

## 2,4-DMAX HL

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| <p><b>BEFORE USING THIS PRODUCT, READ THE LABEL CAREFULLY</b></p>                                                                                                                                                        |                                                                                                                               |
| <p><b>2,4-DMAX HL</b> <span style="float: right;"><b>HERBICIDE</b></span></p>                                                                                                                                            |                                                                                                                               |
| <p>Reg. No. L10725, Act/Wet No. 36 of/van 1947</p> <p>1: 20/08/2019</p>                                                                                                                                                  |                                                                                                                               |
| <p><b>A selective, soluble concentrate herbicide for the post-emergence control of weeds in the crops as indicated.</b></p>                                                                                              | <p><b>'n Selektiewe, wateroplosbare konsentraat onkruidodder vir die beheer van onkruid in die gewasse soos aangedui.</b></p> |
| <p><b>HRAC HERBICIDE GROUP CODE</b></p>                                                                                                                                                                                  | <p><b>O</b></p>                                                                                                               |
| <p><b>HRAC ONKRUIDDODERGROEPKODE</b></p>                                                                                                                                                                                 |                                                                                                                               |
| <p><b>ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL</b></p>                                                                                                                                                                    |                                                                                                                               |
| <p>2,4-D (phenoxy compound) 720 g/l<br/>(as dimethylamine salt)</p>                                                                                                                                                      | <p>2,4-D (fenoksieverbinding)<br/>(as dimetielamiensout)</p>                                                                  |
| <p>Registration Holder / Registrasiehouer<br/><b>Meridian Agrochemical Company (Pty.) Ltd. / (Edms.) Bpk.</b><br/>Reg. No. 2000/010819/07<br/>P.O. Box / Posbus 436, Modderfontein, 1645, South Africa / Suid-Afrika</p> |                                                                                                                               |
| <p>UN Number: 3082</p>                                                                                                                                                                                                   |                                                                                                                               |
| <p><b>Meridian agritech</b></p>                                                                                                                                                                                          |                                                                                                                               |
| <p><b>HARMFUL / SKADELIK</b></p>                                                                                                                                                                                         |                                                                                                                               |

## WARNINGS

- Allow a minimum of 7 days between application and feeding or grazing.
- Handle with care.
- Harmful if swallowed, inhaled or by contact with skin.
- Toxic to fish.
- Keep out of reach of children, animals and uninformed people.
- Store under lock and key in a cool, dry, well-ventilated area away from food, feed, seed, fertilizers and other types of agricultural remedies.
- In the case of poisoning, call a physician and make this label available to him / her.
- Avoid skin and eye contact.
- Wear protective clothing (rubber gloves and face shield) when handling the concentrate.
- Do not spray over, or allow any spray drift to contaminate, water and adjacent areas.
- Comply with the instructions for use in order to avoid risks to man and the environment.
- Store in the original, tightly closed container away from sun and damp.
- Do not apply to land adjacent to susceptible crops as well as grain varieties at a susceptible stage of growth.
- **Re-entry:** Do not enter the treated area within 1 day after treatment unless wearing protective clothing.
- **Aerial application:** Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not apply over water bodies and ensure that spray drift will not contaminate areas not under treatment.
- **2,4-DMAX HL** has been tested on the most important commercial cultivars. More susceptible cultivars may be released in the future which need to be tested; for this, apply **2,4-DMAX HL** to a limited test area before commercial applications are made.

**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

- Avoid drift of spray onto other crops, grazing, rivers, dams and areas not under treatment.
- Do not inhale fumes or spray mist.
- Do not contaminate surface water or ditches with any chemicals or used containers.
- Product must be stored sealed in the original product container.
- Do not smoke, eat or drink whilst handling this product or before washing hands and face and changing clothes.
- Prevent contamination of food, feed, drinking water as well as eating utensils
- Avoid skin, eye or clothing contact with the concentrate or spray mixture.
- Wear protective clothing (impermeable gloves, and eye / face protection) while handling this product.
- Wash with soap and water directly after use and after skin contact.
- Thoroughly wash protective equipment and contaminated clothing after use.
- Wash immediately after accidental skin contact with soap and water.
- In case of eye contact, immediately flush with plenty of running water.
- 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 30% of the volume of the container. Add the rinsings to the contents of the spray tank before destroying the container in the prescribed manner.
- 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.
- Clean the applicator using a 1% household ammonia solution after use. Allow the solution to stand for several hours before rinsing at least twice with clean water. The solution and water must be disposed of where it will not contaminate food, crops, grazing, rivers or dams. This applicator should be reserved for the application of herbicides only.
- Application equipment must not be flushed or drained near any desirable plants, shrubs or trees or within their root zones.
- Keep children and animals away from stacked and waste material.
- Destroy the empty container by perforation and flattening and dispose of it in a safe way in accordance with local regulations, such as by burning or burying it. Do not use it for any other

purpose.

## SYMPTOMS OF HUMAN POISONING

Exposure may cause nausea, vomiting, dizziness, temporary loss of vision, abdominal pain, diarrhoea, headache, hypotension, confusion, aggression, bizarre behaviour, muscle twitching, muscle weakness, loss of muscle coordination, muscle stiffness, loss of tendon reflexes, coughing or burning sensations in the upper respiratory tract and chest. Some of these symptoms may persist for a length of time or even be permanent.

## FIRST AID TREATMENT

**Skin contact:** Immediately remove contaminated clothing, shoes and leather goods. Gently wipe off excess chemical and flush body and clothes with large amounts of water and non-abrasive soap for at least 15-20 minutes. Wash contaminated clothing before re-use. Seek medical assistance immediately if irritation persists.

**Eye contact:** Flush eyes with plenty of gently flowing cold water for at least 15 minutes holding eyelids open. Remove any contact lenses after the first 5 minutes of flushing. **Seek medical assistance immediately.**

**Inhalation:** Lie the patient down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear, apply resuscitation and administer oxygen. Seek medical assistance immediately if irritation persists.

**Ingestion: Do not induce vomiting. Get medical attention immediately** and make this container, label or material safety data sheet available. If swallowed, give the patient large amounts of water to drink immediately, if the patient is alert and able to swallow. Never give anything by mouth to an unconscious person. If the patient is alert and able, rinse the mouth out with water. If vomiting occurs following the administration of water, administer more water if the patient is alert and able. For advice, contact the National Poisons Centre. If vomiting occurs, take precautions to ensure that the vomit is not swallowed.

## NOTE TO PHYSICIAN

No antidote is known. Treat symptomatically and supportively as and when needed. If large quantities have been ingested, gastric lavage may be considered as well as the administration of activated charcoal.

## MODE OF ACTION

**2,4-DMAX HL** is a selective systemic herbicide. Salts are readily absorbed by the roots, whilst esters are readily absorbed by the foliage. Translocation occurs, with accumulation principally at the meristematic regions of shoots and roots. Acts as a growth inhibitor.

## USE RESTRICTIONS

- Do not apply near or on broadleaf crops, fruit or ornamentals.
- Do not apply this product by means of aerial application in KwaZulu Natal.
- Do not apply to crops under stress (heat, drought, cold, waterlogging, nutrient deficiencies)
- 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.
- Take the windspeed and direction into consideration when this product is applied. These factors will determine the distance.

| Windspeed (km / hr) | Aerial application                                | Ground Application                                |
|---------------------|---------------------------------------------------|---------------------------------------------------|
| 1.5 – 5             | 800 m downwind<br>800 m crosswind<br>15 m upwind  | 200 m downwind<br>200 m crosswind<br>6 m upwind   |
| 5 – 10              | 1.6 km downwind<br>800 m crosswind<br>15 m upwind | 400 m downwind<br>200 m crosswind<br>1.5 m upwind |
| 10 – 15             | 3.2 km downwind<br>800 m crosswind<br>15 m upward | 800 m downwind<br>400 m crosswind<br>1.5 m upwind |
| >15                 | Prohibited                                        | Prohibited                                        |

## RESISTANCE WARNING

For resistance management, **2,4-DMAX HL** is a group code O herbicide. Any weed population may contain individuals naturally resistant to **2,4-DMAX HL** and other Group Code O herbicides. These resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **2,4-DMAX HL** or any other group code O herbicide.

### To delay herbicide resistance:

- 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 **2,4-DMAX HL** not controlling resistant weeds. Do not apply **2,4-DMAX HL** alone in situations where weed resistance has been confirmed. Sub-standard application of **2,4-DMAX HL** 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.

A local farm strategy for preventing and managing resistance should be adopted, Guidelines have been produced by the Herbicide Resistance Action Group (HRAC) and copies are available from HRAC, your distributor or agents, independent crop advisor or Meridian Agritech.

## DIRECTIONS FOR USE

**Use only as directed.**

## COMPATIBILITY

The compatibility of **2,4-DMAX HL** 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 with any products not listed in this label.

When using other products in a spray program with **2,4-DMAX HL**, always consult the labels of those particular products regarding directions and restrictions for their application and crop rotation recommendations.

Consult a Meridian Agritech representative for details.

## MIXING AND APPLICATION INSTRUCTIONS

Half-fill the spray tank with suitable water, then add the required amount of **2,4-DMAX HL** to the water in the tank while agitating. Fill the spray tank to the desired volume. Should tank mixtures with other herbicides be made, follow the respective manufacturers' label recommendations. If tank mixtures are used, first add the **2,4-DMAX HL** to a half-filled spray tank, followed by the tank mixture partner. Thereafter, top up with the required amount of clean water. **Tank mixtures must be sprayed out immediately and not be allowed to stand in the spray tank overnight.** Spraying equipment must be thoroughly flushed out at the end of the spraying operation.

**Ensure constant and thorough agitation during mixing and spray operations.**

## APPLICATION METHODS

It is recommended to apply 500 l of spray mixture per ha to ensure effective coverage. Ensure that the spray applicator is correctly calibrated. The use of flat fan nozzles is recommended. The spray equipment must be thoroughly flushed out at the end of the spraying operation.

### Aerial application

**Do not apply this product by means of aerial application in KwaZulu-Natal.**

Aerial application may only be done by a registered aerial application operator using a registered and correctly calibrated aircraft according to the instructions of SANS Code 10118 (Aerial Application of Agricultural Remedies). It is important to ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria are met:

### Equipment

- Use suitable atomising equipment that will produce the desired droplet size and coverage of the target area and will ensure minimum loss of product through drift.
- The spraying system must produce a droplet spectrum with the lowest possible Relative Span.
- All nozzles and atomisers should be positioned within the inner 60-75% of the wingspan to prevent droplets from entering the wingtip vortices.

### Application Parameters

- A droplet spectrum with a VMD of 300-350 microns is recommended. Ensure that the production of fine droplets, with a VMD of less than 150 microns, is restricted to a minimum.
- The height of the spray boom should be maintained at 3 - 4m above the target.
- Do not spray when the aircraft is in a climb, at the top of a turn or during a dive or when banking.
- A minimum volume of 30 – 35 l spray mixture per ha is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy nor be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended.
- A minimum droplet coverage of 30 – 40 droplets per sq. cm must be recovered at the target.

### Meteorological Conditions

- The difference between the wet and dry bulb readings as determined by a whirling hygrometer must not exceed 8 °C.
- Do not spray under turbulent, unstable conditions or during the heat of the day when rising thermals and downdraughts occur.
- Do not spray under temperature inversion conditions (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80% and above). As this may lead to:
  - a) Reduced efficacy due to inadequate coverage due to suspension and evaporation of small droplets in the air.
  - b) Damage to sensitive crops and non-target areas due to drifting of the suspended spray cloud away from the area under treatment.
- Do not spray when the wind speed exceeds 15 km per hour.

### General

- Ensure that fields are accurately marked and that the aerial spray operator knows exactly which fields to spray.
- Obtain an assurance from the aerial spray operator that the above requirements will be met and that the relevant data will be kept for future reference.

### Pre-emergence applications:

It is important to plant the crop into a well-tilled, moist, clod-free seedbed in order to ensure a high percentage weed germination immediately after planting. Do not apply under cold conditions, with or without frost. For the control of annual grass weeds, apply **2,4-DMAX HL** before the grasses emerge. The duration of weed control is expected to last from 3 - 6 weeks.

### Post-emergence applications

Apply only when the crop is in a suitable stage of development (refer to **Application Table**) and when the soil is moist. Applying **2,4-DMAX HL** when the weeds are still in the early stages of development (2-4 leaf stage) will ensure the best results. The higher dosage rates will be required as the weeds mature, however do not exceed the maximum dosage rate as recommended in the **Application Table**. Also use the higher rate for cases where the weed infestation is severe.

## RECOMMENDATIONS

| CROP                       | APPLICATION RATE / ha |        | REMARKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------|-----------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Barley, Rye                | 1.0 – 1.75 ℓ          |        | <b>Post-emergence:</b> Apply when the crop is in the five-leaf stage (5 leaves on the main haulm with the 6 <sup>th</sup> leaf visible).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Grain sorghum              | 1.25 ℓ                |        | <b>Post-emergence:</b> Apply when the crop is 15 – 25 cm tall (approximately 3 weeks after germination) as an inter-row directed spray. If application is made at a later stage, drop arms must be used.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Established Grass pastures | 2.25 – 3.0 ℓ          |        | <b>Post-emergence:</b> Apply nitrogenous fertilizer 2 – 3 weeks before the application of <b>2,4-DMAX HL</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Maize                      | 0 – 10% clay          | 1.75 ℓ | <b>Pre-emergence:</b> Apply 5 – 6 days after planting to a seedbed which is in good tilth and is sufficiently moist.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                            | 11 – 20 % clay        | 2.25 ℓ |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                            | 21 – 35 % clay        | 3.0 ℓ  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                            | >35% clay             | 3.5 ℓ  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                            | 1.25 ℓ                |        | <b>Post-emergence:</b> Apply when the crop is 30 – 45 cm tall. Drop arms should be used for directed inter-row spraying. Prevent the spray drift from landing in the funnel. Grass weeds which have already emerged at this stage will not be controlled. <i>Striga asiatica</i> should be sprayed when the flowers are first observed.                                                                                                                                                                                                                                                                                                                                                                                    |
| Established lawns          | 2.25 - 3.0 ℓ          |        | <b>Post-emergence:</b> Apply nitrogenous fertilizer 2 – 3 weeks before the application of <b>2,4-DMAX HL</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Potatoes                   | 0 – 20% clay          | 1.75 ℓ | <b>Pre-emergence:</b> If the crop was dry planted, harrow immediately after the first rain and apply.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                            | 21 – 35% clay         | 2.25 ℓ |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                            | >35% clay             | 3.0 ℓ  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Sugarcane                  | 3.5 – 4.75 ℓ          |        | <p><b>Pre-emergence (plant and ratoon):</b><br/>Apply as a directed inter-row spray in 200 – 400 ℓ water / ha as an overall spray within a few days after planting or harvesting and before emergence of the weeds.</p> <p><b>Post-emergence:</b><br/>Apply in 200 – 400 ℓ water at the early stages of weed growth. The treatment can cause cane damage and the danger of this occurring will be minimised if the applications are directed as an inter-row spray to avoid, as far as possible, wetting the cane leaves. If the cane exceeds a height of 40 cm or has unfurled more than 5 leaves per shoot, directed sprays must be carried out. If directed sprays are not carried out, the growth may be retarded.</p> |
| Wheat                      | 1.0 – 1.75 ℓ          |        | Apply between growth stages 7 (centre double ridges enlarged) and 13 (awn of the top spikelets elongated), according to the list of growth stages of the ARC-small Grain Institute, Bethlehem.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

**WEEDS CONTROLLED:**

| <b>Botanical name</b>         | <b>Common name</b>      |
|-------------------------------|-------------------------|
| <i>Bidens pilosa</i>          | Common blackjack        |
| <i>Chenopodium album</i>      | White goosefoot         |
| <i>Commelina benghalensis</i> | Benghal Wandering Jew   |
| <i>Malva parviflora</i>       | Small mallow            |
| <i>Polygonum aviculare</i>    | Polygonum aviculare     |
| <i>Portulaca oleracea</i>     | Common purslane         |
| <i>Raphanus raphanistrum</i>  | Wild radish             |
| <i>Richardia brasiliensis</i> | Mexican Richardia       |
| <i>Striga asiatica</i>        | Common mealie-witchweed |
| <i>Tagetes minuta</i>         | Khaki weed              |
| <i>Tribulus terrestris</i>    | Devil's thorn           |

The recommended **2,4-DMAX HL** treatments control the above-mentioned weed species. Other weed species that were not present in the development trials of this product may also be controlled to a certain degree. The registration holder accepts no responsibility for unlisted weeds.

## WAARSKUWINGS

- Laat 'n minimum van 7 dae toe tussen laaste toediening en voer of beweiding.
- Hanteer versigtig.
- Skadelik indien ingesluk, ingeasem of deur kontak met vel.
- Giftig vir visse.
- Hou buite bereik van kinders, diere en oningeligte persone.
- Bêre agter slot-en-grendel in 'n koel, droë, goed geventileerde plek, weg van voedsel, voer, saad, kunsmis en ander tipes landboumiddels.
- In geval van vergiftiging kontak 'n geneesheer en wys hierdie etiket aan hom/haar.
- Vermoed vel- en oogkontak.
- Dra beskermende klere (rubber handskoene en gesigskerm) wanneer die konsentraat hanteer word.
- Moenie bo-oor water toedien of toelaat dat die spuitnewel wegdryf en water of aangrensende gebiede besoedel nie.
- Daar moet aan die gebruiksaanwysings voldoen word sodat risiko's teenoor mens en omgewing vermy kan word.
- Bêre in die oorspronklike, digsluitende houer, weg van sonlig en klammigheid.
- Moenie op aangrensende landerye met vatbare gewasse toedien nie, asook nie op graanvariëteite op 'n gevoelige groeistadium nie.
- **Herbetreding:** Moenie behandelde gebied binne 1 dag betree, tensy beskermende oorklere gedra word.
- **Lugtoediening:** Stel al die inwoners in die onmiddellike omgewing van die gebied wat bespuit gaan word in kennis en reik die nodige waarskuwings uit. Moenie oor water toedien nie en verseker dat die wegdrywing van spuitnewel nie ander areas besoedel wat nie onder behandeling is nie.
- **2,4-DMAX HL** is sonder enige fitotoksisiteitskade op die mees belangrikste kommersiële kultivars getoets. Meer sensitiewe kultivars mag in die toekomst vrygestel word wat eers getoets moet word; hiervoor moet **2,4-DMAX HL** eers op 'n klein toetsoppervlakte aangewend word, alvorens groot kommersiële bespuitings gemaak 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

- Vermoed wegdrywing van spuitnewel na ander gewasse, weiding, riviere, damme en gebiede wat nie behandel moet word nie.
- Moenie die dampe of spuitnewel inasem nie.
- Moenie oppervlaktewater of slote met enige chemikalieë of gebruikte houters besoedel nie.
- Produk moet verseël en in die oorspronklike houer gebêre word.
- Moenie rook, eet of drink tydens hantering van die produk of voordat hande en gesig gewas is nie.
- Voorkom die besoedeling van voedsel, voer, drinkwater en eetgerei.
- Vermoed kontak van die konsentraat of spuitmengsel met vel, oog of klere.
- Dra beskermende klere (ondeurdringbare handskoene en oog-/gesigskerm) tydens die hantering van die produk.
- Was met seep en water direk na gebruik en na velkontak.
- Was beskermende toerusting en besoedelde klere deeglik na gebruik.
- Was onmiddellik met seep en water na toevallige velkontak.
- In geval van oogkontak was onmiddellik met genoegsame lopende water.
- Keer die leë houer om oor die spuittenk of mengbak en dreineer vir minstens dertig sekondes nadat die vloeï tot 'n gedrup verminder het. Spoel die houer daarna **drie keer** uit met 'n volume water gelykstaande aan 'n minimum van 30% van die inhoud van die houer. Gooi die spoelwater by die inhoud van die spuittenk voordat die houer op die voorgeskrywe manier vernietig word.
- Maak alle toerusting deeglik na gebruik skoon en gooi spoelwater uit waar dit nie gewasse, weidings, riviere en damme sal besoedel nie.
- Maak die spuittoerusting met 1% huishoudelike ammoniakoplossing na gebruik skoon. Laat die oplossing vir 'n paar uur staan voordat dit ten minste twee keer met skoon water uitgespoel word. Die oplossing en spoelwater moet uitgegooi word waar dit nie voedsel, gewasse, weidings, riviere en damme sal besoedel nie. Gebruik hierdie spuitapparaat slegs vir die toediening van onkruidodders.

- Toedieningsapparaat moet nie naby gewensde plante, struik, boom of in hul wortelstelsels uitgespoel of leeggemaak word nie.
- Hou kinders en diere weg van opgestapelde houers en afvalmateriaal.
- Vernietig die leë houer deur gate daarin te maak en plat te slaan en raak daarvan op 'n veilige manier ontslae, soos deur die plaaslike regulasies voorgeskryf; deur dit te verbrand of te begrawe. Moet dit vir geen ander doel gebruik nie.

### **SIMPTOME VAN MENSLEKE VERGIFTIGING**

Blootstelling mag naarheid, braking, duiseligheid, tydelike verlies aan sig, maagpyne, diarree, hoofpyn, lae bloeddruk, verwardheid, aggressie, vreemde optrede, spiertrekking, spierswakheid, verlies aan spierkoördinasie, spierstyfheid, verlies aan tendonreflekse, hoë of brandgevoel in die boonste lugweë en bors veroorsaak. Sommige van hierdie simptome mag vir lang periodes en selfs permanent aanhou.

### **NOODHULPBEHANDELING**

**Velkontak:** Verwyder onmiddellik besoedelde klere, skoene en leeritems. Vee oortollige chemikalieë sagkens af en was liggaam en klere met groot hoeveelhede water en nie-skurende seep vir ten minste 15-20 minute. Was besoedelde klere voordat dit weer gebruik word. Verkry onmiddellik mediese bystand indien irritasie voortduur.

**Oogkontak:** Spoel oë met genoegsame stadig vloeiende water vir ten minste 15 minute terwyl ooglede oopgehou word. Verwyder enige kontaklense na die eerste 5 minute van spoeling. **Verkry onmiddellik mediese bystand.**

**Inaseming:** Lê die pasiënt neer en hou persoon warm en rustig. Indien asemhaling vlak is of ophou, verseker dat lugweë oop is, dien mond-tot-mond asemhaling toe en dien suurstof toe. Verkry onmiddellik mediese bystand indien irritasie voortduur.

**Ingesluk:** Moenie braking induseer nie. **Verkry onmiddellik mediese bystand** en toon die houer, etiket of produkveiligheids-inligtingsblad (material safety data sheet). Indien ingesluk laat pasiënt onmiddellik groot hoeveelhede water drink indien pasiënt wakker en in staat is om te sluk. Moet nooit iets vir 'n bewustelose pasiënt per mond ingee nie. Indien die pasiënt wakker en in staat is, spoel mond met water uit. Indien braking met toediening van water plaasvind, dien nog water toe indien pasiënt by volle bewussyn is. Vir raad, kontak die Nasionale Gifsentrum. Verseker dat die braaksel nie ingesluk word nie.

### **NOTA AAN GENEESHEER**

Daar bestaan geen teenmiddel nie. Behandel simptome en ondersteunend soos nodig mag wees. Indien groot hoeveelhede ingesluk is, oorweeg maagspoeling asook die toediening van geaktiveerde koolstof.

### **METODE VAN WERKING**

**2,4-DMAX HL** is 'n selektiewe sistemiese onkruidkoder. Soute word maklik deur die wortels geabsorbeer terwyl esters deur die blare geabsorbeer word. Translokasie vind plaas met die akkumulasie wat hoofsaaklik in die meristematiese gedeeltes van die lote en wortels plaasvind. Tree as 'n groei-inhibeerder op.

### **GEBRUIKSBEPERKINGS**

- Moenie naby of op breëblaar gewasse, vrugte of sierplante toedien nie.
- Moenie hierdie produk deur lugbespuiting in KwaZulu-Natal toedien nie.
- Moenie op gewasse onder stremming (hitte, droogte, koue, versuip-toestande en voedingstekorte) toedien nie.
- Moenie op enige gewas of situasie aanwend wat nie in die voorskrifetiket verskyn nie.
- Moenie 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 verteenwoordiger vooraf geraadpleeg is.
- Neem die windspoed en rigting in ag wanneer hierdie produk toegedien word. Die volgende faktore sal die afstand bepaal.

| Windspoed (km/h) | Lugtoediening                                   | Grondtoediening                                 |
|------------------|-------------------------------------------------|-------------------------------------------------|
| 1.5 – 5          | 800 m windaf<br>800 m dwarswind<br>15 m windop  | 200 m windaf<br>200 m dwarswind<br>6 m windop   |
| 5 – 10           | 1.6 km windaf<br>800 m dwarswind<br>15 m windop | 400 m windaf<br>200 m dwarswind<br>1.5 m windop |
| 10 – 15          | 3.2 km windaf<br>800 m dwarswind<br>15 m windop | 800 m windaf<br>400 m dwarswind<br>1.5 m windop |
| >15              | Verbode                                         | Verbode                                         |

### WEERSTANDSWAARSKUWING

Vir weerstandsbestuur is **2,4-DMAX HL** 'n groeppkode O onkruidodder. Enige onkruidpopulasie mag individue insluit wat 'n natuurlike weerstand teen **2,4-DMAX HL** of enige ander groeppkodes O onkruidodder het. Hierdie weerstandbiedende individue kan uiteindelik die onkruidpopulasie oorheers indien hierdie onkruidodders herhaaldelik gebruik word. Hierdie weerstandbiedende onkruid sal waarskynlik nie deur **2,4-DMAX HL** of enige ander groeppkodes O onkruidodder beheer word nie.

#### Om weerstand teen onkruidodders te vertraag:

- Vermoed die eksklusiewe herhaaldelike gebruik van onkruidodders met dieselfde groeppkode. Wissel af met, of gebruik tenkmengsels van, produkte in verskillende onkruidoddergroeppkodes.
- Integreer ander beheermaatreëls (chemies, verbouing, biologies) in onkruidbeheerprogramme.

Vir spesifieke inligting oor weerstandsbestuur, kontak die registrasiehouer van hierdie produk.

Dit is moeilik om die teenwoordigheid van weerstandbiedende onkruid voor gebruik te bepaal en daarom kan nog die Registrasiehouer nog die Verpreider verantwoordelikheid aanvaar vir verliese a.g.v. **2,4-DMAX HL** wat nie die weerstandbiedende onkruid beheer nie. Moenie **2,4-DMAX HL** op sy eie toedien in situasies waar onkruidweerstand bevestig is nie. Sub-standaard toedienings van **2,4-DMAX HL** sal tot verswakte onkruidbeheer lei en mag tot die ontwikkeling van onkruidodder weerstandigheid bydra. Dit is uiters belangrik om die behandelde gebiede noukeurig te ondersoek om te verseker dat onkruidodder weerstandige onkruid betyds geïdentifiseer word.

'n Plaaslike plaasstrategie vir die voorkoming en bestuur van weerstand moet aangeneem word. Riglyne is deur die "Herbicide Resistance Action Group (HRAC)" opgestel en kopieë daarvan is by HRAC, jou verspreider of agent, onafhanklike gewasadviseur of by Meridian Agritech beskikbaar.

### GEBRUIKSAANWYSINGS

#### Gebruik slegs soos aangedui.

#### VERENIGBAARHEID

Die verenigbaarheid van **2,4-DMAX HL** met ander produkte hang van die formulerings van die betrokke produkte af, asook die kwaliteit van die spuitwater wat gebruik word. Omdat formulerings van tyd tot tyd kan verander, word dit aanbeveel om 'n fisiese verenigbaarheidstoets uit te voer voordat die tenkmengsel gemaak word. Moenie met enige ander produkte meng wat nie in hierdie etiket verskyn nie.

Indien ander produkte saam met **2,4-DMAX HL** in 'n spuitprogram gebruik word, moet die etikette van daardie produkte geraadpleeg word vir die aanwysings en beperkings op toedienings en gewasrotasie-aanbevelings.

Raadpleeg 'n Meridian Agritech verteenwoordiger vir besonderhede.

#### MENG- EN TOEDIENINGSINSTRUKSIES

Vul die spuittenk halfvol met skoon water. Voeg die verlangde hoeveelheid **2,4-DMAX HL** by die spuitwater terwyl dit geroer word. Maak spuittenk tot by die verlangde volume vol. Indien tenkmengsels met ander onkruidodders gemaak word, moet die onderskeie vervaardigers se gebruiksaanwysings op die etiket gevolg word. Indien tenkmengsels gemaak word, voeg **2,4-DMAX HL** eerste in 'n halfvol spuittenk, gevolg deur die mengvennoot. Hierna, vul die spuittenk met die verlangde volume skoon water. **Tenkmengsels moet onmiddellik uitgespuit word en nie toegelaat word om in die spuittenk oornag te staan nie.** Spuittoerusting moet deeglik aan die einde van die spuitproses uitgespoel word.

**Verseker konstante en deeglike roering gedurende die meng- en spuitproses.**

## TOEDIENINGSMETODES

Daar word aanbeveel om 500 l spuitmengsel per ha toe te dien om effektiewe bedekking te verseker. Verseker dat die spuitapparaat korrek gekalibreer is. Die gebruik van platwaaier spuitkoppe word aanbeveel. Die spuittoerusting moet na toediening deeglik uitgespoel word.

### Lugtoediening

**Moenie hierdie produk met lugtoediening in KwaZulu-Natal toedien nie.**

Lugtoediening mag slegs deur 'n geregistreerde lugbespuitingsoperateur met 'n korrek gekalibreerde, geregistreerde vliegtuig volgens die instruksies van SANS Kode 10118 (Aerial Application of Agricultural Pesticides) gedoen word. Dit is belangrik om te verseker dat die spuitmengsel eweredig oor die teikenarea versprei word en dat die verlies aan spuitmengsel tydens toediening tot 'n minimum beperk word. Dit is dus belangrik om aan die volgende vereistes te voldoen:

### Toerusting

- Gebruik geskikte atomiseringsapparaat wat die vereiste druppelgrootte en bedekking sal produseer, maar wat die minste verlies van produk deur wegdrywing sal verseker.
- Die spuitsisteem moet 'n druppelspektrum met die kleinste moontlike relatiewe spanwydte produseer.
- Al die spuitkoppe en atomiseerders moet in die binneste 60 - 75% van die vlerkspan geplaas word om te verhoed dat die druppels binne-in die vlerkvorteks inbeweeg.

### Toedieningsparameters

- 'n Druppelspektrum met 'n VMD van 300 - 350 mikron word aanbeveel. Verseker dat die produksie van fyn druppels (kleiner as 150 mikron) tot 'n minimum beperk word.
- Die hoogte van die spuitbalk moet tussen 3 en 4 meter bokant die teiken gehandhaaf word.
- Moenie spuit wanneer die vliegtuig besig is om te klim, te draai, te duik, of terwyl dit uitklim nie.
- 'n Minimum volume van 30 - 35 l spuitmengsel per hektaar word aanbeveel. Aangesien hierdie produk nie teen 'n verlaagde volume getoets is nie, kan die registrasiehouer nie effektiwiteit waarborg, of verantwoordelik gehou word vir enige nadelige effek indien hierdie produk teen 'n laer volume as hierbo aanbeveel, uit die lug toegedien word nie.
- 'n Druppelbedekking van 30 - 40 druppels per vierkante cm moet op die teikenarea herwin word.

### Meteorologiese Toestande

- Die verskil tussen die nat- en droëbollesing, soos met 'n swaaihigrometer bepaal, moet nie 8°C oorskry nie.
- Moenie tydens turbulente, onstabiele toestande, of gedurende die hitte van die dag wanneer stygende en dalende konveksie-windbewegings plaasvind, toedien nie.
- Moenie tydens temperatuur-inversie-toestande (deur bokant of binne-in die inversielaag te spuit) en/of gedurende hoë humiditeitstoestande (relatiewe humiditeit bokant 80%) toedien nie, aangesien dit kan lei tot:
  - a) Verlaagde effektiwiteit a.g.v. suspensie of verdamping van klein druppels in die lug wat tot onvoldoende bedekking op teikenarea lei.
  - b) Skade aan ander sensitiewe gewasse en/of nie-teikenareas deur wegdrywing van die spuitwolk vanaf die teikenarea.
- Moenie spuit wanneer die windspoed 15 km per uur oorskry nie.

### Algemeen

- Verseker dat die lande akkuraat gemerk is en dat die spuitoperateur presies weet watter lande gespuit moet word.
- Verkry die versekering van die spuitoperateur dat aan die bogenoemde vereistes voldoen sal word en dat die toepaslike data in 'n logboek vir latere verwysing opgeteken sal word.

### Vooropkomstoediening

Dit is belangrik om die gewas in 'n goed bewerkte, klam, kluitvrye saadbedding te plant om te verseker dat 'n hoë persentasie onkruid onmiddellik na planttyd ontkiem. Moenie onder koue toestande, met of sonder ryp, toedien nie. Vir die beheer van eenjarige grassoorte dien **2,4-DMAX HL** toe voordat die grasse ontkiem. Die tydperk van onkruidbeheer word verwag om tussen 3 - 6 weke te wees.

### Na-opkomstoediening

Dien slegs toe wanneer die gewas in die geskikte ontwikkelings stadium is (sien die **Doseringstabel**) en as die grond klam is. Toediening van **2,4-DMAX HL** wanneer die onkruid nog in vroeë stadium van ontwikkeling (2 - 4 blaar stadium) is, sal die beste resultate verseker. Die hoër dosis mag nodig wees as die onkruid volwasse raak, maar moenie die maksimum dosis soos in die **Doseringstabel** aangedui, oorskry nie. Gebruik ook die hoër dosis in gevalle waar die onkruidinfestasie hewig is.

# AANBEVELINGS

| GEWAS                   | DOSIS / ha     |        | OPMERKINGS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------|----------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gars, Rog               | 1.0 – 1.75 ℓ   |        | <b>Na-opkoms:</b> Dien toe wanneer die gewas in die vyfblaarstadium (5 blare op die hoofhalm met die 6de blaar sigbaar) is.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Graansorghum            | 1.25 ℓ         |        | <b>Na-opkoms:</b> Dien toe wanneer die gewas 15 – 25 cm hoog is (ongeveer 3 weke na ontkieming) as 'n tussen-ry gerigte spuit. Indien toediening op 'n latere stadium gedoen word, moet val-arms gebruik word.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Gevestigde grasweidings | 2.25 – 3.0 ℓ   |        | <b>Na-opkoms:</b> Dien stikstofhoudende kunsmis 2 – 3 weke voor die toediening van <b>2,4-DMAX HL</b> toe.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Mielies                 | 0 – 10% klei   | 1.75 ℓ | <b>Vooropkoms:</b> Dien toe 5 – 6 dae na plant op 'n goed voorbereide saadbed met genoegsame vog.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                         | 11 – 20 % klei | 2.25 ℓ |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                         | 21 – 35 % klei | 3.0 ℓ  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                         | >35% klei      | 3.5 ℓ  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                         | 1.25 ℓ         |        | <b>Na-opkoms:</b> Dien toe wanneer die gewas 30 – 45 cm hoog is. Val-arms moet vir gerigte tussen-ry bespuitings gebruik word. Verhoed dat die sproeinewel in die kelk beland. Grasonkruid wat alreeds teen hierdie tyd ontkiem het, sal nie beheer word nie. <i>Striga asiatica</i> moet gespuit word sodra blomme die eerste keer sigbaar is                                                                                                                                                                                                                                                                                                                                                                                            |
| Gevestigde grasperke    | 2.25 - 3.0 ℓ   |        | <b>Na-opkoms:</b> Dien stikstofhoudende kunsmis 2 – 3 weke voor die toediening van <b>2,4-DMAX HL</b> toe.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Aartappels              | 0 – 20% clay   | 1.75 ℓ | <b>vooropkoms:</b> As die gewas in droëland geplant is, eg dadelik na die eerste reëns en dien toe.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                         | 21 – 35% clay  | 2.25 ℓ |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                         | >35% clay      | 3.0 ℓ  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Suikerriet              | 3.5 – 4.75 ℓ   |        | <p><b>Vooropkoms (plant- en opslagriet):</b> Dien as 'n gerigte bespuiting tussen rye in 200 - 400 ℓ water / ha as 'n algehele bespuiting binne enkele dae na plant of oes en voordat die onkruid opkom.</p> <p><b>Na-opkoms:</b><br/>Dien toe in 200 - 400 ℓ water in die vroeë stadiums van onkruidgroei. Die behandeling kan rietskade aanrig en die gevaar dat dit voorkom, word tot die minimum beperk as die toedienings as 'n tussenry-bespuiting gerig word om sover moontlik te vermy dat die rietblare nat word.. As die kiere 'n hoogte van 40 cm oorskry of meer as 5 blare per loot oopgevou het, moet gerigte bespuitings uitgevoer word. As daar nie gerigte bespuitings gedoen word nie, kan die groei vertraag word.</p> |
| Koring                  | 1.0 – 1.75 ℓ   |        | Dien toe tussen groeistadiums 7 (middelste dubbelriwwe vergroot) en 13 (baard van die boonste sy-aartjies verleng), volgens die lys van groeistadiums van die LNR se Kleingraan Instituut in Bethlehem.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## ONKRUIDE BEHEER:

| <b>Botaniese naam</b>         | <b>Algemene naam</b>              |
|-------------------------------|-----------------------------------|
| <i>Bidens pilosa</i>          | Gewone Knapsekêrel                |
| <i>Chenopodium album</i>      | Withondebossie                    |
| <i>Commelina benghalensis</i> | Bengaalse wandelende Jood         |
| <i>Malva parviflora</i>       | Kiesieblaar                       |
| <i>Polygonum aviculare</i>    | Voëlduisendknoop (Koperdraadgras) |
| <i>Portulaca oleracea</i>     | Porslein                          |
| <i>Raphanus raphanistrum</i>  | Ramenas                           |
| <i>Richardia brasiliensis</i> | Meksikaanse-Richardia             |
| <i>Striga asiatica</i>        | Gewone mieliëroiblom              |
| <i>Tagetes minuta</i>         | Kakiebos                          |
| <i>Tribulus terrestris</i>    | Dubbeltjie                        |

Die aanbevole **2,4-DMAX HL** behandelings beheer die bogenoemde onkruidspesies. Sekere onkruid wat nie in die ontwikkelingsproewe van die produk teenwoordig was nie, mag dalk ook in 'n mate beheer word. Die registrasiehouer aanvaar geen verantwoordelikheid vir onkruid wat nie gelys is nie.