.05.2021 | 24.06.2021 | 02.06.2021 |  |  |  |
| Crop stage in application | | | BBBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 |  |  |  |
| Pest stage | | | BBCH 10-12 | BBCH 10-12 | BBCH 11-12 | BBCH 10-14 | BBCH 21-30 | BBCH 11-13 |  |  |  |
| Assessment date | | | 08.06.2020 | 08.06.2021 | 09.06.2021 | 07.06.2021 | 08.07.2021 | 16.06.2021 |  |  |  |
| Days after application DA-A | | | 13 DA-A | 13 DA-A | 14 DA-A | 11 DA-A | 14 DA-A | 14 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 6.0 | 5.0 | 5.0 | 6.0 | 7.0 | 7.0 | 6.0 | 5.0 | 7.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  | 84.00 | 70.00 | 85.00 | 67.50 | 70.00 | 75.30 | 67.50 | 85.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 88.80 | 86.50 | 85.00 | 91.30 | 80.00 | 79.00 | 85.10 | 79.00 | 91.30 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 92.50 | 87.50 | 85.00 | 90.00 | 86.30 | 96.00 | 89.55 | 85.00 | 96.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 95.00 | 90.80 | 90.00 | 100.00 | 90.00 | 99.00 | 94.13 | 90.00 | 100.00 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 99.00 | - | - | - | - | - | 99.00 | 99.00 | 99.00 |
| 7 | Adengo 315 SC | 0.33 | 99.00 | 99.50 | 95.00 | 91.30 | 90.00 | 99.00 | 95.63 | 90.00 | 99.50 |
| LSD(P=.05) | | | 2.440 | 2.140 | 4.850 | 3.520 | 4.220 | 5.100 |  |  |  |

*Table 34. The efficacy of CHR/H/IZOXACYP 250 SC in control of MATIN 27-28 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Tripleurospermum inodorum* MATIN** | | | | | |  |  |  |
| Report code | | | **A.T/2020/082/KK** | **A.T/2021/055/KK** | **A.T/2021/056/KK** | **A.T/2021/059/KK** | **A.T/2021/103/KK** | **SRPL21-439-336FE** |  |  |  |
| Application date | | | 26.05.2020 | 26.05.2021 | 26.05.2021 | 27.05.2021 | 24.06.2021 | 02.06.2021 |  |  |  |
| Crop stage in application | | | BBBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 |  |  |  |
| Pest stage | | | BBCH 10-12 | BBCH 10-12 | BBCH 11-12 | BBCH 10-14 | BBCH 21-30 | BBCH 11-13 |  |  |  |
| Assessment date | | | 22.06.2020 | 21.06.2021 | 23.06.2021 | 24.06.2021 | 22.07.2021 | 30.06.2021 |  |  |  |
| Days after application DA-A | | | 27 DA-A | 26 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 6.0 | 5.0 | 5.0 | 5.0 | 7.0 | 7.0 | 5.8 | 5.0 | 7.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  | 77.00 | 81.80 | 88.00 | 82.50 | 70.00 | 79.86 | 70.00 | 88.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 90.00 | 82.80 | 90.00 | 95.00 | 90.00 | 80.00 | 87.97 | 80.00 | 95.00 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 95.00 | 85.80 | 95.00 | 100.00 | 100.00 | 100.00 | 95.97 | 85.80 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 100.00 | 87.30 | 100.00 | 100.00 | 100.00 | 100.00 | 97.88 | 87.30 | 100.00 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 100.00 | - | - | - | - | - | 100.00 | 100.00 | 100.00 |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 98.80 | 100.00 | 100.00 | 100.00 | 100.00 | 99.80 | 98.80 | 100.00 |
| LSD(P=.05) | | | - | 4.190 | 2.990 | 1.690 | 1.990 | 5.400 |  |  |  |

*Table 35. The efficacy of CHR/H/IZOXACYP 250 SC in control of VERHE 14 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Veronica hederifolia VERHE** | | | | | |  |  |  |
| Report code | | | **A.T/2020/081/KK** | **A.T/2021/056/KK** | **A.T/2021/103/KK** | **AH/22/K/20/Jab/01** | **AH/22/K/20/Mał/02** | **AH/22/K/20/NW/03** |  |  |  |
| Application date | | | 15.05.2020 | 26.05.2021 | 24.06.2021 | 22.06.2022 | 21.06.2022 | 12.07.2022 |  |  |  |
| Crop stage in application | | | BBCH 11-12 | BBCH 12-13 | BBCH 11-12 | BBCH 11-13 | BBCH 11-12 | BBCH 11-12 |  |  |  |
| Pest stage | | | BBCH 10-11 | BBCH 11-13 | BBCH 10-14 | BBCH 12-14 | BBCH 10-12 | BBCH 10-11 |  |  |  |
| Assessment date | | | 29.05.2020 | 09.06.2021 | 08.07.2021 | 06.07.2022 | 05.07.2022 | 26.07.2022 |  |  |  |
| Days after application DA-A | | | 14 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 5.0 | 5.0 | 5.0 | 5.0 | 6.0 | 5.0 | 5.2 | 5.0 | 6.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 | - | 75.00 | 62.50 | 29.00 | 31.00 | 36.00 | 46.7 | 29.0 | 75.0 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 80.00 | 85.00 | 77.50 | 36.00 | 39.00 | 48.00 | 60.9 | 36.0 | 85.0 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 89.50 | 85.00 | 77.50 | 45.00 | 48.00 | 59.00 | 67.3 | 45.0 | 89.5 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 91.30 | 90.00 | 80.00 | 49.00 | 56.00 | 69.00 | 72.6 | 49.0 | 91.3 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 92.50 | - | - | - | - | - | 92.5 | 92.5 | 92.5 |
| 7 | Adengo 315 SC | 0.33 | 87.50 | 90.00 | 88.80 | 51.00 | 59.00 | 69.00 | 74.2 | 51.0 | 90.0 |
| LSD(P=.05) | | | 8.700 | 2.500 | 7.310 | 8.300 | 5.200 | 5.800 |  |  |  |

*Table 36. The efficacy of CHR/H/IZOXACYP 250 SC in control of VERHE 25-28 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Veronica hederifolia VERHE** | | | | | |  |  |  |
| Report code | | | **A.T/2020/081/KK** | **A.T/2021/056/KK** | **A.T/2021/103/KK** | **AH/22/K/20/Jab/01** | **AH/22/K/20/Mał/02** | **AH/22/K/20/NW/03** |  |  |  |
| Application date | | | 15.05.2020 | 26.05.2021 | 24.06.2021 | 22.06.2022 | 21.06.2022 | 12.07.2022 |  |  |  |
| Crop stage in application | | | BBCH 11-12 | BBCH 12-13 | BBCH 11-12 | BBCH 11-13 | BBCH 11-12 | BBCH 11-12 |  |  |  |
| Pest stage | | | BBCH 10-11 | BBCH 11-13 | BBCH 10-14 | BBCH 12-14 | BBCH 10-12 | BBCH 10-11 |  |  |  |
| Assessment date | | | 09.06.2020 | 23.06.2021 | 22.07.2021 | 22.07.2022 | 19.07.2022 | 09.08.2022 |  |  |  |
| Days after application DA-A | | | 25 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 5.0 | 5.0 | 5.0 | 5.0 | 6.0 | 5.0 | 5.2 | 5.0 | 6.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  | 85.00 | 81.30 | 39.00 | 43.00 | 43.00 | 58.26 | 39.00 | 85.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 85.80 | 85.00 | 91.30 | 51.00 | 51.00 | 55.00 | 69.85 | 51.00 | 91.30 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 90.80 | 90.00 | 92.50 | 61.00 | 65.00 | 71.00 | 78.38 | 61.00 | 92.50 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 95.30 | 95.00 | 93.80 | 79.00 | 82.00 | 82.00 | 87.85 | 79.00 | 95.30 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 97.00 | - | - | - | - | - | 97.00 | 97.00 | 97.00 |
| 7 | Adengo 315 SC | 0.33 | 89.80 | 95.00 | 97.50 | 78.00 | 80.00 | 81.00 | 86.88 | 78.00 | 97.50 |
| LSD(P=.05) | | | 3.790 | 2.810 | 3.710 | 5.500 | 4.300 | 5.500 |  |  |  |

*Table 37. The efficacy of CHR/H/IZOXACYP 250 SC in control of STEME 13-14 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Stellaria media* STEME** | | | | | |  |  |  |
| Report code | | | **A.T/2020/081/KK** | **A.T/2021/054/KK** | **A.T/2021/055/KK** | **A.T/2021/056/KK** | **A.T/2021/103/KK** | **SRPL21-440-336FE** |  |  |  |
| Application date | | | 15.05.2020 | 19.05.2021 | 26.05.2021 | 26.05.2021 | 24.06.2021 | 07.06.2021 |  |  |  |
| Crop stage in application | | | BBCH 11-12 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 |  |  |  |
| Pest stage | | | BBCH 10-11 | BBCH 10-12 | BBCH 10-14 | BBCH 11-12 | BBCH 18-31 | BBCH 10-16 |  |  |  |
| Assessment date | | | 29.05.2020 | 01.06.2021 | 08.06.2021 | 09.06.2021 | 08.07.2021 | 21.06.2021 |  |  |  |
| Days after application DA-A | | | 14 DA-A | 13 DA-A | 13 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 7.0 | 7.0 | 5.0 | 5.0 | 5.0 | 8.8 | 6.3 | 5.0 | 8.8 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  |  | 90.80 | 85.00 | 90.00 | 71.30 | 84.28 | 71.30 | 90.80 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 91.30 | 100.00 | 94.50 | 90.00 | 90.00 | 77.50 | 90.55 | 77.50 | 100.00 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 97.50 | 100.00 | 97.50 | 95.00 | 90.00 | 86.30 | 94.38 | 86.30 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 100.00 | 100.00 | 99.00 | 95.00 | 90.00 | 94.50 | 96.42 | 90.00 | 100.00 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 100.00 | 100.00 | - | - | - | - | 100.00 | 100.00 | 100.00 |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 100.00 | 98.80 | 95.00 | 90.00 | 96.50 | 96.72 | 90.00 | 100.00 |
| LSD(P=.05) | | | 2.810 | - | 3.690 | 4.560 | - | 4.520 |  |  |  |

*Table 38. The efficacy of CHR/H/IZOXACYP 250 SC in control of STEME 25-28 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Stellaria media* STEME** | | | | | |  |  |  |
| Report code | | | **A.T/2020/081/KK** | **A.T/2021/054/KK** | **A.T/2021/055/KK** | **A.T/2021/056/KK** | **A.T/2021/103/KK** | **SRPL21-440-336FE** |  |  |  |
| Application date | | | 15.05.2020 | 19.05.2021 | 26.05.2021 | 26.05.2021 | 24.06.2021 | 07.06.2021 |  |  |  |
| Crop stage in application | | | BBCH 11-12 | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 11-12 | BBCH 12-13 |  |  |  |
| Pest stage | | | BBCH 10-11 | BBCH 10-12 | BBCH 10-14 | BBCH 11-12 | BBCH 18-31 | BBCH 10-16 |  |  |  |
| Assessment date | | | 09.06.2020 | 15.06.2021 | 21.06.2021 | 23.06.2021 | 22.07.2021 | 05.07.2021 |  |  |  |
| Days after application DA-A | | | 25 DA-A | 27 DA-A | 26 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 7.0 | 8.0 | 5.0 | 5.0 | 5.0 | 9.0 | 6.5 | 5.0 | 9.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  |  | 94.00 | 95.00 | 100.00 | 75.00 | 91.00 | 75.00 | 100.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 77.50 | 96.25 | 77.50 | 100.00 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 86.30 | 97.72 | 86.30 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 94.50 | 99.08 | 94.50 | 100.00 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 100.00 | 100.00 | - | - | - | - | 100.00 | 100.00 | 100.00 |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 96.50 | 99.42 | 96.50 | 100.00 |
| LSD(P=.05) | | | - | - | 2.320 | - | - | 4.450 |  |  |  |

*Table 39. The efficacy of CHR/H/IZOXACYP 250 SC in control of BRSNW 11-14 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Brassica napus BRSNW** | | | | | |  |  |  |
| Report code | | | **A.T/2020/081/KK** | **A.T/2021/055/KK** | **A.T/2021/059/KK** | **AH/22/K/20/Jab/01** | **AH/22/K/20/Mał/02** | **AH/22/K/20/NW/03** |  |  |  |
| Application date | | | 15.05.2020 | 26.05.2021 | 27.05.2021 | 22.06.2022 | 21.06.2022 | 12.07.2022 |  |  |  |
| Crop stage in application | | | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 11-13 | BBCH 11-12 | BBCH 11-12 |  |  |  |
| Pest stage | | | BBCH 10-11 | BBCH 12-16 | BBCH 10-14 | BBCH 10-14 | BBCH 11-12 | BBCH 09-10 |  |  |  |
| Assessment date | | | 29.05.2020 | 08.06.2021 | 07.06.2021 | 06.07.2022 | 05.07.2022 | 26.07.2022 |  |  |  |
| Days after application DA-A | | | 14 DA-A | 13 DA-A | 11 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 6.0 | 10.0 | 6.0 | 5.0 | 8.0 | 5.0 | 6.7 | 5.0 | 10.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  | 71.00 | 75.00 | 31.00 | 39.00 | 36.00 | 50.4 | 31.0 | 75.0 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 92.50 | 75.30 | 87.50 | 41.00 | 50.00 | 43.00 | 64.9 | 41.0 | 92.5 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 98.80 | 78.50 | 94.50 | 56.00 | 60.00 | 53.00 | 73.5 | 53.0 | 98.8 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 100.00 | 82.30 | 99.80 | 64.00 | 69.00 | 66.00 | 80.2 | 64.0 | 100.0 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 100.00 | - | - | - | - | - | 100.0 | 100.0 | 100.0 |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 98.00 | 100.00 | 63.00 | 66.00 | 69.00 | 82.7 | 63.0 | 100.0 |
| LSD(P=.05) | | | 2.810 | 4.050 | 4.130 | 5.800 | 6.000 | 8.500 |  |  |  |

*Table 40. The efficacy of CHR/H/IZOXACYP 250 SC in control of BRSNW 25-28 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | **Brassica napus BRSNW** | | | | | |  |  |  |
| Report code | | | **A.T/2020/081/KK** | **A.T/2021/055/KK** | **A.T/2021/059/KK** | **AH/22/K/20/Jab/01** | **AH/22/K/20/Mał/02** | **AH/22/K/20/NW/03** |  |  |  |
| Application date | | | 15.05.2020 | 26.05.2021 | 27.05.2021 | 22.06.2022 | 21.06.2022 | 12.07.2022 |  |  |  |
| Crop stage in application | | | BBCH 11-12 | BBCH 12-13 | BBCH 12-13 | BBCH 11-13 | BBCH 11-12 | BBCH 11-12 |  |  |  |
| Pest stage | | | BBCH 10-11 | BBCH 12-16 | BBCH 10-14 | BBCH 10-14 | BBCH 11-12 | BBCH 09-10 |  |  |  |
| Assessment date | | | 09.06.2020 | 21.06.2021 | 24.06.2021 | 22.07.2022 | 19.07.2022 | 09.08.2022 |  |  |  |
| Days after application DA-A | | | 25 DA-A | 26 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 6.0 | 10.0 | 6.0 | 6.0 | 8.0 | 5.0 | 6.8 | 5.0 | 10.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 |  | 58.80 | 90.00 | 45.00 | 38.80 | 42.50 | 55.02 | 38.80 | 90.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 100.00 | 67.80 | 100.00 | 61.30 | 60.00 | 52.50 | 73.60 | 52.50 | 100.00 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 100.00 | 72.30 | 100.00 | 68.80 | 72.50 | 66.30 | 79.98 | 66.30 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 100.00 | 79.50 | 100.00 | 85.00 | 85.50 | 85.30 | 89.22 | 79.50 | 100.00 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | 100.00 | - | - | - | - | - | 100.00 | 100.00 | 100.00 |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 95.80 | 100.00 | 84.80 | 85.00 | 84.80 | 91.73 | 84.80 | 100.00 |
| LSD(P=.05) | | | - | 7.230 | - | 4.870 | 7.080 | 5.350 |  |  |  |

*Table 41. The efficacy of CHR/H/IZOXACYP 250 SC in control of AMARE 11-14 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Amaranthus retrofelxus* AMARE** | | | | | |  |  |  |
| Report code | | | **A.T/2021/055/KK** | **A.T/2021/059/KK** | **SRPL21-438-336FE** | **SRPL21-439-336FE** | **SRPL21-440-336FE** | **SRPL21-441-336FE** |  |  |  |
| Application date | | | 26.05.2021 | 27.05.2021 | 28.04.2021 | 02.06.2021 | 07.06.2021 | 01.06.2021 |  |  |  |
| Crop stage in application | | | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 |  |  |  |
| Pest stage | | | BBCH 12-14 | BBCH 10-14 | BBCH 14 | BBCH 12-13 | BBCH 12-16 | BBCH 12-13 |  |  |  |
| Assessment date | | | 08.06.2021 | 07.06.2021 | 12.05.2021 | 16.06.2021 | 21.06.2021 | 15.06.2021 |  |  |  |
| Days after application DA-A | | | 13 DA-A | 11 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | 14 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 5.0 | 50.0 | 13.0 | 10.0 | 8.5 | 6.5 | 15.5 | 5.0 | 50.0 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 | 95.00 | 75.00 | 45.00 | 73.00 | 62.50 | 10.00 | 60.08 | 10.00 | 95.00 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 97.50 | 80.00 | 52.50 | 83.00 | 73.80 | 35.00 | 70.30 | 35.00 | 97.50 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 97.50 | 82.50 | 66.30 | 99.00 | 87.50 | 66.30 | 83.18 | 66.30 | 99.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 99.30 | 88.00 | 77.50 | 99.00 | 92.50 | 75.00 | 88.55 | 75.00 | 99.30 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | - | - | - | - | - | - | - | - | - |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 95.00 | 80.00 | 99.00 | 93.30 | 91.30 | 93.10 | 80.00 | 100.00 |
| LSD(P=.05) | | | 2.280 | 3.280 | 4.830 | 3.400 | 6.890 | 5.540 |  |  |  |

*Table 42. The efficacy of CHR/H/IZOXACYP 250 SC in control of AMARE 26-28 DA-A*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pest code | | | ***Amaranthus retrofelxus* AMARE** | | | | | |  |  |  |
| Report code | | | **A.T/2021/055/KK** | **A.T/2021/059/KK** | **SRPL21-438-336FE** | **SRPL21-439-336FE** | **SRPL21-440-336FE** | **SRPL21-441-336FE** |  |  |  |
| Application date | | | 26.05.2021 | 27.05.2021 | 28.04.2021 | 02.06.2021 | 07.06.2021 | 01.06.2021 |  |  |  |
| Crop stage in application | | | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 | BBCH 12-13 |  |  |  |
| Pest stage | | | BBCH 12-14 | BBCH 10-14 | BBCH 14 | BBCH 12-13 | BBCH 12-16 | BBCH 12-13 |  |  |  |
| Assessment date | | | 21.06.2021 | 24.06.2021 | 26.05.2021 | 30.06.2021 | 05.07.2021 | 29.06.2021 |  |  |  |
| Days after application DA-A | | | 26 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | 28 DA-A | **Average** | **Min.** | **Max.** |
| weeds density pcs/m2 | | | 5.0 | 5.0 | 13.5 | 10.0 | 9.5 | 7.0 | 8.3 | 5.0 | 13.5 |
| No. | Name | Rate (L, kg/ha) |  |  |  |  |  |  |  |  |  |
| 1 | Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | CHR/H/IZOXACYP 250 SC | 0.20 | 74.00 | 77.50 | 60.00 | 71.00 | 68.80 | 30.00 | 63.55 | 30.00 | 77.50 |
| 3 | CHR/H/IZOXACYP 250 SC | 0.25 | 80.00 | 82.50 | 81.30 | 83.00 | 82.50 | 51.30 | 76.77 | 51.30 | 83.00 |
| 4 | CHR/H/IZOXACYP 250 SC | 0.30 | 82.80 | 85.00 | 93.80 | 100.00 | 88.80 | 100.00 | 91.73 | 82.80 | 100.00 |
| 5 | CHR/H/IZOXACYP 250 SC | 0.35 | 85.00 | 91.80 | 97.00 | 100.00 | 94.50 | 100.00 | 94.72 | 85.00 | 100.00 |
| 6 | CHR/H/IZOXACYP 250 SC | 0.40 | - | - | - | - | - | - | - | - | - |
| 7 | Adengo 315 SC | 0.33 | 100.00 | 100.00 | 98.00 | 100.00 | 93.30 | 100.00 | 98.55 | 93.30 | 100.00 |
| LSD(P=.05) | | | 3.450 | 4.740 | 5.150 | 3.800 | 6.230 | 2.520 |  |  |  |

# Appendix 6 Summary of phytotoxicity trials data in summary form

Table 1 – data from phytotoxicity trials – maize (selectivity trials)

**PREEMERGENCE APPLICATION**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Report code** | **Treatment** | **Dose [L/ha]** | **Phytotoxicity in %** | | | | | |
| **A.T/2021/052/KK** | Timing of assessment | DA-A | 18 DA-A | 25 DA-A | 29 DA-A | 83 DA-A | - | - |
| date |  | 17.05.2021 | 24.05.2021 | 28.05.2021 | 21.07.2021 | - | - |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.56 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.66 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| LSD (P=0.05) | | - | - | - | - | - | - |
| **A.T/2021/053/KK** | Timing of assessment | DA-A | 19 DA-A | 26 DA-A | 76 DA-A |  | - | - |
| date |  | 24.05.2021 | 31.05.2021 | 20.07.2021 |  | - | - |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.56 | 9.50 | 5.80 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.66 | 10.80 | 9.80 | 0.00 | 0.00 | - | - |
| LSD (P=0.05) | | 3.48 | 2.49 | - | - | - | - |
| **AH/21/K/17/Zł/01** | Timing of assessment | DA-A | 7 DA-A | 14 DA-A | 21 DA-A | 28 DA-A | - | - |
| date |  | 19.05.2021 | 26.05.2021 | 02.06.2021 | 09.06.2021 | - | - |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.56 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.66 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| LSD (P=0.05) | | - | - | - | - | - | - |
| **AH/21/K/17/Gr/02** | Timing of assessment | DA-A | 7 DA-A | 14 DA-A | 21 DA-A | 28 DA-A | - | - |
| date |  | 20.05.2021 | 27.05.2021 | 03.06.2021 | 10.06.2021 | - | - |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.56 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.66 | 0.00 | 0.00 | 0.00 | 0.00 | - | - |
| LSD (P=0.05) | | - | - | - | - | - | - |
| **CHR\_H\_IZOXACYP22\_SEL\_PL01** | Timing of assessment | DA-A | 7 DA-A | 14 DA-A | 22 DA-A | 30 DA-A | 56 DA-A | - |
| date |  | 01.06.2022 | 08.06.2022 | 16.06.2022 | 24.06.2022 | 20.07.2022 | - |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.56 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.66 | 0.00 | 0.00 | 2.00 | 2.00 | 2.00 | - |
| LSD (P=0.05) | | - | - | - | - | - | - |
| **CHR\_H\_IZOXACYP22\_SEL\_PL02** | Timing of assessment | DA-A | 8 DA-A | 15 DA-A | 22 DA-A | 29 DA-A | 36 DA-A | 64 DA-A |
| date |  | 10.06.2022 | 17.06.2022 | 24.06.2022 | 01.07.2022 | 08.07.2022 | 05.08.2022 |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.56 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.66 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LSD (P=0.05) | | - | - | - | - | - | - |
| **CHR\_H\_IZOXACYP22\_SEL\_PL03** | Timing of assessment | DA-A | 11 DA-A | 18 DA-A | 25 DA-A | 32 DA-A | 60 DA-A | - |
| date |  | 21.05.2022 | 28.05.2022 | 04.06.2022 | 11.06.2022 | 09.07.2022 | - |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.56 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.66 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| LSD (P=0.05) | | - | - | - | - | - | - |
| **CHR\_H\_IZOXACYP22\_SEL\_PL04** | Timing of assessment | DA-A | 12 DA-A | 19 DA-A | 26 DA-A | 33 DA-A | 61 DA-A | - |
| date |  | 18.05.2022 | 25.05.2022 | 01.06.2022 | 08.06.2022 | 06.07.2022 | - |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.56 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.66 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| LSD (P=0.05) | | - | - | - | - | - | - |

Table 2 – data from phytotoxicity trials – maize (selectivity trials)

**POSTEMERGENCE APPALICATION**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Report code** | **Treatment** | **Dose [L/ha]** | **Phytotoxicity in %** | | | | |
| **A.T/2021/060/KK** | Timing of assessment | DA-A | 10 DA-A | 17 DA-A | 21 DA-A | 27 DA-A | 64 DA-A |
| date |  | 28.05.2021 | 04.06.2021 | 08.06.2021 | 14.06.2021 | 21.07.2021 |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.70 | 4.50 | 3.50 | 3.50 | 5.00 | 4.30 |
| Adengo 315 SC | 0.33 | 0.50 | 0.80 | 0.80 | 0.00 | 0.00 |
| Adengo 315 SC | 0.66 | 5.00 | 3.00 | 2.80 | 1.80 | 1.80 |
| LSD (P=0.05) | | 1.660 | 2.400 | 2.290 | 2.930 | 2.500 |
| **A.T/2021/061/KK** | Timing of assessment | DA-A | 14 DA-A | 24 DA-A | 42 DA-A | - | - |
| date |  | 18.06.2021 | 28.06.2021 | 16.07.2021 | - | - |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.35 | 0.00 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.70 | 0.00 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.66 | 0.00 | 0.00 | 0.00 | - | - |
| LSD (P=0.05) | | - | - | - | - | - |
| **A.T/2021/062/KK** | Timing of assessment | DA-A | 14 DA-A | 28 DA-A | 73 DA-A | - | - |
| date |  | 07.06.2021 | 21.06.2021 | 05.08.2021 | - | - |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.35 | 0.00 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.70 | 0.00 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.66 | 0.00 | 0.00 | 0.00 | - | - |
| LSD (P=0.05) | | - | - | - | - | - |
| **A.T/2020/083/KK** | Timing of assessment | DA-A | 13 DA-A | 25 DA-A | 38 DA-A | 69 DA-A | - |
| date |  | 04.06.2020 | 16.06.2020 | 29.06.2020 | 30.07.2020 | - |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.70 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.66 | 0.00 | 0.00 | 0.00 | 0.00 | - |
| LSD (P=0.05) | | - | - | - | - | - |
| **A.T/2020/084/KK** | Timing of assessment | DA-A | 11 DA-A | 21 DA-A | 61 DA-A | - | - |
| date |  | 02.06.2020 | 12.06.2020 | 22.07.2020 | - | - |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.35 | 0.00 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.70 | 10.00 | 5.80 | 0.00 | - | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.66 | 12.50 | 5.80 | 0.00 | - | - |
| LSD (P=0.05) | | 1.99 | 1.52 | - | - | - |
| **SRPL21-442-336FE** | Timing of assessment | DA-A | 7 DA-A | 14 DA-A | 21 DA-A | 28 DA-A | 56 DA-A |
| date |  | 22.06.2021 | 29.06.2021 | 06.07.2021 | 13.07.2021 | 10.08.2021 |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.66 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LSD (P=0.05) | | - | - | - | - | - |
| **SRPL21-443-336FE** | Timing of assessment | DA-A | 7 DA-A | 14 DA-A | 21 DA-A | 28 DA-A | 56 DA-A |
| date |  | 14.06.2021 | 21.06.2021 | 28.06.2021 | 05.07.2021 | 05.08.2021 |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.66 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LSD (P=0.05) | | - | - | - | - | - |
| **SRPL21-444-336FE** | Timing of assessment | DA-A | 7 DA-A | 14 DA-A | 21 DA-A | 28 DA-A | 56 DA-A |
| date |  | 17.06.2021 | 24.06.2021 | 01.07.2021 | 08.07.2021 | 05.08.2021 |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.66 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LSD (P=0.05) | | - | - | - | - | - |

Table 3 – data from phytotoxicity trials – maize (efficacy trials)

**PREEMERGENCE APPLICATION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Report code** | **Treatment** | **Dose [L/ha]** | **Phytotoxicity in %** | | | |
| **SRPL21-433-336FE** | Timing of assessment | DA-A | 22 DA-A | 29 DA-A | 43 DA-A | 71 DA-A |
| date |  | 17.06.2021 | 24.06.2021 | 08.07.2021 | 05.08.2021 |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.24 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 |
| LSD (P=0.05) | | - | - | - | - |
| **SRPL21-434-336FE** | Timing of assessment | DA-A | 18 DA-A | 25 DA-A | 39 DA-A | 67 DA-A |
| date |  | 31.05.2021 | 07.06.2021 | 21.06.2021 | 19.07.2021 |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.24 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 |
| LSD (P=0.05) | | - | - | - | - |
| **SRPL21-435-336FE** | Timing of assessment | DA-A | 7 DA-A | 14 DA-A | 28 DA-A | 56 DA-A |
| date |  | 24.05.2021 | 31.05.201 | 14.06.2021 | 12.07.2021 |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.24 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 |
| LSD (P=0.05) | | - | - | - | - |
| **SRPL21-436-336FE** | Timing of assessment | DA-A | 14 DA-A | 28 DA-A | 42 DA-A | 70 DA-A |
| date |  | 07.06.2021 | 14.06.2021 | 28.06.2021 | 26.07.2021 |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.24 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 |
| LSD (P=0.05) | | - | - | - | - |
| **A.T/2022/002/KK** | Timing of assessment | DA-A | 15 DA-A | 27 DA-A | 77 DA-A | - |
| date |  | 13.05.2022 | 25.05.2022 | 14.07.2022 | - |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.16 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.20 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.24 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | - |
| LSD (P=0.05) | | - | - | - | - |
| **A.T/2022/003/KK** | Timing of assessment | DA-A | 10 DA-A | 28 DA-A | 66 DA-A | - |
| date |  | 16.05.2022 | 03.06.2022 | 11.07.2022 | - |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.16 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.20 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.24 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | - |
| LSD (P=0.05) | | - | - | - | - |
| **A.T/2022/004/KK** | Timing of assessment | DA-A | 13 DA-A | 28 DA-A | 73 DA-A | - |
| date |  | 19.05.2022 | 03.06.2022 | 18.07.2022 | - |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.16 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.20 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.24 | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | - |
| LSD (P=0.05) | | - | - | - | - |
| **A.T/2022/005/KK** | Timing of assessment | DA-A | 7 DA-A | 28 DA-A | 54 DA-A | 83 DA-A |
| date |  | 19.05.2022 | 09.06.2022 | 05.07.2022 | 03.08.2022 |
| Untreated Check | - | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.24 | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 |
| LSD (P=0.05) | | - | - | - | - |
| **A.T/2022/006/KK** | Timing of assessment | DA-A | 6 DA-A | 28 DA-A | 75 DA-A |  |
| date |  | 17.05.2022 | 08.06.2022 | 25.07.2022 |  |
| Untreated Check | - | 0.00 | 0.00 | 0.00 |  |
| CHR/H/IZOXACYP 250 SC | 0.16 | 0.00 | 0.00 | 0.00 |  |
| CHR/H/IZOXACYP 250 SC | 0.20 | 0.00 | 0.00 | 0.00 |  |
| CHR/H/IZOXACYP 250 SC | 0.24 | 0.00 | 0.00 | 0.00 |  |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | 0.00 |  |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | 0.00 |  |
| LSD (P=0.05) | | - | - | - | - |
| **AH/22/K/20/Br/01** | Timing of assessment | DA-A | 14 DA-A | 28 DA-A | - | - |
| date |  | 20.05.2022 | 03.06.2022 | - | - |
| Untreated Check | - | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.16 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.20 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.24 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | - | - |
| LSD (P=0.05) | | - | - | - | - |
| **AH/22/K/20/Zł/02** | Timing of assessment | DA-A | 14 DA-A | 28 DA-A | - | - |
| date |  | 13.05.2022 | 27.05.2022 | - | - |
| Untreated Check | - | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.16 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.20 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.24 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | - | - |
| LSD (P=0.05) | | - | - | - | - |
| **AH/22/K/20/Gr/03** | Timing of assessment | DA-A | 13 DA-A | 27 DA-A | - | - |
| date |  | 23.05.2022 | 06.06.2022 | - | - |
| Untreated Check | - | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.16 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.20 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.24 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | - | - |
| LSD (P=0.05) | | - | - | - | - |
| **AH/22/K/20/Ce/04** | Timing of assessment | DA-A | 8 DA-A | 22 DA-A | - | - |
| date |  | 12.05.2022 | 26.05.2022 | - | - |
| Untreated Check | - | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.16 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.20 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.24 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | - | - |
| LSD (P=0.05) | | - | - | - | - |
| **AH/22/K/20/Mr/05** | Timing of assessment | DA-A | 14 DA-A | 28 DA-A | - | - |
| date |  | 25.05.2022 | 08.06.2022 | - | - |
| Untreated Check | - | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.16 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.20 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.24 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | 0.28 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | 0.33 | 0.00 | 0.00 | - | - |
| LSD (P=0.05) | | - | - | - | - |

Table 4 – data from phytotoxicity trials – maize (efficacy trials)

**POSTEMERGENCE APPALICATION**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Report code** | **Treatment** | **Dose [L/ha]** | | **Phytotoxicity in %** | | | |
| **A.T/2020/081/KK** | Timing of assessment | DA-A | | 14 DA-A | 25 DA-A | 62 DA-A | - |
| date |  | | 29.05.2020 | 09.06.2020 | 16.07.2020 | - |
| Untreated Check | - | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.25 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.30 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.35 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.40 | | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.33 | | 0.00 | 0.00 | 0.00 | - |
| LSD (P=0.05) | | | - | - | - | - |
| **A.T/2020/082/KK** | Timing of assessment | DA-A | | 13 DA-A | 27 DA-A | 62 DA-A | - |
| date |  | | 08.06.2020 | 22.06.2020 | 27.07.2020 | - |
| Untreated Check | - | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.25 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.30 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.35 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.40 | | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.33 | | 0.00 | 0.00 | 0.00 | - |
| LSD (P=0.05) | | | - | - | - | - |
| **A.T/2021/054/KK** | Timing of assessment | DA-A | | 13 DA-A | 27 DA-A | 58 DA-A | - |
| date |  | | 01.06.2021 | 15.06.2021 | 16.07.2021 | - |
| Untreated Check | - | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.20 | | 0.80 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.25 | | 1.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.30 | | 2.50 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.35 | | 1.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.33 | | 3.80 | 0.00 | 0.00 | - |
| LSD (P=0.05) | | | 2.03 | - | - | - |
| **A.T/2021/055/KK** | Timing of assessment | DA-A | | 13 DA-A | 26 DA-A | 50 DA-A | - |
| date |  | | 08.06.2021 | 21.06.2021 | 15.07.2021 | - |
| Untreated Check | - | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.20 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.25 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.30 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.35 | | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.33 | | 0.00 | 0.00 | 0.00 | - |
| LSD (P=0.05) | | | - | - | - | - |
| **A.T/2021/056/KK** | Timing of assessment | DA-A | | 14 DA-A | 28 DA-A | 44 DA-A | - |
| date |  | | 09.06.2021 | 23.06.2021 | 09.07.2021 | - |
| Untreated Check | - | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.20 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.25 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.30 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.35 | | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.33 | | 0.00 | 0.00 | 0.00 | - |
| LSD (P=0.05) | | | - | - | - | - |
| **A.T/2021/057/KK** | Timing of assessment | DA-A | | 14 DA-A | 28 DA-A | 58 DA-A | - |
| date |  | | 14.06.2021 | 28.06.2021 | 28.07.2021 | - |
| Untreated Check | - | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.20 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.25 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.30 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.35 | | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.33 | | 0.00 | 0.00 | 0.00 | - |
| LSD (P=0.05) | | | - | - | - | - |
| **A.T/2021/059/KK** | Timing of assessment | DA-A | | 11 DA-A | 28 DA-A | 62 DA-A | - |
| date |  | | 07.06.2021 | 24.06.2021 | 28.07.2021 | - |
| Untreated Check | - | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.20 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.25 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.30 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.35 | | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.33 | | 0.00 | 0.00 | 0.00 | - |
| LSD (P=0.05) | | | - | - | - | - |
| **A.T/2021/103/KK** | Timing of assessment | DA-A | | 14 DA-A | 28 DA-A | 43 DA-A | - |
| date |  | | 08.07.2021 | 22.07.2021 | 06.08.2021 | - |
| Untreated Check | - | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.20 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.25 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.30 | | 0.00 | 0.00 | 0.00 | - |
| CHR/H/IZOXACYP 250 SC | 0.35 | | 0.00 | 0.00 | 0.00 | - |
| Adengo 315 SC | 0.33 | | 0.00 | 0.00 | 0.00 | - |
| LSD (P=0.05) | | | - | - | - | - |
| **SRPL21-437-336FE** | Timing of assessment | DA-A | | 7 DA-A | 14 DA-A | 28 DA-A | 56 DA-A |
| date |  | | 22.06.2021 | 29.06.2021 | 13.07.2021 | 10.08.2021 |
| Untreated Check | - | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.20 | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.25 | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.30 | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.35 | | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.33 | | 0.00 | 0.00 | 0.00 | 0.00 |
| LSD (P=0.05) | | | - | - | - | - |
| **SRPL21-438-336FE** | Timing of assessment | DA-A | | 7 DA-A | 14 DA-A | 28 DA-A | 56 DA-A |
| date |  | | 05.05.2021 | 12.05.2021 | 26.05.2021 | 23.06.2021 |
| Untreated Check | - | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.20 | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.25 | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.30 | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.35 | | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.33 | | 0.00 | 0.00 | 0.00 | 0.00 |
| LSD (P=0.05) | | | - | - | - | - |
| **SRPL21-439-336FE** | Timing of assessment | DA-A | | 7 DA-A | 14 DA-A | 28 DA-A | 56 DA-A |
| date |  | | 09.06.2021 | 16.06.2021 | 30.06.2021 | 28.07.2021 |
| Untreated Check | - | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.20 | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.25 | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.30 | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.35 | | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.33 | | 0.00 | 0.00 | 0.00 | 0.00 |
| LSD (P=0.05) | | | - | - | - | - |
| **SRPL21-440-336FE** | Timing of assessment | DA-A | | 7 DA-A | 14 DA-A | 28 DA-A | 56 DA-A |
| date |  | | 14.06.2021 | 21.06.2021 | 05.07.2021 | 02.08.2021 |
| Untreated Check | - | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.20 | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.25 | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.30 | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.35 | | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.33 | | 0.00 | 0.00 | 0.00 | 0.00 |
| LSD (P=0.05) | | | - | - | - | - |
| **SRPL21-441-336FE** | Timing of assessment | DA-A | | 7 DA-A | 14 DA-A | 28 DA-A | 56 DA-A |
| date |  | | 08.06.2021 | 15.06.2021 | 29.06.2021 | 27.07.2021 |
| Untreated Check | - | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.20 | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.25 | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.30 | | 0.00 | 0.00 | 0.00 | 0.00 |
| CHR/H/IZOXACYP 250 SC | 0.35 | | 0.00 | 0.00 | 0.00 | 0.00 |
| Adengo 315 SC | 0.33 | | 0.00 | 0.00 | 0.00 | 0.00 |
| LSD (P=0.05) | | | - | - | - | - |
| **AH/22/K/20/Jab/01** | Timing of assessment | | DA-A | 14 DA-A | 28 DA-A | - | - |
| date | |  | 06.07.2022 | 20.07.2022 | - | - |
| Untreated Check | | - | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | | 0.20 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | | 0.25 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | | 0.30 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | | 0.35 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | | 0.33 | 0.00 | 0.00 | - | - |
| LSD (P=0.05) | | | - | - | - | - |
| **AH/22/K/20/Mał/02** | Timing of assessment | | DA-A | 14 DA-A | 28 DA-A | - | - |
| date | |  | 05.07.2022 | 19.07.2022 | - | - |
| Untreated Check | | - | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | | 0.20 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | | 0.25 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | | 0.30 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | | 0.35 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | | 0.33 | 0.00 | 0.00 | - | - |
| LSD (P=0.05) | | | - | - | - | - |
| **AH/22/K/20/NW/03** | Timing of assessment | | DA-A | 14 DA-A | 28 DA-A | - | - |
| date | |  | 26.07.2022 | 09.08.2022 | - | - |
| Untreated Check | | - | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | | 0.20 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | | 0.25 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | | 0.30 | 0.00 | 0.00 | - | - |
| CHR/H/IZOXACYP 250 SC | | 0.35 | 0.00 | 0.00 | - | - |
| Adengo 315 SC | | 0.33 | 0.00 | 0.00 | - | - |
| LSD (P=0.05) | | | - | - | - | - |

Table 5 – data from phytotoxicity trials

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test report (1)** | **Testing Unit**  **GEP (2)** | **Country Region (3)** | **Dates of trials and GS (4)** | **Cultivar**  **F/G (5)**  **N/A (6)** | **Experimental design**  **Test method (7)**  **Replicates** | **Remarks** |
| **A.T/2021/052/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Grzebienisko/ Poland | 29.04.2021  BBCH 01-05 | maize/ Invictus  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 7.4 |
| **A.T/2021/053/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Studzieniec/ Poland | 05.05.2021  BBCH 00 | maize/ Farmezzo  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sand  pH 5.9 |
| **AH/21/K/17/Zł/01** | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | Złotniki/ Poland | 12.05.2021  BBCH 06 | maize/ Farmodena  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 5.1 |
| **AH/21/K/17/Gr/02** | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | Gorzyń/ Poland | 13.05.2021  BBCH 03 | maize/ DKC3350  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 6.0 |
| **CHR\_H\_IZOXACYP22\_SEL\_PL01** | SynTech Research Poland Sp. z o.o.  69/1 Jagiellonska  85-027 Bydgoszcz | Nagady/Poland | 25.05.2022  BBCH 00 | maize/ Ligato  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: silt loam  pH 4.5 |
| **CHR\_H\_IZOXACYP22\_SEL\_PL02** | SynTech Research Poland Sp. z o.o.  69/1 Jagiellonska  85-027 Bydgoszcz | Rąblów/Poland | 02.06.2022  BBCH 00 | maize/ PIONEER P8307  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: silt loam  pH 5.9 |
| **CHR\_H\_IZOXACYP22\_SEL\_PL03** | SynTech Research Poland Sp. z o.o.  69/1 Jagiellonska  85-027 Bydgoszcz | Tonowo /Poland | 10.05.2022  BBCH 05 | maize/ Rosomak  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy loam  pH 6.0 |
| **CHR\_H\_IZOXACYP22\_SEL\_PL04** | SynTech Research Poland Sp. z o.o.  69/1 Jagiellonska  85-027 Bydgoszcz | Dochanowo /Poland | 06.05.2022  BBCH 05 | maize/ SY Calo  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy clay loam  pH 6.6 |
| **SRPL21-433-336FE** | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | Wąwolnica/ Poland | 26.05.2021  BBCH 00 | maize/ PIONEER P8307  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy caly loam  pH 6.69 |
| **SRPL21-434-336FE** | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | Jankowice Wielkie/ Poland | 13.05.2021  BBCH 00 | maize/ SY Calo  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy loam  pH 6.4 |
| **SRPL21-435-336FE** | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | Jabłowo Pałuckie/ Poland | 17.05.2021  BBCH 03 | maize/ DKC 3595  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 7.9 |
| **SRPL21-436-336FE** | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | Gietrzwałd / Poland | 17.05.2021  BBCH 00 | maize/ Cedro (FAO 200)  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 5.8 |
| **A.T/2022/002/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Kocanowo/ Poland | 28.04.2022  BBCH 03-06 | maize/ ES Faraday  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy loam  pH 5.9 |
| **A.T/2022/003/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Zielątkowo / Poland | 06.05.2022  BBCH 03-06 | maize/ DKC 3595  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy loam  pH 6.7 |
| **A.T/2022/004/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Kopaszyn / Poland | 06.05.2022  BBCH 05 | maize/ ES Constellation  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 6.2 |
| **A.T/2022/005/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Dąbrówka / Poland | 12.05.2022  BBCH 07-09 | maize/ Baobi  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy loam  pH 5.1 |
| **A.T/2022/006/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Trzeciewnica / Poland | 11.05.2022  BBCH 07 | maize/ DKC3079  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy loam  pH 5.5 |
| **AH/22/K/20/Br/01** | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | Brody / Poland | 06.05.2022  BBCH 00 | maize/ Farmfire  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 6.3 |
| **AH/22/K/20/Zł/02** | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | Złotniki / Poland | 29.04.2022  BBCH 00 | maize/ Farmfire  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 5.8 |
| **AH/22/K/20/Gr/03** | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | Gorzyń / Poland | 10.05.2022  BBCH 00 | maize/ Farmodena  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 6.0 |
| **AH/22/K/20/Ce/04** | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | Cerekwica / Poland | 04.05.2022  BBCH 00 | maize/ Pioneer P8255  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy loam  pH 5.7 |
| **AH/22/K/20/Mr/05** | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | Kokoszczyn / Poland | 11.05.2022  BBCH 00 | maize/ DKC 3350  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy loam  pH 6.1 |
| **A.T/2021/060/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Grzebienisko/ Poland | 18.05.2021  BBCH 11-12 | maize/Invictus  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 7.4 |
| **A.T/2021/061/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Mirosław /Poland | 04.06.2021  BBCH 12-13 | maize/ Legion  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 4.9 |
| **A.T/2021/062/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Orzelski Młyn /Poland | 24.05.2021  BBCH 11-12 | maize/ Amavit  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy loam  pH 5.9 |
| **A.T/2020/083/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Zamarte /Poland | 22.05.2020  BBCH 12-13 | maize/ SM Hubal  F  N | Randomized blocks  EPPO PP 1/135 (3)  4 | Soil type: sandy loam  pH 6.1 |
| **A.T/2020/084/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Nowe Młodochowo /Poland | 22.05.2020  BBCH 11-12 | maize/ Abelardo  F  N | Randomized blocks  EPPO PP 1/135 (3)  4 | Soil type: loamy sand  pH 6.6 |
| **SRPL21-442-336FE** | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | Rąblów /Poland | 15.06.2021  BBCH 12-13 | maize/ PIONEER P8307  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: slit loam  pH 5.9 |
| **SRPL21-443-336FE** | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | Gietrzwałd /Poland | 07.06.2021  BBCH 11-13 | maize/ Opoka FAO 240  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy loam  pH 5.4 |
| **SRPL21-444-336FE** | SynTech Research Poland Sp. z o.o. Jagiellońska 69/1 Bydgoszcz | Jabłowo Pałuckie /Poland | 10.06.2021  BBCH 12-13 | maize/ DKC 3595  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 7.9 |
| **A.T/2020/081/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Kocanowo/ Poland | 15.05.2020  BBCH 11-12 | maize/ LG 32.16  F  N | Randomized blocks  EPPO PP 1/135 (3)  4 | Soil type: loamy sand  pH 6.2 |
| **A.T/2020/082/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Dąbrówka/ Poland | 26.05.2020  BBCH 12-13 | maize/ SM Hubal  F  N | Randomized blocks  EPPO PP 1/135 (3)  4 | Soil type: loamy sand  pH 5.1 |
| **A.T/2021/054/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Wymysłowo / Poland | 19.05.2021  BBCH 11-12 | maize/ LG 3216  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 4.3 |
| **A.T/2021/055/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Batorowo/ Poland | 26.05.2021  BBCH 12-13 | maize/ ES Yakari  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 7.4 |
| **A.T/2021/056/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Kopaszyn/ Poland | 26.05.2021  BBCH 12-13 | maize/ Luigi  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 6.2 |
| **A.T/2021/057/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Nowy Dwór/ Poland | 31.05.2021  BBCH 12-13 | maize/ Ambrosini  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sand  pH 5.6 |
| **A.T/2021/059/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Stare Gralewo/ Poland | 27.05.2021  BBCH 12-13 | maize/ Sm Piast  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 6.5 |
| **A.T/2021/103/KK** | A.T Sp. z o.o. ul. Przemysłowa 3 88-300 Mogilno | Borkowo Kościelne / Poland | 24.06.2021  BBCH 11-12 | maize/ Opoka  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 6.0 |
| **SRPL21-437-336FE** | SynTech Research Poland Sp. z o.o ul. Jagiellonska 69/1 85-027 Bydgoszcz | Rąblów / Poland | 15.06.2021  BBCH 12-13 | maize/ PIONEER P8307  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: slit loam  pH 5.9 |
| **SRPL21-438-336FE** | SynTech Research Poland Sp. z o.o ul. Jagiellonska 69/1 85-027 Bydgoszcz | Jankowice Wielkie/ Poland | 28.04.2021  BBCH 12-13 | maize/ SY Talisman  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy loam  pH 6.3 |
| **SRPL21-439-336FE** | SynTech Research Poland Sp. z o.o ul. Jagiellonska 69/1 85-027 Bydgoszcz | Jabłowo Pałuckie / Poland | 02.06.2021  BBCH 12-13 | maize/ DKC 3595  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 7.9 |
| **SRPL21-440-336FE** | SynTech Research Poland Sp. z o.o ul. Jagiellonska 69/1 85-027 Bydgoszcz | Naglady / Poland | 07.06.2021  BBCH 12-13 | maize/ Cedro  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy loam  pH 4.9 |
| **SRPL21-441-336FE** | SynTech Research Poland Sp. z o.o ul. Jagiellonska 69/1 85-027 Bydgoszcz | Osowka / Poland | 01.06.2021  BBCH 12-13 | maize/ PIONEER  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy loam  pH 6.7 |
| AH/22/K/20/JAB/01 | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | Jabłowo Pałuckie / Poland | 22.06.2022  BBCH 11-13 | maize/ DKC3595  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: loamy sand  pH 6.8 |
| AH/22/K/20/MAŁ/02 | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | Małujowice / Poland | 21.06.2022  BBCH 11-12 | maize/ Ułan  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type loamy sand  pH 6.4 |
| AH/22/K/20/NW/03 | Poznań University of Life Sciences, Research and Education Center Gorzyń,  Wojska Polskiego 28, 60-637 Poznań | Nowa Wieś / Poland | 12.07.2022  BBCH 11-12 | maize/ Subito  F  N | Randomized blocks  EPPO PP 1/135 (4)  4 | Soil type: sandy loam  pH 6.0 |

Notes:

(1): test report number

(2): Trial responsible entity/ officially recognized organization

(3): precise place of the trial followed by the country

(4): Crop growth stage at application timing

(5): F= field trial, G=protected crop, specify

(6): N=Natural infestation, A= Artificial inoculation

(7): Test guideline used

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

None

# Appendix 8 Summary of data on succeeding crop

None