



# TORUS

BEFORE USING THIS PRODUCT, READ THE LABEL CAREFULLY

**TORUS**

**HERBICIDE**

Reg. No. L10709, Act/Wet No. 36 of/van 1947  
Namibian Reg. No. N-AR 2100

2:16/09/2020

An oil-in-water emulsion herbicide for the post-emergent control of weeds in wheat and barley in the Western, Southern and Eastern Cape, and as directed in orchards, vineyards and other crops as indicated.

'n Olie-in-water emulsie onkruiddoder vir die na-opkoms beheer van onkruid in koring en gars in die Wes-, Suid- en Oos-Kaap en soos aangedui in boorde, wingerde en ander genoemde gewasse.

HRAC HERBICIDE GROUP CODE	E	HRAC ONKRUIDDODERGROEPKODE
<b>ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL</b>		
Carfentrazone-ethyl (Triazolinone)	240 g/l	Karfentrasoon-etiel (triasolinoon)

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

DIRECTIONS FOR USE ENCLOSED  
Batch Number  
Date of manufacture  
REFER TO DETAILS AS PRINTED  
ON CONTAINER / BAG

UN Number: 3082

CAUTION / VERSIGTIG

## **WARNINGS**

### **Allow the following number of days between last treatment and harvest or use as food or feed:**

Wheat .....	126 days
Barley .....	126 days
Apples .....	120 days
Pears .....	120 days
Stone fruit (Peaches, Plums, Nectarines) .....	120 days
Table Grapes .....	81 days
Wine Grapes .....	81 days
Citrus .....	120 days
Tree Nuts (Macadamias, Pecan nuts, Almonds) .....	120 days
Avocados .....	120 days

**IMPORTANT:** The recommended withholding period between last application and harvest meets local residue requirements but may not meet export requirements. If the treated crop is intended for export, consult the relevant exporting organisation regarding MRL requirements and withholding periods. When this product is applied according to the label recommendations indicated below, the local MRL will not be exceeded. Meridian Agrochemical Company (Pty) Ltd T/A Meridian Agritech cannot, however, be held liable for export crops exceeding the import tolerances of other countries.

- Keep out of reach of children, animals and uninformed people.
- Avoid skin and eye contact.
- Store under lock and key in a cool, dry, well-ventilated area away from food, feed, seed, fertilizers and other types of agricultural remedies.
- Extremely toxic to fish.
- 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.
- **TORUS** 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 **TORUS** 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**

- Extremely toxic to fish and / or aquatic life. Do not contaminate surface waters or rivers and streams with the chemical or used container.
- After contact, wash from the skin and eyes immediately with plenty of clean water.
- Avoid contact by mouth.
- Wear protective clothing (coveralls, face shield and impermeable gloves) while handling this product.
- Do not inhale fumes or spray mist.
- Do not smoke, eat or drink whilst handling this product or before washing hands and face and changing clothes.
- Avoid drift of spray onto other crops, grazing, rivers, dams and areas not under treatment.
- Serious localized or translocated damage may occur if the spray or spray drift comes into contact with the leaves. Fruit and / or immature bark of trees, vines or adjacent non-target crops that are not under treatment.
- Thoroughly wash spray equipment after use (see sprayer clean-out).
- Do not use the same application equipment for foliar applications.
- Product must be stored sealed in the original product container.

- 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 (see sprayer clean-out) and dispose of the wash water where it will not pollute the environment or contaminate crops, grazing, rivers or dams.
- Keep children and animals away from stacked and waste material.

#### **SPRAYER CLEAN-OUT**

- Drain the tank completely after application and flush the tank, as well as the boom and hoses with clean water. Drain the tank again.
- Fill the tank with clean water and add household ammonia (containing 3% active ammonia) at a rate of 1 litre for every 100 litres of water. Circulate the ammonia solution through the tank, boom and hoses for at least 10 minutes. Drain completely. Rinse the tank with clean water and flush through boom and hoses to remove traces of ammonia. Use at least one tenth of the spray volume. Drain completely and repeat the rinsing as above.

#### **MODE OF ACTION**

**TORUS** acts by inhibition of protoporphyrinogen, leading to membrane disruption. It is absorbed by the foliage, with limited translocation.

#### **USE RESTRICTIONS**

- 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.
- Do not apply by air.
- Do not apply **TORUS** to crops under stress from drought, water logging, cold, pests and / or diseases, nutrient or lime deficiency or other factors which reduce plant growth.
- Do not keep unused spray mixture overnight.
- Do not apply **TORUS + MCPA 750 DMAX** to a sparse crop stand. In a crop planted with a planter, **always** apply **TORUS** in combination with **MCPA 750 DMAX** + approved formulations of metsulfuron-methyl. Crop competition is essential for optimal weed control with **TORUS + MCPA 750 DMAX**.
- Grass herbicides must not be applied within 7 days after a **TORUS** application.

#### **MINIMUM RE-CROPPING INTERVAL AND CROP ROTATION GUIDELINES**

There is no restriction on the planting of any succeeding or rotational crop after the application of **TORUS**. All crops can be sown 1 month after application. Full consideration should be given to the minimum re-cropping intervals and crop rotation guidelines for **MCPA 750 DMAX** and **PRISM 20 WG**.

#### **RESISTANCE WARNING**

For resistance management, **TORUS** is a group code E herbicide. Any weed population may contain individuals naturally resistant to **TORUS** and other Group Code E herbicides. These resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **TORUS** or any other group code E 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 because of **TORUS** not controlling resistant weeds. Do not apply **TORUS** alone in situations where weed resistance has been confirmed. Sub-standard application of **TORUS** 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 to identify the occurrence of herbicide-resistant weeds timely.

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.**

### **Wheat and Barley**

- For optimum results, apply **TORUS** when weeds are young and actively growing under moist conditions.
- Weeds growing under stress conditions may be less susceptible to **TORUS**,
- **TORUS** rapidly burns down the leaves of the targeted weeds. Final die-back of weeds may vary according to the weed species and prevailing conditions.
- Apply only when the crop is in the correct stage of development as indicated.
- Apply only to an even crop stand and avoid areas with little or no crop competition effect.
- Application by windsock applicator may enhance the symptoms of chlorotic leaf scorch.
- Use a suitable buffer in accordance with the label directions where the water is known to be hard / alkaline, to obtain the ideal pH of 5 – 7.

**Orchards and vineyard (perennial) crops** (such as deciduous fruit, table and wine grapes, citrus, macadamia nuts, pecan nuts, avocado, almond nuts and Aloes)

- Apply **TORUS + NIRVANA** to actively growing weeds and ensure good coverage, especially of larger, more mature weeds.
- Difficult to control annual weeds should be treated in early spring as a pre-blossom application.
- Use a suitable buffer in accordance with the label directions where the water is known to be hard / alkaline, to obtain the ideal pH of 5.
- Serious localized or translocated damage may occur if the spray or spray drift meets leaves, fruit and / or immature bark of trees, vine bushes or adjacent non-target crops that are not under treatment.

### **COMPATIBILITY**

The compatibility of **TORUS** 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 combination with **TORUS**, always consult the labels of those products regarding directions and restrictions for their application and crop rotation recommendations.

Consult a Meridian Agritech representative for details.

Grass herbicides must not be applied within 7 days after a **TORUS** application.

In cereals, do not mix with wetters or oils.

### **MIXING AND APPLICATION INSTRUCTIONS**

Half-fill the spray tank with suitable water, then add the required amount of **TORUS** 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 **TORUS** 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. When **TORUS** is used in a tank mixture with **NIRVANA**, the order of mixing should be as follows: Buffer agent, **TORUS**, **NIRVANA**, suitable surfactant, drift control.

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

### **APPLICATION METHODS**

**Ground application only:**

**TORUS** works only by contact. It is thus essential to achieve a good overall coverage of the targeted plant.

**Wheat and Barley:**

- Apply by means of tractor mounted boom sprayer which is correctly calibrated to deliver at least 200 l / ha of spray mixture and a maximum of 400 l / ha at a constant speed and pressure (100 – 200 kPa) to ensure an even distribution.
- Avoid overlapping of swaths and close the nozzles while starting, slow movement, turning and stopping to prevent over-spraying.

#### **Orchard and vineyard (perennial) crops**

- Apply by knapsack sprayer or suitable motorized applicator with covered (shielded) nozzles or using low pressures (100 – 200 kPa) and / or low-drift nozzles to minimize the risk of drift.
- The use of larger orifice nozzles produces larger droplets that improve coverage and effectiveness and minimize potential to drift.
- Do not exceed a speed of 5 kph when applying by tractor / ground rig.
- Do not apply when wind speeds exceed 10 kph.
- Avoid application during temperature inversion conditions.
- Apply approximately 200 l spray mixture / ha to ensure thorough coverage of the weeds.
- A repeat application may be necessary. In this case spot spraying is recommended.
- It is the responsibility of the spray applicator to ensure that the spray / spray drift does not come into contact with non-target plants or crops.

#### **RECOMMENDATIONS**

CROP	APPLICATION RATE / ha	REMARKS
<b>Wheat, Barley</b>	42 mL / ha <b>TORUS + 267 mL / ha MCPA 750 DMAX</b>  or  42 mL / ha <b>TORUS + 267 mL / ha MCPA 750 DMAX + 12.5 g / ha PRISM 20 WG</b>	Apply as a post-emergence spray when the Wheat and Barley are between stages 7 and 13 according to the list of growth stages of the ARC Small Grain Institute, Bethlehem. Application should not take place later than 6 weeks after weed emergence. Apply to Barley in the 5 to 6 leaf stage.
<b>Orchard and vineyard (perennial) crops</b>		
<b>Orchard and vineyard (perennial) crops:</b>  <b>Deciduous fruit</b> (Apples, Pears, Peaches, Plums, Nectarines)  <b>Vines</b> (Table and Wine Grapes)  <b>Citrus</b>  <b>Tree nuts</b> (Macadamia nuts, Pecan nuts, Almonds)  <b>Avocado</b>  <b>Aloe</b>	42 mL / ha <b>TORUS + 5 L NIRVANA</b>	Apply as a directed interrow spray for the control of difficult to control weeds such as <i>Malva parviflora</i> , <i>Conyza bonariensis</i> , <i>Urtica dioica</i> when actively growing (the ideal stage is when the weeds are 10 – 20 cm in height). Shield young vines / trees / bushes with immature bark during application or use a covered sprayer. Ensure that contact is avoided on leaves, fruit and bark. Follow the directions on the <b>NIRVANA</b> label.  Refer to the <b>NIRVANA</b> label for a list of weeds on which control can be expected.  The addition of a suitable surfactant will enhance the cosmetic effect and rapidity of action.  <b>Vines:</b> Commence application before bud burst in bush and low trellised vines. In the case of high trellises, do not spray any overhanging foliage or green portions of the vines. Do not apply to vines which are 2 years in age or younger, unless the stems are shielded.  <b>Orchards:</b> Do not apply after commencement of flowering.

#### **WEEDS CONTROLLED:**

The following weed species are normally controlled by **TORUS + MCPA 750 DMAX**, or **TORUS + MCPA 750 DMAX + PRISM 20 WG** used at the recommended application rate.

<b>Botanical name</b>	<b>Common name</b>
<i>Anagallis arvensis</i>	Pimpernel
<i>Arctotheca calendula*</i>	Cape marigold
<i>Emex australis</i>	Spiny emex
<i>Erodium moschatum</i>	Musk Heron's Bill
<i>Fumaria muralis</i>	Fumitory
<i>Galium spurium</i>	Small cleaver
<i>Malva parviflora</i>	Small mallow
<i>Pentzia suffruticosa</i>	Small stinkweed
<i>Polycarpon tetraphyllum</i>	Four-leaved allseed
<i>Raphanus raphanistrum</i>	Wild radish

\*Control may be variable.

The recommended **TORUS** 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. Weeds which have germinated after the application of **TORUS + MCPA 750 DMAX** tank mixture will not be controlled.

#### **ACKNOWLEDGEMENT OF TRADEMARKS**

MCPA 750 DMAX (L 9020)  
Prism 20 WG (L 8131)

Meridian Agrochemical Company (Pty) Ltd  
Meridian Agrochemical Company (Pty) Ltd

## WAARSKUWINGS

### Laat die volgende aantal dae toe tussen laaste toediening en oes, of vir gebruik as voedsel of voer:

Koring .....	126 dae
Gars .....	126 dae
Appels .....	120 dae
Pere .....	120 dae
Steenvrugte (Perskes, Pruime, Nektariens) .....	120 dae
Tafeldruwe.....	81 dae
Wyndruwe .....	81 dae
Sitrus .....	120 dae
Boomneute (Makadamia, Pekan, Amandel) .....	120 dae
Avokado's .....	120 dae

**BELANGRIK:** Die aanbevole onthoudingsperiode tussen die laaste toediening en oes voldoen aan die plaaslike residuvereistes, maar dit mag dalk nie aan die buitelandse uitvoervereistes voldoen nie. Indien die behandelde gewas vir die buiteland bestem is, moet die relevante uitvoerinstansie genader word rakende die aanbevole onthoudingsperiode (MRL) vir die gebruik van die produkte. Indien hierdie produk toegedien word volgens die etiketvoorskrif soos hieronder aangedui, sal die plaaslike MRL nie oorskry word nie. Meridian Agrochemical Company (Edms.) Bpk. H/A Meridian Agritech kan egter nie aanspreeklik gehou word vir uitvoergewasse wat die invoervereistes van ander lande oorskry nie.

- Hou buite bereik van kinders, diere en oningesigte persone.
- Vermy vel- en oogkontak.
- Bêre agter slot-en-grendel in 'n koel, droë, goed-geventileerde area, weg van voedsel, voer, saad, kunsmis en ander landboumiddels.
- Utters giftig vir visse.
- Moenie bo-oor water toedien en dit besoedel of toelaat dat die sputnewel wegdryf en aangrense gebiede besoedel nie.
- Voldoen aan die gebruiksaanwysings om risiko aan mens en omgewing te vermy.
- Bêre in die oorspronklike, digsluitende houer, weg van sonlig en klammigheid.
- Moenie op aangrensende lande met vatbare gewasse toedien nie, asook nie op graankultivars by 'n vatbare groei stadium nie.
- **Herbetreding:** Moenie behandelde gebied binne 1 dag na behandeling betree nie, tensy beskermende oorklere gedra word.
- **TORUS** is sonder enige fitotoksitsiteitskade op die mees belangrikste kommersiële kultivars getoets. Meer sensitiewe kultivars mag in die toekoms vrygestel word wat eers getoets moet word; hiervoor moet **TORUS** 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

- Utters gevaaarlik vir visse en/of waterlewe. Moenie oppervlakterwater of riviere en strome met die chemikalieë of gebruikte houer besoedel nie.
- Na kontak, was vel en oë met genoegsame skoon water.
- Vermy kontak met mond.
- Dra geskikte beskermende klere (oorpakke, gesigmasker en ondeurdringbare handskoene) terwyl produk hanteer word.
- Moenie die dampe of sputnewel inasem nie.
- Moenie rook, eet of drink tydens hantering van die produk of voordat hande en gesig gewas is en skoon klere aangetrek is nie.
- Vermy wegdrywing van sputnewel na ander gewasse, weiding, riviere, damme en gebiede wat nie behandel moet word nie.
- Ernstige gelokaliseerde en getranslokeerde skade mag voorkom indien sputnewel of die

wegdrywing daarvan in kontak kom met blare, vrugte en/of onvolwasse bas van bome, wingerdstokke of aangrensende nie-teiken gewasse, wat nie onder behandeling is nie.

- Was sputtoerusting deeglik na gebruik (sien skoonmaak van sputtoerusting).
- Moenie dieselfde toedieningsapparaat vir blaarbespuitings gebruik nie.
- Produk moet geseël en in oorspronklike houer gestoor word.
- In geval van oogkontak, spoel onmiddellik uit met genoegsame lopende water.
- Keer die leë houer om oor die sputtenk of mengbak en dreineer vir minstens 30 sekondes nadat die vloeい 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 sputtenk voordat die houer op die voorgeskrywe manier vernietig word.
- Maak toedieningsapparaat deeglik na gebruik skoon (sien skoonmaak van sputtoerusting) en raak ontslae van uitspoelwater waar dit nie die omgewing of gewasse, weidings, riviere of damme sal besoedel nie.
- Hou kinders en diere weg van opgestapelde- en afvalmateriaal.
- Vernietig leë houers deur gate daarin te maak en dit plat te maak voordat daarvan volgens plaaslike regulasies op 'n veilige manier van ontslae geraak word, soos deur dit te verbrand of te begrawe. Moenie dit vir enige ander doel gebruik nie.

### **SKOONMAAK VAN SPUTTOERUSTING**

- Dreineer die sputtenk heeltemal na toediening en spoel die tenk sowel as die sputbalk en pype uit met skoon water. Dreineer die tenk weer.
- Maak die tenk vol met skoon water en voeg huishoudelike ammoniak (wat 3% ammoniak-aktief bevat) teen 'n dosis van 1 liter vir elke 100 liter water by. Sirkuleer die ammoniakoplossing deur die tenk, sputbalk en pype vir ten minste 10 minute. Dreineer dan heeltemal. Spoel tenk uit met skoon water en spoel die sputbalk en pype deeglik om ammoniakoordlyfsels te verwijder. Gebruik ten minste een tiende van die sputvolume. Dreineer volledig en herhaal die uitspoelproses soos hierbo.

### **METODE VAN WERKING**

**TORUS** reageer deur die inhibering van protoporfirien wat tot membraanversteuring lei. Dit word deur die blare geabsorbeer met beperkte translokasie.

### **GEBRUIKSBEPERKINGS**

- Moenie op enige gewas of situasie aanwend wat nie in die voorskrifketeket 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.
- Moenie met lugbespuiting toedien nie.
- Vermy die toediening van **TORUS** onder stremmingstoestande a.g.v. droogte, versuite gronde, koue, plae en/of siektes, voedings- of kalktekorte of enige faktore wat gewasgroei nadelig beïnvloed.
- Moenie ongebruikte sputtmengsel oornag laat staan nie.
- Moenie **TORUS + MCPA 750 DMAX** op 'n yl gewasstand toedien nie. Wanneer 'n gewas met 'n planter geplant word, moet **TORUS altyd** in kombinasie met **MCPA 750 DMAX** + goedgekeurde formulerings van metsulfuron-metiel toegedien word. Gewaskompetisie is noodsaaklik vir optimale onkruidbeheer met **TORUS + MCPA 750 DMAX**.
- Moenie grasonkruiddoders binne 7 dae na 'n toediening van **TORUS** toedien nie.

### **MINIMUM OPVOLGGEWAS TUSSENPOSES EN RIGLYNE VIR GEWASROTERING**

Daar is geen beperking op die plant van enige opvolggewas of gewasrotasie na die toediening van **TORUS** nie. Alle gewasse mag binne 1 maand na toediening gesaai word. Volle oorweging moet aan die minimum opvolggewas-tussenposes en riglyne vir gewasrotering vir **MCPA 750 DMAX** en **PRISM 20 WG** geskenk word.

### **WEERSTANDSWAARSKUWING**

Vir weerstandsbestuur is **TORUS** 'n groepkode E onkruiddoder. Enige onkruidpopulasie mag individue insluit wat 'n natuurlike weerstand teen **TORUS** of enige ander groepkode E onkruiddoders het. Die weerstandbiedende individue kan uiteindelik die onkruidpopulasie oorheers indien hierdie onkruiddoders herhaaldelik gebruik word. Hierdie weerstandbiedende onkruide sal waarskynlik nie deur **TORUS** of enige ander groepkodes E onkruiddoder beheer word nie.

### **Om weerstand teen swamdoders te vertraag:**

- Vermy die eksklusieve herhaalde gebruik van onkruiddoders met dieselfde groepkode. Wissel af met, of gebruik tenkmengsels van, produkte in verskillende onkruiddoggroepkodes.
- 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 onkruidte voor gebruik te bepaal en daarom kan nog die Registrasiehouer nog die Verpreider verantwoordelikheid aanvaar vir verliese a.g.v. **TORUS** wat nie die weerstandbiedende onkruidte beheer nie. Moenie **TORUS** op sy eie toedien in situasies waar onkruidweerstand bevestig is nie. Sub-standaard toedienings van **TORUS** sal tot verswakte onkruidbeheer lei en mag tot die ontwikkeling van onkruiddoder weerstandigheid bydra. Dit is uiterst belangrik om die behandelde gebiede noukeurig te ondersoek om te verseker dat onkruiddoder weerstandige onkruidte 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.**

##### **Koring en Gars**

- Vir optimale resultate, dien **TORUS** toe wanneer die onkruidte jong en aktief in klam omstandighede groei.
- Onkruidte wat onder stemmingstoestande groei, mag minder gevoelig wees vir **TORUS**.
- **TORUS** skroeï die blare van teikenonkruidte vinnig. Die finale terugsterwing van onkruidte mag wissel volgens die onkruidspesies en heersende toestande.
- Dien slegs toe op die gewas in die aanbevole stadium van ontwikkeling soos aangedui.
- Dien slegs toe op 'n egale gewasstand en vermy areas waar daar min of geen effek van gewaskompetisie is.
- Kousbalktoedienings mag die simptome van vergeling van blaarskroei vererger.
- Gebruik 'n gesikte buffer volgens die etiketvoorskrif indien die water hard/alkalies voorkom om 'n ideale pH van 5 – 7 te verkry.

#### **Boorde en wingerde (meerjarige) gewasse (soos sagtevrugte, tafel- en wyndruwe, sitrus, makadamianeute, pekanneute, amandels en avokado's)**

- Dien **TORUS + NIRVANA** toe op aktiegroeiente onkruidte en verseker deeglike bedekking, veral op die groter, meer volwasse onkruidte.
- Moeilik-beheerbare eenjarige onkruidte moet gedurende vroeë lente as 'n voor-blom behandeling toegedien word.
- Gebruik 'n gesikte buffer volgens die etiketvoorskrif indien die water hard/alkalies voorkom om 'n ideale pH van 5 te verkry.
- Ernstige gelokaliseerde en getranslokeerde skade mag voorkom indien sputnewel of die wegdrywing daarvan in kontak kom met blare, vrugte en/of onvolwasse bas van bome, wingerdstokke of aangrensende nie-teiken gewasse, wat nie onder behandeling is nie.

### **VERENIGBAARHEID**

Die verenigbaarheid van **TORUS** met ander produkte hang van die formulering van die betrokke produkte af, asook die kwaliteit van die sputwater wat gebruik word. Omdat formulering van tyd tot tyd kan verander, word dit aanbeveel dat 'n fisiële verenigbaarheidstoets uitgevoer word, voordat die tenkmengsel gemaak word. Moenie met enige ander produktes wat nie in hierdie etiket verskyn, meng nie.

Indien ander produktes saam met **TORUS** in 'n sputprogram gebruik word, moet die etikette van daardie produktes geraadpleeg word vir die aanwysings en beperkings op toedienings en gewasrotasie-aanbevelings.

Raadpleeg 'n Meridian Agritech verteenwoordiger vir besonderhede.

Grasonkruiddoders mag nie binne 7 dae na 'n **TORUS** bespuiting toegedien word nie.

By graangewasse, moenie met benatters en olies meng nie.

## MENG- EN TOEDIENINGSINSTRUKSIES

Vul die spuittenk halfvol met skoon water en voeg die verlangde hoeveelheid **TORUS** by die spuitwater terwyl dit geroer word. Maak spuittenk tot by die verlangde volume vol. Indien tenkmengsels met ander onkruiddoders gemaak word, moet die onderskeie vervaardigers se gebruiksaanwysings op die etiket gevolg word. Indien tenkmengsels gebruik word, voeg **TORUS** heel eerste in die halfvol tenk en voeg dan tenkvennoot by. Vul die tenk hierna 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. Indien **TORUS** met **NIRVANA** in 'n tenkmengsel gebruik word, moet die mengvolgorde as volg wees: Bufferagent, **TORUS**, **NIRVANA**, geskikte benatter en wegdrywingsbeheermiddel.

**Verseker konstante en deeglike roering tydens die vermengings- en spuitproses.**

## TOEDIENINGSMETODES

### Slegs grondtoediening:

**TORUS** het slegs 'n kontakwerking. Dit is dus noodsaaklik om 'n goeie algemene bedekking op die teikenplante te verkry.

#### Koring en Gars:

- Dien toe met 'n trekkergemonteerde balkspuit wat korrek gekalibreer is om ten minste 200 l / ha spuitmengsel en 'n maksimum van 400 l / ha teen 'n konstante spoed en druk (100 – 200 kPa) te lewer om egalige verspreiding te verseker.
- Vermy oorvleueling van spuitbane en sluit die spuitpunte af tydens aanskakeling, stadige beweging, wanneer gedraai word en wanneer tot stilstand kom om oormatige toediening te verhoed.

#### Boorde en wingerd (meerjarige) gewasse

- Dien toe met 'n rugsakspuit of geskikte gemotoriseerde toedienier met bedekte (beskermde) spuitkoppe of die gebruik van lae druk (100 – 200 kPa) en/of lae-wegdrywingsspuitkoppe om die risiko van wegdrywing van spuitewel te beperk.
- Die gebruik van spuitkoppe met groter openinge verseker groter druppels wat bedekking en effektiwiteit verbeter en die potensiële wegdrywing verminder.
- Moenie die spoed van 5 km/h oorskry wanneer met 'n trekker of grondtuig toedien nie.
- Moenie toedien met windsnelhede van meer as 10 km/h nie.
- Vermy toediening wanneer temperatuur-inversietoestande voorkom.
- Dien toe in ongeveer 200 l spuitmengsel/ha om deeglike bedekking van die onkruidte te verseker.
- 'n Opvolgbespuiting mag nodig wees. Kolbespuiting word onder sulke omstandighede aanveevel.
- Dit is die verantwoordelikheid van die spuitoperator om te verseker dat die spuitmengsel/newel nie in aanraking met nie-teikenplante of gewasse kom nie.**

## AANBEVELINGS

GEWAS	DOSIS / HA	OPMERKINGS
<b>Koring, Gars</b>	42 ml / ha <b>TORUS</b> + 267 ml / ha <b>MCPCA 750 DMAX</b>  of  42 ml / ha <b>TORUS</b> + 267 ml / ha <b>MCPCA 750 DMAX</b> + 12.5 g / ha <b>PRISM 20 WG</b>	Dien toe as 'n na-opkomsbespuiting wanneer die koring en gars tussen die groeistadiums 7 en 13 volgens die lys van LNR Kleingraaninstituut, Bethlehem is. Toediening moet nie later as 6 weke na opkoms van die onkruidte plaasvind nie.  Dien toe op gars in die 5 tot 6 blaarstadium.
<b>Boorde en wingerd (meerjarige) gewasse</b>		
<b>Boorde en wingerd (meerjarige) gewasse:</b>  <b>Sagtevrugte</b> (Appels, Pere, Perskes, Pruime, Nektariens),  <b>Wingerd</b> (Tafel- en Wyndruwe)	42 ml / ha <b>TORUS</b> + 5 l <b>NIRVANA</b>	Dien toe as 'n gerigte tussenry bespuiting vir die beheer van moeilik beheerbare onkruidte soos <i>Malva parviflora</i> , <i>Conyza bonariensis</i> en <i>Urtica dioica</i> wat aktief groeiend is (die ideale stadium is wanneer die onkruidte tussen 10 – 20 cm hoog is). Beskerm die jong wingerdstokke / bome / bossies met onvolwasse bas gedurende toediening of gebruik bedekte spuitapparaat. Verseker dat kontak met die blare, vrugte en bas vermy word. Volg die aanbevelings op die <b>NIRVANA</b> etiket.

<b>Sitrus</b>		Verwys na die <b>NIRVANA</b> etiket vir 'n lys van onkruide wat verwag om beheer te word.
<b>Boomneute</b> (Makadamianeute, Pekanneute, Amandels)		Die byvoeging van 'n gesikte benatter sal die kosmetiese effek en spoed van werking versnel.
<b>Avokado's</b>		<b>Wingerd:</b> Begin met toediening voor bot in bos- en laag-opgeleide wingerde. By hoog opgeleide wingerd, moenie op oorhangende blare of groengedeeltes van die wingerd sput nie. Moenie op wingerde wat 2 jaar of jonger is sput nie, tensy die stamme afgeskerm is.
<b>Aalwyne</b>		<b>Boorde:</b> Moenie sput nie wanneer blomstadium begin het nie.

#### ONKRUIDE BEHEER:

Die volgende onkruidspesies word normaalweg deur **TORUS + MCPA 750 DMAX**, of **TORUS + MCPA 750 DMAX + PRISM 20 WG** beheer indien teen die voorgeskrewe dosis toegedien word.

Botaniese naam	Gewone naam
<i>Anagallis arvensis</i>	Pimpernel
<i>Arctotheca calendula*</i>	Soetgousblom
<i>Emex australis</i>	Kaapse dubbeltjie
<i>Erodium moschatum</i>	Turknael
<i>Fumaria muralis</i>	Duiwekerwel
<i>Galium spurium</i>	Kleefkruid
<i>Malva parviflora</i>	Kiesieblaar
<i>Pentzia suffruticosa</i>	Klein stinkkruid
<i>Polycarpon tetraphyllum</i>	Naaldvrug
<i>Raphanus raphanistrum</i>	Ramenas

\*Beheer mag wisselvallig wees.

Die **TORUS** behandelings beheer die bogenoemde onkruidspesies. Sekere onkruide 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 onkruide wat nie gelys is nie. Onkruide wat ontkiem het na die toediening van die **TORUS + MCPA 750 DMAX** tenkmengsel sal nie beheer word nie.

#### ERKENNING VAN HANDELSMERKE

MCPA 750 DMAX (L 9020)  
Prism 20 WG (L 8131)

Meridian Agrochemical Company (Edms.) Bpk.  
Meridian Agrochemical Company (Edms.) Bpk.