

MISTIC

BEFORE USING THIS PRODUCT, READ THE LABEL CAREFULLY

GEBRUIKSAANWYSINGS INGESLUIT
Lotnummer
Datum van vervaardiging

VERWYS NA BESONDERHEDE
SOOS OP HOUER / SAK GEDRUK

MISTIC

HERBICIDE



Reg. No. L10123, Act/Wet No. 36 of/van 1947

1:25/11/2016

A water soluble post-emergent herbicide for the control of certain annual broadleaf and grass weeds as listed

'n Wateroplosbare na-opkoms onkruid-doder vir die beheer van sekere eenjarige breëblaar en grasonkruide soos gelys.

| HRAC HERBICIDE GROUP CODE | B;B | HRAC ONKRUIDDODER GROEPKODE |
|--|--------|-----------------------------|
| ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL | | |
| Imazapyr (imidazolinone) | 15 g/ℓ | Imasapir (imidasolinon) |
| Imazamox (imidazolinone) | 33 g/ℓ | Imasamoks (imidasolinon) |

Registration Holder / Registrasiehouer
Meridian Agrochemical Company (Pty.) Ltd. / (Edms.) Bpk.
 Reg. No. 2000/010819/07
 P.O. Box / Posbus 436, Modderfontein, 1645, South Africa / Suid-Afrika

20ℓ



UN Number: Not regulated



CAUTION / VERSIGTIG



WARNINGS

Allow the following minimum number of days between application and harvesting:

Clearfield® Sunflower.....70 days

IMPORTANT: The recommended withholding period between the last application and harvest meets local residue requirements, but may not meet export requirements.

- Poisonous if swallowed.
- Handle with care.
- Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
- Store under a lock and key in a cool, dry place away from food, feeds and seed.
- Keep out of reach of children, animals and uninformed people.
- Do not spray over, or allow any spray drift to contaminate water and adjacent areas.
- In order to avoid injury to other crops, all spray equipment used for the application of **MISTIC** must be drained after, and thoroughly cleaned with water before being used for the application of other products to crops.
- Apply only to qualified **CLEARFIELD®** Sunflower varieties as registered by the relevant seed companies.
- **Re-entry:** Do not enter the treated area until the spray deposit has dried unless wearing protective clothing.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be effective under all conditions. The activity and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the weed against the remedy, as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal, or for lack of performance of the remedy concerned due to failure by the user to follow the label instructions, or to the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

PRECAUTIONS

- Do not inhale spray mist or fumes.
- Wash with soap and water directly after use or skin contact.
- Do not smoke, eat or drink whilst handling this product or before washing hands and face and changing clothes.
- Avoid spray drift onto other crops, grazing, rivers, dams or other areas not under treatment.
- Clean all equipment thoroughly following use and dispose of the wash water where it will not pollute the environment or contaminate crops, grazing, rivers or dams.
- Do not apply this product where the roots of any desirable plants may absorb the product.
- Invert the empty container over the spraying or mixing tank and allow it to drain for at least thirty seconds after the flow has slowed down to a drip. Thereafter, rinse the container three times with a volume of water equal to at least 10% of the volume of the container. Add the rinsings to the contents of the spray tank before destroying the container in the prescribed manner.
- Destroy the empty container by perforation, flattening and burying at an appropriate landfill and do not use it for any other purpose.
- Prevent contamination of food, feed, drinking water as well as eating utensils.

USE RESTRICTIONS

- **MISTIC** can only be used on **CLEARFIELD®** Sunflower hybrids. Non **CLEARFIELD®** hybrids of Sunflower will die if treated with **MISTIC**. For information on where to obtain **CLEARFIELD®** Sunflower, please contact your agent.
- Avoid the application of **MISTIC** to soils with a pH (KCl) of below 4.5 or above 7.2.
- Avoid overlaps whilst spraying.
- **DO NOT** use any additional wetters, spreaders or other adjuvants as **MISTIC** has already been formulated with the optimised amounts of surfactants. The only exception is the addition of Ammonium Sulphate containing formulations such as **Hyperboost SL.**, see under “General Information” below.

- Do not apply when the wind velocity exceeds 15 km / h, when the temperature inversion conditions exist or when the spray mist may drift onto sensitive crops. Ideally, a buffer zone should be established between the area to be sprayed and any sensitive crops.
- Sensitive crops may include, but are not limited to, vegetable crops, cereal and other grain crops, and Sunflower varieties other than **CLEARFIELD®** Sunflower.
- Do not apply to any crop or situation not mentioned in this label.
- Do not apply this product in combination or tank mixture with any other product or agricultural remedy which is not specifically listed on this label. Meridian Agrochemical Company (Pty) Ltd accepts no responsibility for any negative effects experienced if the instructions on this label are not adhered to, unless a Meridian representative was consulted beforehand.
- In order to avoid possible damage to follow-up crops, the following waiting periods should be taken into consideration after the application of **MISTIC**. Nevertheless, a test planting is always recommended.

| CROP | WAITING PERIOD |
|---|-----------------------|
| CLEARFIELD® Sunflower. | None |
| Wheat. | 4 months |
| Maize (All maize producing areas (including irrigation)). | 10 months |
| All other crops. | 20 months |

The above-mentioned waiting periods will only be valid if the correct quantity of **MISTIC** has been applied and an average, or above average, rainfall (with a minimum of 350 mm) between application and planting of the following crop has been recorded. When the minimum rainfall, as indicated above, has not been recorded for the season of application, the above-mentioned period should be extended by an extra 12 months. Consult the supplier in the event of any uncertainty.

RESISTANCE WARNING

For resistance management, **MISTIC** is a Group Code B Herbicide, belonging to the Imidazolinone group of herbicides. This product has the acetolactate-synthase (ALS) inhibitor mode of action. Any weed population may contain individuals naturally resistant to **MISTIC** and other Group Code B Herbicides. These resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **MISTIC** or any other Group Code B Herbicide. This is also true for **MISTIC** and other ALS-inhibiting herbicides. Therefore, Meridian Agrochemical Company (Pty) Ltd., trading as Meridian Agritech, cannot be held responsible for poor control of such resistant weeds, or any losses that may result from the use of **MISTIC**.

To delay herbicide resistance:

- It is important to understand and know the modes of action of the different herbicides available.
- Apply only one application of **MISTIC** per season.
- Avoid exclusive repeated use of herbicides from the same herbicide Group Code. Alternate or tank mix with registered products from different Herbicide Group Codes.
- Integrate other control methods (chemical, cultural, biological) into weed control programmes.

For specific information on resistance management contact the registration holder of this product.

The presence of resistant weeds is difficult to detect prior to use and therefore neither the Registration Holder nor the Distributor can accept responsibility for any losses as a result of **MISTIC** not controlling resistant weeds. Do not apply **MISTIC** alone in situations where weed resistance has been confirmed. Sub-standard application of **MISTIC** will lead to inferior weed control and may assist in development of herbicide resistance. It is of the utmost importance to inspect treated areas at regular intervals in order to identify the occurrence of herbicide-resistant weeds timeously.

MODE OF ACTION

MISTIC is a branched chain amino acid synthesis (ALS or AHAS) inhibitor. This causes the disruption of protein synthesis, which then leads to an interference in DNA synthesis and cell growth. This causes chlorosis and tissue necrosis of new leaves. Imazapyr is a systemic, contact and residual herbicide, and is absorbed by the foliage and roots, with rapid translocation in the Xylem and Phloem to the meristematic regions, where it accumulates. Imazamox is a pre- and post-emergence herbicide, with contact and residual activity, and is absorbed through both the foliage and roots. It is then translocated to the growing points.

DIRECTIONS FOR USE

Use only as directed.

General information:

- **CLEARFIELD** is an internationally registered trademark belonging to BASF, and appears in a registered logo including the words ***CLEARFIELD Production System***.
- The words ***CLEARFIELD* Production System*** is a combination of agronomically advanced seeds (natural selection) and custom designed herbicides. The **CLEARFIELD*** name and logo link the seed and herbicide together. These plants are not GMO's.
- The mode of action of **MISTIC** involves the uptake by the plant foliage, followed by translocation to the growth points. Following **MISTIC** application, susceptible weeds may show yellowing and weed growth will stop. Susceptible weeds stop growing and either die, or are not competitive with the crop.
- **MISTIC** must only be applied to **CLEARFIELD®** Sunflower after the 2-leaf stage of the crop (ideally at the 4-leaf stage). However, do not apply when the leaf canopy of the crop is too large as this could intercept the spray and prevent the herbicide from reaching the targeted weeds.
- Application should be completed by 32 days after planting.
- The weeds must be between the 2- and 6-leaf stages at application and must be actively growing. The weeds should not be under stress (e.g. drought, waterlogged or nutrient imbalances) during application, as this can limit the uptake and translocation of the product, resulting in poor weed control.
- Adequate soil moisture is essential for optimum **MISTIC** activity.
- In regions where the water quality is known to be poor, an adjuvant such as **Hyperboost SL** or **BOOST-UP AS** can be used to ameliorate the water before adding **MISTIC**. Use an adjuvant such as **Hyperboost SL** or **BOOST-UP AS** at a 2% dilution (see applicable label).
- Ensure thorough coverage and wetting of the weeds.
- **Important:** Only one application of **MISTIC** may be made per growing season. In the situation where **CLEARFIELD®** Sunflowers are replanted for any reason and where **MISTIC** was applied to the first planting, DO NOT re-apply **MISTIC** to the second planting. A shallow cultivation of the soil to no deeper than 5 cm is suggested, so that the option of a pre-emergent grass herbicide can be used at re-planting (refer to the appropriate labels for full recommendations).
- A transient yellowing of crops (so-called "yellow flash"), or shortening of the internodes, may occur 5 – 8 days following a **MISTIC** application. However, no adverse effects on yield will occur. These effects can be more pronounced if an adjuvant such as **Hyperboost SL** or **BOOST-UP AS** has been included in the tank mixture and if crops are growing under stressful environmental conditions. Therefore, ensure that the best agronomic practices are followed including soil preparation, adequate fertilization and disease control in the seedling phase.

COMPATIBILITY

The compatibility of **MISTIC** with other products depends on the formulations of the respective products as well as the quality of the spray water to be used. As formulations change from time to time it is recommended that a physical compatibility test be done prior to the tank mixture being made. Do not mix **MISTIC** with any products not listed in this label. **MISTIC** is compatible with **Hyperboost SL** and **BOOST-UP AS**. Do not mix **MISTIC** with any organophosphate or carbamate insecticides.

When using other products in a spray program with MISTIC, always consult the labels of those particular products regarding directions and restrictions for their application and crop rotation recommendations.

MIXING AND APPLICATION INSTRUCTIONS

Three-quarter fill the spray tank with clean water. Make a premix by carefully measuring out the required amount of **MISTIC** and mixing it with at least 10 l of clean water, and then add the premix to the water in the tank while agitating. Add the mixing partner to the tank. **Maintain constant agitation.** Should tank mixtures with other herbicides be made, follow the respective manufacturers' label recommendations. If any other product is to be mixed with **MISTIC**, pre-mix the required volume of the product in a similar fashion. Agitate the water in the spray tank and, if needed, add **Hyperboost SL** first, allowing for sufficient mixing before adding the **MISTIC**. Fill the spray tank to the desired volume with water while maintaining agitation. **Tank mixtures must be sprayed out immediately and not allowed to stand in the spray tank.** Spraying equipment must be thoroughly flushed out at the end of the spraying operation.

APPLICATION METHODS

Ensure that the equipment is correctly calibrated and is checked regularly during application to ensure even and accurate application. Ensure uniform coverage

RECOMMENDATIONS

| CROP | DOSAGE (ℓ / HA) | DIRECTIONS FOR APPLICATION |
|--------------------------|-----------------|--|
| Clearfield® Sunflower | 1.0 | <p>MISTIC should always be part of a programme application. Always start the programme by using a pre-emergence grass herbicide such as UNIMOC EC.</p> <p>Post-emergent application:</p> <p>MISTIC must be applied at the 2 – 6 leaf stage of the weeds. Any grass weeds must be treated before tillering starts. The Sunflower seedlings must be between the 2 – and 6 – leaf stages. It is, therefore, important to apply when most of the weeds have emerged together with consideration given to the crop stage. However, do not delay application beyond this time as reduced efficacy can be expected for older weeds. The timing of this application should be completed by 32 days after planting.</p> <p>Ground application: Apply MISTIC in 150 – 250 ℓ water / ha.</p> <p>Aerial application is not recommended.</p> |

WEEDS NORMALLY CONTROLLED:

The following weeds will normally be controlled by MISTIC when applied following the use of a pre-emergent grass control product such as Unimoc EC:

Grasses:

| Scientific name | Common name |
|--|-------------------|
| <i>Digitaria sanguinalis</i> | Crab finger-grass |
| <i>Eleusine indica</i> subsp. <i>africanum</i> | Goose grass |

Broadleaf weeds:

| Scientific name | Common name |
|----------------------------|-------------------|
| <i>Amaranthus hybridus</i> | Common pigweed |
| <i>Chenopodium album</i> | White goosefoot |
| <i>Datura ferox</i> | Large thorn apple |
| <i>Hibiscus trionum</i> | Bladder hibiscus |
| <i>Portulaca oleracea</i> | Purslane |
| <i>Tribulus terrestris</i> | Devil Thorn |

Also refer to the weed spectrum of the pre-emergent grass control herbicides mentioned above. Weed species such as *Bidens* spp., *Datura* spp. and some other weeds that germinate erratically, even during the latter part of the season, may not be effectively controlled up to harvest.

Suppression of between 60 – 90% of the following weeds will be achieved with MISTIC following the use of a registered pre-emergent grass herbicides such as Unimoc EC.

Grasses:

| Scientific name | Common name |
|-------------------------|---------------------|
| <i>Panicum schinzii</i> | Sweet buffalo grass |

Broadleaf weeds:

| Scientific name | Common name |
|--------------------------|--------------------|
| <i>Schkuhria pinnata</i> | Dwarf marigold |

The **MISTIC** treatments control or suppress the above-mentioned weed species as listed. Other weed species that were not present in the development trials of this product may also be controlled or suppressed to a certain degree. The registration holder accepts no responsibility for unlisted weeds.

ACKNOWLEDGEMENT OF TRADEMARKS

| | |
|------------------------|---|
| Boost-up AS (L 7770) | Meridian Agrochemical Company (Pty) Ltd |
| Hyperboost SL (L 7346) | Arysta Life Science (Pty) Ltd. |
| Unimoc EC (L 7341) | Meridian Agrochemical Company (Pty) Ltd |

WAARSKUWINGS

Laat die volgende minimum aantal dae toe tussen laaste toediening en oes van die gewas:

Clearfield® Sonneblom.....70 dae

BELANGRIK: Die aanbevole onthoudingsperiode tussen laaste toediening en oes voldoen aan die vereistes van plaaslike residuvlakke, maar mag dalk nie aan vereistes vir uitvoer voldoen nie.

- Giftig indien ingesluk.
- Hanteer versigtig.
- Skadelik vir akwatiese organismes. Mag langtermyn nadelige gevolge vir die waterlewe veroorsaak.
- Bêre agter slot-en-grendel in 'n koel droë plek, weg van voedsel, voer en saad.
- Hou buite bereik van kinders, diere en oningeligte persone.
- Moet nie bo-oor water en aangrensende gebiede spuit nie, of toelaat dat spuitnewel hierdie genoemde gebiede besoedel nie.
- Om skade op ander gewasse te vermy, moet alle spuittoerusting na die gebruik van **MISTIC**-toediening geledig word en deeglik met water uitgewas word voordat dit gebruik word vir bespuiting met ander produkte op gewasse.
- Gebruik slegs op die goedgekeurde **CLEARFIELD®** Sonneblom-variëteite, soos deur die toepaslike saadmaatskappye geregistreer.
- **Herbetreding:** Moenie die behandelde gebied betree alvorens die spuitneerslag droog is nie, tensy beskermende oorklere gedra word.

Alhoewel hierdie middel omvattend onder 'n groot verskeidenheid toestande getoets is, waarborg die registrasiehouer nie dat dit onder alle toestande doeltreffend sal wees nie. Die werking en doeltreffendheid daarvan kan beïnvloed word deur faktore soos abnormale grond-, klimaats- en bergingstoestande; kwaliteit van verdunningswater, verenigbaarheid met ander stowwe wat nie op die etiket aangedui word nie en die voorkoms van weerstand van die onkruid teen die betrokke middel, sowel as die metode, tyd en akkuraatheid van die toediening. Verder aanvaar die registrasiehouer nie verantwoordelikheid vir skade aan gewasse, plantegroei, die omgewing of vir nadelige invloede op mens of dier of vir 'n gebrek aan prestasie van die betrokke middel as gevolg van die versuim van die gebruiker om etiketaanwysings na te kom, of as gevolg van die ontstaan van toestande wat nie kragtens die registrasie voorsien kon word nie. Raadpleeg die verskaffer in die geval van enige onsekerheid.

VOORSORGMAATREËLS

- Vermy die inaseming van dampe en sproeinewel.
- Was deeglik met seep en water na gebruik asook in die geval van aanraking met vel.
- Moenie rook, eet of drink met hantering van die produk of voordat hande en gesig gewas is en skoon klere aangetrek is nie.
- Verhoed wegdrywing van die sproeinewel na ander gewasse, weidings, riviere, damme of ander gebiede wat nie behandel word nie.
- Maak toerusting voor en na gebruik skoon. Gooi die waswater weg waar dit nie die omgewing en ander gewasse, weidings, riviere en damme sal besoedel nie.
- Moenie toedien waar wortels van gewenste plantegroei die middel kan opneem nie.
- Leë houers moet drie keer uitgespoel word soos volg: Keer die leë houer om oor die spuittenk of mengbak en dreineer vir minstens 30 sekondes nadat die vloei tot 'n gedrup verminder het. Spoel die houer daarna drie keer uit met 'n volume water gelykstaande aan 'n minimum van 10% van die houer. Gooi die spoelwater by die inhoud van die spuittenk voordat die houer op die voorgeskrewe wyse vernietig word.
- Vernietig leë houers deur gate daarin te maak, plat te slaan, en by 'n goedgekeurde stortingsterrein te begrawe en moet nie vir enige ander doel gebruik nie.
- Verhoed die besoedeling van voedsel, voer, drinkwater en eetgerei.

GEBRUIKSBEPERKINGS

- **MISTIC** kan slegs op goedgekeurde **CLEARFIELD®** Sonneblom-variëteite gebruik word. Nie-**CLEARFIELD®** Sonneblom-variëteite sal vrek indien dit met **MISTIC** bespuit word. Vir meer inligting rakende die verkryging van **CLEARFIELD®** Sonneblomsaad, skakel gerus u agent.
- Vermoed die toediening van **MISTIC** op gronde met 'n pH (KCl) onder 4,5 of bokant 7,2.
- Vermoed die oorvleueling van spuitbane tydens toediening.
- **MOENIE** addisionele benatters, verspreiders of ander byvoegmiddels saam met **MISTIC** gebruik nie, aangesien dit alreeds met optimale hoeveelhede byvoegmiddels geformuleer is. Die enigste uitsondering is die byvoeging van Ammoniumsulfaat-bevattende formuleringe soos **Hyperboost SL**, sien "Algemene Inligting" hieronder.
- Toediening moet gestaak word indien die windsnelheid 15 km/h oorskry, wanneer temperatuurinversie-toestande voorkom of wanneer die spuitnewel na sensitiewe gewasse mag oorwaai. Verkieslik moet 'n buffersonne tussen die behandelde gebied en die gevoelige gewasse gelaat word.
- Gevoelige gewasse mag die volgende insluit, maar is nie beperk tot, groentegewasse, graangewasse en sonneblom-variëteite wat nie **CLEARFIELD®** Sonneblom is nie.
- Moet nie op enige gewas of situasie aanwend wat nie in die voorskrif etiket verskyn nie.
- Moet nie hierdie produk in kombinasie of tenkmengsel met enige ander produk of landboumiddel gebruik wat nie spesifiek op hierdie etiket gelys is nie. Meridian Agrochemical Company (Edms.) Bpk. aanvaar geen verantwoordelikheid vir enige negatiewe gevolge indien die instruksies op die etiket nie nagekom word nie, tensy 'n Meridian Agritech verteenwoordiger vooraf geraadpleeg is.
- Om moontlike skade aan opvolggewasse te voorkom, moet die volgende wagperiodes in ag geneem word, nadat **MISTIC** toegedien is. 'n Toetsaanplanting word nogsteeds aanbeveel.

| GEWAS | WAGPERIODE |
|--|------------|
| CLEARFIELD® Sonneblom | Geen |
| Koring | 4 maande |
| Mielies (Alle mielieproduserende-streke (besproeiing ingesluit)) | 10 maande |
| Alle ander gewasse | 20 maande |

Die bogenoemde wagperiodes geld slegs indien die korrekte hoeveelheid **MISTIC** toegedien is en 'n gemiddelde of bo-gemiddelde reënval (met 'n minimum van 350mm) tussen die toediening en aanplanting van die opvolggewas voorgekom het. Indien die minimum reënval, soos hierbo aangedui, nie gedurende die seisoen voorgekom het nie, moet die bogenoemde wagperiodes met 'n addisionele 12 maande verleng word. Kontak die verskaffer in geval van onsekerheid.

WEERSTANDBIEDENHEIDS-WAARSKUWING

Vir weerstandsbestuur moet daarop gelet word dat **MISTIC** 'n Groepkode B onkruidodder is en tot die Imidasoloon-groep onkruidodders behoort. Die produk besit die asetolaktaatsintese onderdrukkende (ASL) metode van werking. Enige onkruidpopulasie mag individue (biotipes) insluit wat 'n natuurlike weerstandbiedendheid teen **MISTIC** en enige ander Groepkodes B onkruidodders het. Hierdie weerstandbiedende individue kan uiteindelik die onkruidbevolking oorheers indien hierdie onkruidodders herhaaldelik aangewend word. Hierdie weerstandbiedende onkruid mag dan nie deur **MISTIC** of enige ander Groepkodes B onkruidodders beheer word nie. Dit is ook dan waar vir **MISTIC** en ander ALS-onderdrukkende onkruidodders. Daarom kan Meridian Agrochemical Company (Edms.) Bpk., handeldrywend as Meridian Agritech, nie verantwoordelik gehou word vir die swak beheer van sulke weerstandbiedende onkruid nie, of enige verliese gelyk as gevolg van die gebruik van **MISTIC** nie.

Om weerstand teen onkruidodders te verhoog:

- Dit is belangrik om die metode van werking van die verskillende beskikbare onkruidodders te ken en te verstaan.
- Wend slegs een toediening van **MISTIC** per seisoen aan.
- Vermoed die eksklusiewe herhaaldelike gebruik van onkruidodders met dieselfde Onkruidoddergroepkode. Wissel af met, of gebruik tenkmengsels van geregistreerde produkte in verskillende Onkruidoddergroepkodes.
- Integreer ander beheermaatreëls (chemies, verbouing, biologies) in onkruidodderprogramme.

Vir spesifieke inligting oor weerstandsbestuur moet die registrasiehouer van hierdie produk gekontak word.

Die teenwoordigheid van weerstandbiedende onkruid is moeilik om voor gebruik te bepaal en gevolglik kan nie die Registrasiehouer of die Verspreider verantwoordelikheid aanvaar vir enige verlies wat veroorsaak is deurdat **MISTIC** nie weerstandbiedende onkruid beheer nie. Moenie **MISTIC** op sy eie in omstandighede waar onkruidweerstand bekend is, gebruik nie. Sub-standaard toedienings van **MISTIC**

sal tot swak onkruidbeheer lei en onkruidodderweerstandbiedendheid aanmoedig. Dit is uiters belangrik om behandelde gebiede met gereelde intervalle te ondersoek om sodoende die bestaan van weerstandbiedende onkruid betyds te identifiseer.

METODE VAN WERKING

MISTIC is 'n vertakte-ketting aminosuursintese- (ALS of AHAS) inhibeerder. Dit veroorsaak die ontwinging van proteïensintese wat lei tot die inmenging in DNS-sintese en selgroeï. Dit veroorsaak vergeling en weefselnekrose by nuwe blare. Imasapir is 'n sistemiese, kontak en nawerkende onkruidodder wat deur die blare en wortels geabsorbeer word en vining deur die Xileem en Floeëem translokeer om in die meristematische dele te vergader. Imasamoks is 'n voor- en na-opkoms onkruidodder met kontak en nawerkende eienskappe wat deur beide blare en wortels geabsorbeer word. Dit word dan na die groeipunte getranslokeer.

GEBRUIKSAANWYSINGS

Gebruik slegs soos aangedui.

Algemene Inligting:

- **CLEARFIELD®** is 'n internasionaal geregistreerde handelsmerk wat aan BASF behoort. Dit verskyn as 'n geregistreerde handelsmerk (logo) en sluit die woorde "**CLEARFIELD® Production System**" in.
- "**CLEARFIELD® Production System**" is 'n kombinasie van landboukundig gevorderde saad en tegnologie ontwikkelde onkruidodder. Die **CLEARFIELD®** naam en logo verbind die saad en onkruidodder as een handelsnaam (eenheid). Hierdie plante is nie GGO nie.
- Die metode van werking van **MISTIC** behels die opname deur die blare en die gevolglike translokasie na die groeipunte. Nadat **MISTIC** toegedien is, sal die vatbare onkruid geel verkleur en sal die groeiproses eindig. Vatbare onkruid sal of doodgaan of geen verdere kompetisie vir die gewas inhou nie.
- **MISTIC** moet net op **CLEARFIELD®** Sonneblom na die 2-blaar stadium van die gewas (verkieklik die 4-blaar stadium) gebruik word. Moet egter nie wanneer die blaredak te groot is spuit nie, want dit sal verhoed dat die onkruidodder die teiken gebied bereik.
- Toediening moet binne 32 dae na aanplanting voltooi wees.
- Die onkruid moet tydens toediening tussen die 2- en 6-blaar stadium en aktief groeiend wees. Die onkruid moet tydens toediening nie onder enige stremming (bv. droogte, versuip of voedingswanbalanse) verkeer nie. Dit kan die opname en translokering van die produk benadeel en gevolglike swak onkruidbeheer tot gevolg hê.
- Voldoende grondvog is noodsaaklik vir die optimale werking van **MISTIC**.
- In gebiede waar swak waterkwaliteit bekend is, moet **Hyperboost SL** of **BOOST-UP AS** as 'n byvoegmiddel gebruik word om die water te versag alvorens **MISTIC** bygevoeg word. Gebruik **Hyperboost SL** of **BOOST-UP AS** teen 2% verdunning (sien die betrokke etiket).
- Verseker deeglike bedekking en benatting van die onkruid.
- **Belangrik:** Slegs een toediening **MISTIC** mag per groeiseisoen toegedien word. In die geval van 'n heraanplanting vir enige rede van **CLEARFIELD®** Sonneblomme, waar **MISTIC** alreeds met die eerste aanplanting gespuit is, mag **MISTIC** nie weer by die tweede aanplanting gespuit word nie. 'n Vlak bewerking van die grond, nie dieper as 5 cm nie, word voorgestel, sodat die opsie van 'n voor-opkomsgrasonkruidodder met die heraanplanting weer toegedien kan word (verwys na die toepaslike etikette vir aanwysings).
- 'n Verbygaande vergeling van die gewas ("yellow flash"), of verkorting van die internodes mag 5 – 8 dae na die **MISTIC** - toediening voorkom. Geen nadelige oesopbrengs sal egter ervaar word nie. Hierdie simptome mag meer prominent vertoon wanneer byvoegmiddels soos **Hyperboost SL** of **BOOST-UP AS** by die tenk mengsel gevoeg word, of wanneer die gewas onder omgewingstremmingtoestande verkeer. Verseker dus dat die beste landboukundige praktyke gevolg word, insluitend grondvoorbereiding, genoegsame kunsmis en siektebeheer gedurende die saailing stadium.

VERENIGBAARHEID

Die verenigbaarheid van **MISTIC** met ander produkte sal van die formulerings van die onderskeie produkte afhang, asook van die kwaliteit van die spuitwater wat gebruik word. Soos formulerings van tyd tot tyd verander, is dit raadsaam om eers 'n fisiese verenigbaarheidstoets te doen voordat tenk mengsels gemaak word. Moenie **MISTIC** met enige produkte wat nie in hierdie etiket gelys is, meng nie. **MISTIC** is verenigbaar met **Hyperboost SL** en **BOOST-UP AS**. Moenie **MISTIC** met organofosfaat- of karbamaatonkruidodders meng nie.

Wanneer ander produkte saam met MISTIC in 'n spuitprogram gebruik word, moet die etiket van daardie betrokke produkte altyd geraadpleeg word, rakende die toedieningsaanwysings en -beperkings, asook gewasrotasie-aanbevelings.

MENG- EN TOEDIENINGSINSTRUKSIES

Maak die spuittenk driekwart vol met skoon water. Meet die verlangde hoeveelheid **MISTIC** versigtig af en meng dit vooraf met minstens 10 l skoon water en voeg dan hierdie voorafmengsel by die tenk terwyl roering plaasvind. **Verseker konstante roering.** Indien tenkmengsels met ander onkruidodders gemaak word, volg die onderskeie vervaardigers se etiket-aanbevelings. Indien enige ander produk met **MISTIC** gemeng word, meng die verlangde hoeveelheid vooraf op dieselfde manier. Roer die water in die spuittenk en indien nodig, voeg **Hyperboost SL** eerste by, en na voldoende roering, voeg die **MISTIC** by. Vul die spuittenk met water tot by die verlangde vlak terwyl daar voortdurend geroer word. **Tenkmengsels moet dadelik uitgespuit word en nie vir lang periodes in die spuittenk staan nie.** Spuittoerusting moet deeglik uitgewas en gespoel word aan die einde van die spuitproses.

TOEDIENINGSMETODES

Verseker dat die toerusting korrek gekalibreer is en gereeld gedurende die bespuiting nagegaan word om egalige en akkurate toediening te verseker. Verseker eenvormige bedekking.

AANBEVELINGS

| GEWAS | DOSIS (l / HA) | TOEDIENINGSVOORSKRIFTE |
|--------------------------|----------------|--|
| Clearfield® Sonneblom | 1.0 | <p>MISTIC moet altyd in 'n programbespuiting toegedien word. Begin die program altyd met 'n voor-opkomsgrasonkruidodder soos UNIMOC EC.</p> <p>Na-opkomstoediening:</p> <p>MISTIC moet tydens die 2 - 6 blaarstadium van die onkruid toegedien word. Enige grasonkruid moet behandel word voor die uitstoelstadium bereik word. Die sonneblomsaailinge moet tussen die 2- en 6-blaarstadium wees. Dit is daarom belangrik dat toediening geskied wanneer die meeste onkruid alreeds opgekom het, inagneming van die gewasstadium. Moet egter nie toediening na hierdie tyd toepas nie, want dit sal verlaagde effektiwiteit by ouer onkruid veroorsaak. Die tydsbestek van hierdie toediening behoort 32 dae na plant afgehandel te wees.</p> <p>Grondtoediening: Dien MISTIC in 150 – 250 l water / ha toe.</p> <p>Lugtoediening word nie aanbeveel nie.</p> |

ONKRUIDE WAT NORMAALWEG BEHEER WORD:

Die volgende onkruid word normaalweg deur MISTIC beheer na die toediening van 'n voor-opkoms grasonkruidodder soos UNIMOC EC:

Grasse:

| Wetenskaplike naam | Gewone naam |
|--|-----------------|
| <i>Digitaria sanguinalis</i> | Kruisvingergras |
| <i>Eleusine indica</i> subsp. <i>africanum</i> | Jongosgras |

Breëblaaronkruid:

| Wetenskaplike naam | Gewone naam |
|----------------------------|------------------|
| <i>Amaranthus hybridus</i> | Kaapse misbredie |
| <i>Chenopodium album</i> | Withondebossie |
| <i>Datura ferox</i> | Groot stinkblaar |

| | |
|----------------------------|-------------------|
| <i>Hibiscus trionum</i> | Terblansbossie |
| <i>Portulaca oleracea</i> | Gewone porslein |
| <i>Tribulus terrestris</i> | Gewone dubbeltjie |

Verwys ook na die onkruidspektrum wat deur die voor-opkomsgrasonkruidodders wat hierbo genoem word, beheer word. Onkruidspesies soos *Bidens* spp., *Datura* spp. en sommige ander onkruid wat wisselvallig ontkiem, selfs gedurende die laaste gedeelte van die seisoen, mag tot en met oes, swak beheer word.

Onderdrukking van tussen 60 – 90% van die volgende onkruid sal met MISTIC bereik word, na die gebruik van 'n geregistreerde voor-opkoms onkruidodder soos UNIMOC EC.

Grasse:

| Wetenskaplike naam | Gewone naam |
|-------------------------|-----------------|
| <i>Panicum schinzii</i> | Soetbuffelsgras |

Breëblaaronkruid:

| Wetenskaplike naam | Gewone naam |
|--------------------------|---------------|
| <i>Schkuhria pinnata</i> | Kleinkakiebos |

Die **MISTIC**- behandelings beheer of onderdruk die bogenoemde onkruidspesies soos gelys. Ander onkruid wat nie tydens die ontwikkelingsproewe teenwoordig was nie, mag ook tot 'n mate beheer of onderdruk word. Die registrasiehouer aanvaar geen verantwoordelikheid vir ongelyste onkruid nie.

ERKENNING VAN HANDELSMERKE

Boost-up AS (L 7770)
Hyperboost SL (L 7346)
Unimoc EC (L 7341)

Meridian Agrochemical Company (Pty) Ltd.
Arysta Life Science (Pty) Ltd.
Meridian Agrochemical Company (Pty) Ltd.