



# GLYPHOGAN 360 SL

Reg No L 5393 Act / Wet 36 of 1947  
N – AR 0491

A soluble concentrate, non-selective, systemic post-emergence herbicide with slightly or no soil activity for the control of perennial and annual weeds in agriculture as well as in non-crop and industrial areas. GLYPHOGAN can also be used as a growth regulator to reduce growth of weeds.

'n Oplosbare konsentraat, nie-selektiewe, sistemiese na-opkom onkruidoder met min of geen grondaktiwiteit vir die beheer van een- en meerjarige onkruid in landbou asook in onbeboude- en nywerheidsgebiede. GLYPHOGAN kan ook gebruik word as groeireguleerder vir die vertraging van groei in onkruid.

**HRAC GROUP CODE HERBICIDE**

**G**

**HRAC ONKRUIDODER GROEPKODE**

## ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL

Glyphosate (glycine) 360 g / ℓ ae/se Glifosaat (glisien)  
(glyphosate isopropylamine salt 480 g / ℓ) (glifosaat isopropielamien sout 480 g / ℓ)

## NET VOLUME / NETTO VOLUME

..... ℓ

## REGISTRATION HOLDER / REGISTRASIEHOUER

Makhteshim-Agan SA (Pty) LTD  
Reg No. 92/01741/07  
21 Viben Street  
Brackenfell  
7560

Batch number .....

Lotnommer

Date of Manufacture .....

Datum van Vervaardiging

UN NR:



## WARNINGS

- Harmful if swallowed. Avoid contact with eyes and skin. Do not breathe fumes
- Do not mix, store or apply in galvanized steel or unlined steel (except stainless steel) containers, as a reaction will produce hydrogen gas which is highly combustible.
- Store in a cool, dry, well-ventilated place away from direct sunlight.
- Store away from food, feeds, seed and other agricultural chemicals.
- Keep out of reach of children, uninformed persons and animals.

**Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions because the action 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 concerned 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 of 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 or registration holder in the event of any uncertainty.**

## PRECAUTIONS

- Do not eat, drink or smoke whilst handling this product
- Prevent contamination of food, feed, drinking water and eating utensils.
- Wear suitable protective clothing and gloves. In case of accidental skin or eye contact wash thoroughly with soap and water.
- While spraying, avoid contact with spray as much as possible.
- Prevent spray drift and / or contamination onto susceptible or edible crops, grazing or any other areas not under treatment as this may cause serious crop damage.
- Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a minimum of 10% of that of the container. Add the rinsings to be contents of the spray tank before destroying the container in the prescribed manner. Destroy empty container by perforation and flattening and never use for any other purpose.

## RESISTANCE PERVENTION MANAGEMENT

**GLYPHOGAN 360 SL** is a member of the glycine group of herbicides, HRAC Herbicide Group Code G. Some naturally occurring weed biotypes resistant to **GLYPHOGAN** and other herbicides belonging to Group Code G herbicides may exist through normal genetic variability in any weed population. These resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by **GLYPHOGAN** and other Group Code G herbicides. To prevent the selection of resistant weeds, the following steps can be taken:

- Integrate tillage or other mechanical control methods (including non-selective herbicides during the fallow period) into weed control programmes whenever practical.
- Avoid the repeated use of products in the same mode-of-action group. Plan crop rotations to allow the use of herbicides from different mode-of-action groups.

For further advice on the prevention of herbicide resistance, contact your local Makhteshim-Agan representative.

## **DIRECTIONS FOR USE: USE ONLY AS DIRECTED**

### **GENERAL INFORMATION**

- The herbicidal action is only visible from two weeks after application onwards.
- Apply **GLYPHOGAN** post-emergence to vigorously growing weeds, directed to the foliage and immature bark. For difficult to control perennial weeds, application in autumn is recommended, when weeds are actively translocation nutrients into their roots, bulbs, rhizomes and stolons. Any regrowth should be spot sprayed.
- Do not spray whilst weeds are wet, dormant or under stress or when covered in a layer of dust or damaged by frost.
- Rain or irrigation within 6 hours of application can reduce the efficacy of **GLYPHOGAN**.
- In mixed weed situations (annuals in amongst problem perennials) mow or spray out annuals, wait for vigorous regrowth of perennials and then spray or spot spray on regrowth.
- When applied in a tank mix with other chemicals the label recommendations of all the products apply.
- Pre-plant weed control sprays on sandy soil (<10% clay) should take place 14 - 21 days before transplanting any seedlings. Tomato and tobacco seedlings, in particular, are very sensitive to glyphosate carry-over.

### **COMPATIBILITY**

**GLYPHOGAN** can be tank mixed with the following chemicals:

- MCPA (potassium salt)
- Simazine SC and WP (with the addition of ammonium sulphate)
- Diuron SC and WP (with ammonium sulphate).

**NOTE:** The addition of ammonium sulphate (2%) to the spray water before adding Diuron or Simazine in tank mixtures with **GLYPHOGAN** improves compatibility.

### **APPLICATION INFORMATION**

- **GLYPHOGAN** can be applied in spray volumes ranging from 12 to 600ℓ / ha.
- Ensure that spray equipment is clean and free of rust, dust and sediment from other pesticides.
- Always use clean water. Avoid the use of brack or muddy water, or water with a high colloid content derived from soils high in organic matter. Where alkaline and/or hard water occurs, a buffer should be added according to label recommendations.
- Correctly calibrate all sprayers under field conditions.
- In situations where drift may be hazardous, use low pressures of 100 to 200kPa or low drift nozzles when spraying.
- Do not spray when wind speed exceeds 10km/h.
- Ensure a fine, even droplet distribution and thorough coverage of the target weeds.

#### **Aerial application:**

Aerial application of **GLYPHOGAN 360 SL** may only be done by a registered Aerial Application Operator

using a correctly calibrated, registered aircraft according to the instructions of SABS Code 10118 (Aerial Application of Agricultural Pesticides). 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 be met:

- Volume: A spray mixture volume of 30 to 50 litres per hectare is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aurally at a lower volume rate than recommended.
- Droplet coverage: 30 to 40 droplets per cm<sup>2</sup> must be recovered at the target area.
- Droplet size: A droplet spectrum with a VMD of 300 to 400 microns is recommended. Limit the production of fine droplets less than 150 microns (high drift and evaporation potential) to a minimum.
- Flying height: Maintain the height of the spray boom at 3 to 4 metres above the target. Do not spray when aircraft dives, is in a climb or when banking
- Use suitable atomising equipment that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product. The spraying system must produce a droplet spectrum with the lowest possible Relative Span.
- Position all the atomisers within the inner 60 to 75% of the wingspan to prevent droplets from entering the wingtip vortices.
- The use of a registered drift retardant and/or low drift aerial spraying nozzle (e.g. straight stream nozzle) is recommended.
- The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C.
- Stop spraying if the wind speed exceeds 10km/h.
- Stop spraying under turbulent, unstable and dry conditions during the heat of the day.
- Spraying under temperature inversion conditions (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80% and above) may lead to the following:
  - a) reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage).
  - b) damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.
- Ensure 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 relevant data will be compiled in a logbook and kept for future reference.

## **SURFACTANTS / ADDITIVES**

- For optimum results a minimum of 1.5% **GLYPHOGAN** solution in the total spray volume is recommended. If it is less 0.5% surfactant (0.5ℓ / 100ℓ water) should be added to the spray volume.  
For example: 3ℓ in 200ℓ water / ha (1.5% solution) = No surfactant needed.  
3ℓ in 400ℓ water / ha (0.7% solution) = Add 2ℓ surfactant to the spray volume.
- GLYPHOFIX (L5389), a high surfactant formulation, may be added to spray solutions as a surfactant at 0.5 to 0.75ℓ GLYPHOFIX per 100ℓ spray volume.
- GLYPHOFIX may be used to supplement **GLYPHOGAN** in the spray solution by replacing 1ℓ **GLYPHOGAN** with 2ℓ GLYPHOFIX. DO NOT SUBSTITUTE MORE THAN 50% OF THE RECOMMENDED **GLYPHOGAN** RATE e.g. **GLYPHOGAN** rate 4ℓ / ha = 3ℓ **GLYPHOGAN** + 2ℓ GLYPHOFIX / ha.

- For pH and water hardness adjustment of spray water, add a buffer as recommended to the spray water before adding **GLYPHOGAN**.

## **WEED CONTROL**

Percentage calculation, e.g. 1.5% solution = 1.5ℓ **GLYPHOGAN** in 98.5ℓ water = 100ℓ spray solution.

Application timing codes:

ES	-	Early Spring	S	-	Summer
A	-	Autumn	W	-	Winter

Table 1: Perennial weeds

Table 2: Non-crop and industrial use

Table 3: Crop recommendations, tree crops, pre-planting, forestry, Eucalyptus eradication and sugarcane

Table 4: Chemical mowing

Table 5: Pasture renovation

Table 6: Wipe-type application

TABLE 1: PERENNIAL WEEDS TABEL 1: MEERJARIGE ONKRUIDE				
REMARKS	TIMING	WEED / ONKRUID	TYD	OPMERKINGS
Rate: 2,0ℓ / ha 1,5% solution			Dosis: 2,0ℓ / ha or 1,5% oplossing	
Large trees: Cut back stems to a height of 5 to 20cm. Wait for regrowth to knee height before spraying. Seedlings: Spray up to 1m height with 0.5% solution.	S/A	Bugweed / Luisboom ( <i>Solanum mauritianum</i> )	S/H	Groot bome: Kap stam af op 'n hoogte van tussen 5 en 20cm. Spuit hergroei indien kniehoogte is. Saailinge: Spuit tot op 1m hoogte met 0.5% oplossing.
Seedlings only: • Bipinnate leaf stage – 2ℓ / ha • Up to 60cm high – 4ℓ / ha	ES/A	Port Jackson Willow / Port Jackson ( <i>Acacia saligna</i> )	H/VL	Slegs vir Saailinge: • Tweeblaarstadium – 2ℓ / ha • Tot 60cm hoog – 4ℓ / ha
	S/A	Weeping love grass / Oulandsgras ( <i>Eragrostis curvula</i> )	S/H	
	S/A	Wild grain sorghum / Wilde graansorghum ( <i>Sorghum spp</i> )	S/H	
Rate: 8ℓ / ha or 4% solution			Dosis: 8ℓ / ha of 4% oplossing	
<u>Ground application</u> (8ℓ / ha): Ensure thorough wetting of all plant parts. Spray up to 1500ℓ spray mixture per ha. It might be necessary to do a follow up application with a knapsack sprayer should regrowth occur. Use a rate of 2.5 – 3% spray solution. <u>Aerial application</u> (8ℓ / ha): Apply at least 40ℓ spray mixture per ha. In dense stands apply twice on the same swath, the second application in the opposite direction as the first. Should regrowth appear it can be treated	S/A	Common reed / Fluitjiesriet ( <i>Phragmites australis</i> )	S/H	<u>Grondtoediening</u> (8ℓ / ha): Verseker 'n deeglike bedekking van alle plantdele. Gebruik tot 1500ℓ spuitoplossing per ha. Indien nodig kan 'n opvolgbespuiting met 'n rugsakspuit gedoen word teen 'n konsentrasie van 2.5 – 3% spuitoplossing. <u>Lugtoediening</u> (8ℓ / ha): Dien in ten minste 40ℓ spuitoplossing per ha toe. In digte stande word aanbeveel dat twee keer oor dieselfde spuitbaan toegedien word, die tweede in die teenoorgestelde rigting van die eerste. Indien nodig, kan hergroei met 'n rugsakspuit behandel word

TABLE 1: PERENNIAL WEEDS TABEL 1: MEERJARIGE ONKRUIDE				
REMARKS	TIMING	WEED / ONKRUID	TYD	OPMERKINGS
with a knapsack sprayer using a 2.5 – 3% spray solution.				teen 'n konsentrasie van 2.5 – 3% spuitoplossing.
Rate: 3ℓ / ha or 1.5% solution				Dosis: 3ℓ / ha of 1.5% oplossing
Spray up to 1m in height.	S	Black wattle / Swartwattel ( <i>Acacia mearnsii</i> )	S	Spuit tot en met 1m hoogte.
	S	Ink Berry / Inkbessie ( <i>Phytolacca heptanra</i> )	VL	
	S	Mauritius thorn / Kraaldoring ( <i>Caesalpinea decapetula</i> )	S	
Apply before flowering only.	ES	Plantain / Tongblaar ( <i>Plantago lanceolate</i> )	VL	Bespuit slegs voor blom.
Seedling plants: Up to 1m high – 1.5% solution Higher than 1m – 2% solution Shrubs and/or trees: Slash, spray regrowth with 1.5% tot 2% solution when 1m high.	ES	Sesbania ( <i>Sesbania punicea</i> )	VL	Saailinge: Tot 1m hoogte – 1.5% oplossing Hoër as 1m – 2% oplossing Struik en/of hoë bome: Sny af, bespuit hergroei met 1.5% tot 2% oplossing op 1m hoogte.
Apply before flowering only in a tank mix with the recommended Simazine rate.	ES	Small mallow / Kiesieblaar ( <i>Malva parviflora</i> )	VL	Dien toe voor blom alleenlik in 'n tenkmengsel met Simasien soos aanbeveel.
Apply before flowering only.	ES	Sorrel / Steenboksuring ( <i>Rumex spp.</i> )	VL	Bespuit slegs voor blom.
Rate: 4ℓ / ha or 1.5% solution				Dosis: 4ℓ / ha of 1.5% oplossing
Follow up spray on regrowth, use 3ℓ / ha or spot spray using 1.5% solution.	S/A	Johnson grass / Johnsongras ( <i>Sorghum halepense</i> )	S/H	Opvolgbespuiting op hergroei met 3ℓ / ha of kolbespuit met 1.5% oplossing.
Apply on active growth during summer. Spray regrowth using 3ℓ / ha or spot spray using 1.5% solution. Winter rainfall area: Apply in	S	Kikuyu / Kikoejoe ( <i>Pennisetum clandestinum</i> )	S	Dien toe op aktiewe groei in somer. Bespuit hergroei met 3ℓ / ha of kolbespuit met 1.5% oplossing. Winterreënvalgebied: Dien toe in herfs, maar voor ryp.

TABLE 1: PERENNIAL WEEDS TABEL 1: MEERJARIGE ONKRUIDE				
REMARKS	TIMING	WEED / ONKRUID	TYD	OPMERKINGS
autumn but before frost.				
Use high volume 400ℓ mixture / ha. Spot spray regrowth or spray early spring with 2% solution.	W	Nassella tussock grass / Nassella polgras ( <i>Stipa trichotoma</i> )	W	Gebruik hoë volume 400ℓ spuitmengsel / ha. Kolbespuit hergroei of bespuit vroeg lente met 'n 2% oplossing.
Rate: 6ℓ / ha or 1.5% solution			Dosis: 6ℓ / ha of 1.5% oplossing	
Knapsack sprayer – 3% solution or mistblower – 4% solution	S/A	American bramble / Brame ( <i>Rubus spp.</i> )	S/H	Rugsakspuit – 3% oplossing of newelblaser – 4% oplossing.
Follow up on regrowth with 3ℓ / ha or spot spray with 1.5% solution.	S	Buffalo or Ubabe grass / Buffelgras ( <i>Panicum maximum</i> )	S	Volg hergroei op met 3ℓ / ha of kolbespuit met 1.5% oplossing.
Apply in autumn and follow up in summer on the active regrowth with 4ℓ / ha or a 2% solution spot spray. Alternatively apply in summer and follow up in autumn on the regrowth. Winter rainfall area: Apply up to 9ℓ / ha in autumn before frost occurs	S/A	Common quick grass / Kweek ( <i>Cynodon dactylon</i> )	S/H	Dien toe in herfs en volg op in somer op die hergroei met 4ℓ / ha of kolbespuit met 2% oplossing. Anders dien toe in somer en volg op in herfs op die hergroei. Winterreënvalgebied: Dien tot 9ℓ / ha toe in herfs, maar voor die ryp.
Apply at flower but before seeds are shed. Follow up on regrowth using 3ℓ / ha or spot spray with 1.5% solution	S	Common paspalum / Polpaspalum ( <i>Paspalum dilatatum</i> )	S	Dien toe met blom, maar voor saadval. Volg hergroei op met 3ℓ / ha of kolbespuit met 1.5% oplossing.
Apply at beginning of flowering. Follow up with 1.5% solution on regrowth.	S	Field bindweed / Akkerwinde ( <i>Convolvulus arvensis</i> )	S	Bespuit sodra begin blom. Volg op met 1.5% oplossing op hergroei.
Knapsack spraying – 3% solution or mistblower – 4% solution.	S/A	Lantana / Gewone lantana ( <i>Lantan camara</i> )	S/H	Rugsakspuit – 3% oplossing of newelblaser – 4% oplossing.
Apply at flowering, spray regrowth with 3ℓ / ha or spot spray using	S	Purple nutsedge / Rooiuitjie ( <i>Cyperus rotundus</i> )	S	Dien toe met blom. Bespuit hergroei met 3ℓ / ha of kolbespuit met 1.5%

TABLE 1: PERENNIAL WEEDS TABEL 1: MEERJARIGE ONKRUIDE				
REMARKS	TIMING	WEED / ONKRUID	TYD	OPMERKINGS
1.5% solution (Feb/March).				oplossing (Feb/Maart).
Apply at flowering, spray regrowth with 3ℓ / ha or spot spray using 1.5% solution (Feb/March)	S	Yellow nutsedge / Geeluintjies ( <i>Cyperus esculentus</i> )	S	Dien toe met blom. Bespuit hergroei met 3ℓ / ha of kolbespuit met 1.5% oplossing (Feb/Maart).
Rate: 8ℓ / ha			Dosis: 8ℓ / ha	
Apply at flowering but before seed shed. Follow up spray on regrowth at 4ℓ / ha or spot spray with 2% solution. Winter rainfall area: Apply 9ℓ / ha in autumn before frost.	S	Couch paspalum / Kweekpaspalum ( <i>Paspalum paspaloides</i> )	S	Dien toe met blom, maar voor saadval. Dien opvolgbespuiting op hergroei toe met 4ℓ / ha of kolbespuit met 2% oplossing. Winterreënvalgebied: Dien 9ℓ / ha toe in herfs, voor ryp.
<b>SPECIFIC RECOMMENDATIONS</b> Slash established plants and allow to regrow to between 50 and 120cm. Spray 1ℓ / ha per 100ℓ spray volume (i.e. 1%) to give complete cover of foliage. Previously slashed multi-stem plants may require a follow up treatment.	S/A	Triffed weed / Paraffienbos ( <i>Chromolaena odorata</i> )	S/H	<b>SPESIFIEKE AANBEVELING</b> Kap gevestigde plante af en laat hergroei tot tussen 50 en 120cm. Bespuit hergroei met 1ℓ per 100ℓ spuitvolume (i.e. 1%). Verseker volledige bedekking op blare. Vorige gekapte meerstammige plante mag 'n opvolgbehandeling benodig.

<b>TABLE 2: NON-CROP AND INDUSTRIAL USE</b>				
<b>TABEL 2: NIE-GEWAS EN INDUSTRIËLE GEBRUIK</b>				
<b>REMARK</b>	<b>TIMING</b>	<b>AREA</b>	<b>TYD</b>	<b>OPMERKINGS</b>
Annual weeds only	1 to 3 ℓ / ha	All non crop areas/ Alle nie-gewas areas	1 to 3ℓ / ha	Slegs eenjarige onkruid
Will control most annual and perennial weeds. Spot spraying of regrowth with a 1.5% solution may be necessary. For specific weeds, refer to Table 1. For hardy, persistent weeds, use <b>GLYPHOGAN</b> in a tank mix with residual herbicides according to recommended rates (Diuron and Simazine).	2 to 10 ℓ / ha	All non crop areas/ Alle nie-gewas areas	2 to 10ℓ / ha	Sal die meeste een- en meerjarige onkruid beheer. Kolbespuit hergroei met 1.5% oplossing waar nodig. Sien Tabel 1 vir spesifieke onkruid. Vir geharde en weerstandbiedende onkruid gebruik <b>GLYPHOGAN</b> in 'n tenkmengsel met residuele onkruidodders (Diuron en Simasien).

**TABLE 3: CROP RECOMMENDATIONS**  
**TABEL 3: GEWASAANBEVELINGS**

<b>Precautions:</b> Prevent spray / spray mist contact with leaves, green and young bark of stems as well as fruit. Allow 10 days after pruning, or the removal of low branched and/or suckers before spraying weeds in perennial crops.		<b>Voorsorgmaatreëls:</b> Voorkom spuit- of sproeinewelkontak met blare, groen en jong bas van stamme asook vrugte. Laat 'n periode van 10 dae toe na snoei, of verwydering van laaghangende takke en/of suiers, alvorens onkruid in meerjarige gewasse bespuit word.			
<b>REMARKS</b>	<b>RATE</b>	<b>CROP</b>	<b>GEWAS</b>	<b>DOSIS</b>	<b>OPMERKINGS</b>
Dosage rate: Use the higher rate on mature weeds.	<u>Annual weeds:</u> 1 to 3ℓ / ha	Almond	Amandels	<u>Eenjarige onkruid:</u> 1 tot 3ℓ / ha	Dosis: Gebruik die hoër dosis op volwasse onkruid.
Young trees with green bark (generally younger than four years): Shield stems from spray contact.	<u>Perennial weeds:</u> See specific rates in Table 1	Aloes	Alwyne	<u>Meerjarige onkruid:</u> Sien spesifieke dosis in Tabel 1	Jong boompies met groen bas (gewoonlik jonger as vier jaar): Beskerm die stamme teen spuitkontak.
Bananas: Protect suckers and green stems from spray contact.		Apples	Appels		Piesangs: Beskerm suiers en groen stamme teen spuitkontak.
Blackberry: Use only wipe type equipment and prevent direct crop contact.		Apricot	Appelkose		Brame: Gebruik slegs bestryktipe toerusting. Vermy kontak met gewas.
Pineapples and prickly pears: Apply only as a directed inter-row application.		Avocados	Avokados		Pynappels en Turksvye: Dien alleenlik toe as 'n gerigte tussenrybespuiting.
Vines: Apply only to vines older than two years. Apply as directed. Spray before bud burst. Brush and low trellised vines smaller than 60cm height: Apply pre-burst in spring.		Bananas	Piesangs		Wingerd: Dien slegs toe op wingerd ouer as 2 jaar. Dien voor bot toe gerig op die onkruid. Bosstok en laagopgeleide wingerd onder 60cm hoog: Dien toe in die lente voor bot.
		Blackberry	Brame		
		Cherries	Kersies		
		Citrus	Sitrus		
		Coffee	Koffie		
		Deciduous fruit	Sagte-vrugte		
		Grapevines	Wingerde		
		Granadilla	Grenadella		
		Guava	Koejawels		
		Hops	Hops		
		Kiwi fruit	Kiwivrugte		
		Litchis	Lietjies		
		Macadamia	Macadamia		
		Nuts	Neute		
		Mangoes	Mangoes		
		Nectarines	Kaalperske		
		Olives	Olywe		

**TABLE 3: CROP RECOMMENDATIONS**  
**TABEL 3: GEWASAANBEVELINGS**

<b>Precautions:</b> Prevent spray / spray mist contact with leaves, green and young bark of stems as well as fruit. Allow 10 days after pruning, or the removal of low branched and/or suckers before spraying weeds in perennial crops.		<b>Voorsorgmaatreëls:</b> Voorkom spuit- of sproeinewelkontak met blare, groen en jong bas van stamme asook vrugte. Laat 'n periode van 10 dae toe na snoei, of verwydering van laaghangende takke en/of suiers, alvorens onkruid in meerjarige gewasse bespuit word.			
<b>REMARKS</b>	<b>RATE</b>	<b>CROP</b>	<b>GEWAS</b>	<b>DOSIS</b>	<b>OPMERKINGS</b>
Sisal: Apply to nursery and mature plants.	<u>Annual weeds:</u> 1 to 3ℓ / ha  <u>Perennial weeds:</u> See specific dosage rates in Table 1	Pawpaws Peaches Pears Pecan nuts Pineapples Plums Prickly pears Prunes Quince Sisal Tea	Papaja Perskes Pere Pekanneute Pynappels Pruime Turksvye Pruimedante Kwepers Sisal Tee	<u>Eenjarige onkruid:</u> 1 tot 3ℓ / ha  <u>Meerjarige onkruid:</u> Sien spesifieke dosis in Tabel 1.	Sisal: Dien toe in kwekerye en in volwasse plante.
Residual control: Apply a tank mix of <b>GLYPHOGAN</b> and Simazine. Use recommended rates. To overcome incompatibility add 2kg ammonium sulphate / 100ℓ water in the spray tank, and then the recommended dosage rates of <b>GLYPHOGAN</b> followed by Simazine	<b>GLYPHOGAN</b> tank mix with Simazine	Apples Pears Grapevines	Appels Pere Wingerde	<b>GLYPHOGAN</b> tenkmengsel met Simasien	Residuele beheer: Dien die aanbevole tenkmengsel van <b>GLYPHOGAN</b> en Simazien toe. Voeg 2kg ammoniumsulfaat by 100ℓ water om mengbaarheid te verbeter, gevolg deur aanvevole dosisse van <b>GLYPHOGAN</b> en daarna Simasien.
Apply when weeds such as Plantain ( <i>Plantago lanceolata</i> ) and Musk herons bill ( <i>Erodium moschatum</i> ) are young and actively growing.	<b>GLYPHOGAN</b> tank mix with MCPA (potassium salt)			<b>GLYPHOGAN</b> tenkmengsel met MCPA (kaliumsout)	Dien toe wanneer onkruid soos Tongblaar ( <i>Plantago lanceolata</i> ) en Turksnael ( <i>Erodium moschatum</i> ) jonk is en aktief groei.

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<b>Precautions:</b> Prevent spray / spray mist contact with leaves, green and young bark of stems as well as fruit. Allow 10 days after pruning, or the removal of low branched and/or suckers before spraying weeds in perennial crops.		<b>Voorsorgmaatreëls:</b> Voorkom spuit- of sproeinewelkontak met blare, groen en jong bas van stamme asook vrugte. Laat 'n periode van 10 dae toe na snoei, of verwydering van laaghangende takke en/of suiers, alvorens onkruid in meerjarige gewasse bespuit word.			
<b>REMARKS</b>	<b>RATE</b>	<b>CROP</b>	<b>GEWAS</b>	<b>DOSIS</b>	<b>OPMERKINGS</b>
This combination is not recommended for Small mallow ( <i>Malva parviflora</i> ), Cape marigold ( <i>Arctotheca calendula</i> ), Oat seed grass ( <i>Erharta spp</i> ), Blue echium ( <i>Echium vlugare</i> ), Ryegrass ( <i>Lolium spp</i> ), Sow thistle ( <i>Sonchus oleraceus</i> ) and Brome spp ( <i>Bromus spp</i> ).	Early winter (weeds under 15cm high): 1.5ℓ + 3ℓ MCPA / ha	Apples Pears Grapevines	Appels Pere Wingerde	Vroeë winter (onkruid kleiner as 15cm): 1.5ℓ + 3ℓ MCPA/ha	Die kombinasie word nie vir Kiesieblaar ( <i>Malva parviflora</i> ), Gousblom ( <i>Arctotheca calendula</i> ), Hawersaadgras ( <i>Erharta spp</i> ), Slangonkruid ( <i>Echium vulgare</i> ), Raaigras ( <i>Lolium spp</i> ), Sydissel ( <i>Sonchus oleraceur</i> ) en Predikantsluis ( <i>Bromus spp.</i> ) aanbeveel nie.
Use higher rate for Bur clover ( <i>Medicago polymorpha</i> ), Prostrate knotweed ( <i>Polygonum aviculare</i> ) and Sheep sorrel ( <i>Rumex angiocarpus</i> ).	Late winter (weeds under 30cm high): 2ℓ + 4ℓ MCPA / ha			Laat winter (onkruid kleiner as 30cm): 2ℓ + 4ℓ MCPA / ha	Gebruik die hoër dosis vir Klawer ( <i>Medicago polymorpha</i> ), Koperdraad ( <i>Polygonum aviculare</i> ) en Steenboksuring ( <i>Rumex angiocarpus</i> ).
Use <b>GLYPHOGAN</b> after harvesting of previous crop, prior to emergence of new crop. Dosage rate: Use higher rates on annual weeds exceeding the 12 leaf stage or established plants. For <i>Conyza spp.</i> (Fleabane) use 2 to 3ℓ / ha.	<u>Annual weeds:</u> 1 to 3ℓ / ha  <u>Perennial weeds:</u> See Table 1	Arable crop land	Bewerkbare grond	<u>Eenjarige onkruid:</u> 1 tot 3ℓ / ha  <u>Meerjarige onkruid:</u> Sien Tabel 1	Gebruik <b>GLYPHOGAN</b> na oes van die vorige gewas, maar voor opkom van die nuwe gewas. Dosis: Gebruik die hoër dosis vir eenjarige onkruid ouer as die 12 blaar stadium of gevestigde plante. Gebruik 2 tot 3ℓ / ha vir <i>Conyza spp</i> (Skraalhans).
For the establishment of firebreaks (total or tracer lines), for pre-plant trace lines in virgin veld, for post harvest pre-plant clean up, for Wattle re-establishment and for control of	<u>Alien, noxious and perennial weed species:</u> See Table 1	Forestry	Bosbou	<u>Indringer- en meerjarige onkruid:</u> Sien Tabel 1	Vir die maak van brandbane (algeheel of brandstroke), vir voorplantstroke in onversteurde veld, vir na oes voorplant skoonmaak, vir Wattelvestiging en vir die beheer van indringer- en

<b>TABLE 3: CROP RECOMMENDATIONS</b> <b>TABEL 3: GEWASAANBEVELINGS</b>					
<b>Precautions:</b> Prevent spray / spray mist contact with leaves, green and young bark of stems as well as fruit. Allow 10 days after pruning, or the removal of low branched and/or suckers before spraying weeds in perennial crops.			<b>Voorsorgmaatreëls:</b> Voorkom spuit- of sproeinewelkontak met blare, groen en jong bas van stamme asook vrugte. Laat 'n periode van 10 dae toe na snoei, of verwydering van laaghangende takke en/of suiers, alvorens onkruid in meerjarige gewasse bespuit word.		
REMARKS	RATE	CROP	GEWAS	DOSIS	OPMERKINGS
noxious and problem weeds.					probleemonkruid.
Single stem stump (trees never coppiced): Apply ± 50 ml solution to give complete stump wetting especially to the cambium region (where bark and wood meet).	5% solution	Eucalyptus stump eradication	Bloekom stomp uitwissing	5% oplossing	Enkelstamstompe (geen hergroei plaasgevind): Dien ± 50 ml oplossing vir volledige benatting toe veral op die kambiumarea (waar die bas en hout ontmoet).
Multi stem stumps (trees previously coppiced): Apply ± 100 ml solution to give complete stump wetting especially to the cambium region (where bark and wood meet).	7% solution			7% oplossing	Meervoudige stamstompe (stompe wat reeds hergroei het: Dien ± 100 ml oplossing vir volledige benatting toe veral op die kambiumarea (waar die bas en hout ontmoet).
<b>APPLICATION METHOD FOR 5% AND 7% SOLUTION:</b> Use a low pressure knapsack sprayer with a hollow cone nozzle. Apply after felling and removal of sawdust on surface to be treated. Apply on the same day as felling. Stumps which coppice after treatment should be under cut or ringbarked to expose the entire cambium region which must then be treated.  A fuzzy coppice regrowth may occur which normally dies back. If not, remove it by hand or apply a 2% solution avoiding drift onto newly established seedlings.  Species other than <i>Eucalyptus grandis</i> may show a variable response to <b>GLYPHOGAN</b> and may require a second treatment.			<b>TOEDIENINGSMETODE VIR 5% EN 7% OPLOSSINGS:</b> Gebruik 'n laedrukruksakspuit met holkeëlspuitpunte vir volledige stompbenatting. Dien toe nadat die bome afgesaag en die saagsels op die oppervlak verwyder is. Dien op dieselfde dag toe as wat bome afgesaag is. Stompe wat uitloop na behandeling moet korter afgesaag of geringuleer word om die totale kambium bloot te lê vir verdere behandeling.  'n Pluiserige soort hergroei mag voorkom wat normaalweg terugsterwe. Indien nie, verwyder met die hand of spuit met 'n 2% oplossing met die nodige voorsorg om wegdrywing na nuutgevestigde saailing te voorkom.  Ander spesies as <i>Eucalyptus grandis</i> mag wisselvallig reageer op <b>GLYPHOGAN</b> en 'n herbespuiting mag nodig wees.		

**TABLE 3: CROP RECOMMENDATIONS**  
**TABEL 3: GEWASAANBEVELINGS**

<b>Precautions:</b> Prevent spray / spray mist contact with leaves, green and young bark of stems as well as fruit. Allow 10 days after pruning, or the removal of low branched and/or suckers before spraying weeds in perennial crops.		<b>Voorsorgmaatreëls:</b> Voorkom spuit- of sproeinewelkontak met blare, groen en jong bas van stamme asook vrugte. Laat 'n periode van 10 dae toe na snoei, of verwydering van laaghangende takke en/of suiers, alvorens onkruid in meerjarige gewasse bespuit word.			
<b>REMARKS</b>	<b>RATE</b>	<b>CROP</b>	<b>GEWAS</b>	<b>DOSIS</b>	<b>OPMERKINGS</b>
Allow regrowth after final harvest to a height of 45cm (tillering complete): Apply 100 to 400ℓ / ha mixture when tillers have emerged.	8 to 10ℓ / ha	Sugarcane Last ratoon eradication (minimum tillage)	Suikerriet Laaste ratoenuitwis- sing (minimum bewerking)	8 to 10ℓ / ha	Laat hergroei toe tot 45cm hoogte na laaste ratoen (stoelstadium voltooi): Dien 100 tot 400ℓ / ha spuitmengsel toe sodra halms verskyn.
Spray <b>GLYPHOGAN</b> on the last ratoon when the regrowth is 35 to 100cm high. Allow between 1 and 10 days to elapse and shear the cane stool to a depth of 10 to 15cm below the soil surface using a blade shear or similar implement. This treatment will also control certain broadleaf and grass weeds.	4 to 8ℓ / ha. Use higher rate on highly productive soils where regrowth is a problem.	Combination tillage -last ratoon eradication	Kombinasie bewerking – laaste ratoen-uitwissing	4 tot 8ℓ / ha. Gebruik die hoër dosis op vrugbare gronde waar hergroei 'n probleem is.	Spuit <b>GLYPHOGAN</b> op 35 tot 100cm hoë hergroei van die laaste ratoen. Na 1 tot 10 dae, moet die stoel op 'n diepte van tussen 10 en 15cm onder die grondoppervlak afgesny word, met 'n lem of soortgelyke implement. Hierdie behandeling sal ook sekere gras- en breëblaaronkruid beheer.
Apply directed spray to foliage of diseased (e.g. smut) or off-type stools.	10% solution	Spot-eradication	Kol-uitwissing	10% oplossing	Dien gerig toe op blare van besmette (bv. brand) of aftipe plante.
Apply to young annual weeds that are actively growing	<u>Annual weeds:</u> 1 to 3ℓ / ha  <u>Perennial weeds:</u> See Table 1	Pre-plant	Voorplant	<u>Eenjarige onkruid:</u> 1 tot 3ℓ / ha  <u>Meerjarige onkruid:</u> Sien Tabel 1	Dien toe op aktiefgroeïende eenjarige onkruid.

<b>TABLE 3: CROP RECOMMENDATIONS</b>					
<b>TABEL 3: GEWASAANBEVELINGS</b>					
<b>Precautions:</b> Prevent spray / spray mist contact with leaves, green and young bark of stems as well as fruit. Allow 10 days after pruning, or the removal of low branched and/or suckers before spraying weeds in perennial crops.			<b>Voorsorgmaatreëls:</b> Voorkom spuit- of sproeinewelkontak met blare, groen en jong bas van stamme asook vrugte. Laat 'n periode van 10 dae toe na snoei, of verwydering van laaghangende takke en/of suiers, alvorens onkruid in meerjarige gewasse bespuit word.		
<b>REMARKS</b>	<b>RATE</b>	<b>CROP</b>	<b>GEWAS</b>	<b>DOSIS</b>	<b>OPMERKINGS</b>
Direct spray to actively growing plants in the field, around telephone poles, etc.	2% solution	Spot spraying around fields	Kolbespuiting rondom landerye	2% oplossing	Direkte bespuiting op aktiefgroeiende plante rondom landerye, telefoonpale, ens.
Cane harvested from April to July: Apply 6 to 8 weeks prior to harvest.			Riet ge-oes van April tot Julie: Dien 6 tot 8 weke voor oes toe.		
Cane harvested from October to January: Apply 4 to 6 weeks prior to harvest.			Riet ge-oes van Oktober tot Januarie: Dien 4 tot 6 weke voor oes toe.		
Do not apply to sugarcane to be harvested for seed purposes. Continue irrigation as long as possible after application, where applicable before starting the drying off period.			Moet nie lande bespuit wat vir saaddoeleindes gekap word nie. Hou aan met besproeiing so lank as moontlik na toediening waar van toepassing, voordat afdroogperiode 'n aanvang neem.		
Chemical activity is sometimes evidenced within 3 to 4 weeks after application, by slight leaf yellowing in early season cane and bud swell with side shooting in late season cane. Apical growth may cease and the plant may grow long and thin before it finally dies.			Chemiese aktiwiteit, 3 tot 4 weke na toediening, is soms waarneembaar as 'n effense vergeling vroeg in die seisoen en knopswel asook syspruiting in laatseisoenriet. Apikale groei mag stop en plante mag lank en skraal groei en uiteindelik doodgaan.		
Ratoon cane may have increased tiller population and/or slightly stunted tillers with chlorotic leaves, which will recover.			Oorstaanriet mag meer halms ontwikkel en/of wat verpot voorkom met vergeling op die blare, wat sal uitgroei.		

TABLE 4: GROWTH REGULATION (CHEMICAL MOWING)				
TABEL 4: GROEIREGULERING (CHEMIESE SNY)				
REMARK	RATE (ml / ha)	WEED / ONKRUID	DOSIS (ml / ha)	OPMERKINGS
NB: All Remarks listed in Table 4 apply to ALL the weeds listed in Table 4.		<u>TUFTED PERENNIAL GRASSES / MEERJARIGE GRASSE</u>		LET WEL: Alle Opmerkings gelys onder Tabel 4 is van toepassing op ALLE onkruid in Tabel 4.
Apply <b>GLYPHOGAN 5</b> to 10 days after mowing. Use the shorter interval in spring and summer when growth is most active.	400 – 800	Common paspalum / Gewone paspalum ( <i>Paspalum dilatatum</i> )	400 – 800	Dien <b>GLYPHOGAN 5</b> tot 10 dae na sny toe. Gebruik korter intervalle in die lente en somer tydens meer aktiewe groei.
	400– 1000	Common thatch / Dektamboekiegras ( <i>Hyparrhenia hirta</i> )	400– 1000	
	400 - 800	Fescues / Swenkgras ( <i>Fescus spp</i> )	400 - 800	
Application should replace 2 to 4 mechanical mowings depending on dosage rate, species and climatic conditions.	600 –1000	Ratstail dropseed / Rotstert fynsaadgras ( <i>Sporobolus africanus</i> )	600 –1000	Toediening behoort 2 tot 4 meganiiese operasies te vervang afhangend van dosis, spesie en klimaatstoestand.
	400 - 800	Rescue grass / Reddingsgras ( <i>Bromus uniloides</i> )	400 - 800	
Higher dosage rates will have a longer growth regulation period and a corresponding increase in initial chlorosis (yellowing).	400 – 800	Rye grass / Raaigras ( <i>Lolium spp</i> )	400 – 800	Hoër dosis sal groei langer onderdruk met 'n gevaardgaande hoër voorkoms van aanvanklike chlorose (vergeling).
	400– 1000	Smuts finger grass / Smutsvingergras ( <i>Digitaria eriantha</i> )	400– 1000	
	400 - 800	Tall paspalum / Langeen Paspalum ( <i>Passpalum urvillei</i> )	400 - 800	
		<u>RUNNING PERENNIAL GRASSES / MEERJARIGE KRUIPGRASSE</u>		
Perennial grasses are more sensitive to <b>GLYPHOGAN</b> in	400 – 1000	Couch grass / Gewone kweek ( <i>Cynodon dactylon</i> )	400 – 1000	Meerjarige grasse is meer sensitief vir <b>GLYPHOGAN</b> in

TABLE 4: GROWTH REGULATION (CHEMICAL MOWING)				
TABEL 4: GROEIREGULERING (CHEMIESE SNY)				
REMARK	RATE (ml / ha)	WEED / ONKRUID	DOSIS (ml / ha)	OPMERKINGS
autumn and chlorosis can be expected to be greater in this period. Use the lower dosage rates to avoid this.	200 - 600	Kikuyu grass / Kikoejoe ( <i>Pennisetum clandestinum</i> )	200 - 600	die herfs. 'n Groter mate van chlorose kan dus verwag word. Gebruik 'n laer dosis om dit te voorkom.
		<u>BI-ANNUAL AND PERENNIAL BROADLEAF WEEDS / TWEEJARIGE EN MEERJARIGE BREËBLAARONKRUIDE</u>		
In orchards and vineyards in the Winter rainfall region where the interrow is not irrigated (e.g. drip irrigation) the lower dosage rate should be used to late spring and summer applications on grasses.	600 - 800	Must heron bill / Turksnael ( <i>Erodium moschatum</i> )	600 - 800	Gebruik die laer dosis op grasse gedurende laat lente en somer in vrugteboorde en wingerde in die winterreënvalgebied, waar die tussenry nie besproei word nie (bv. drupbesproeiing).
Do not apply to plants under stress conditions, e.g. drought, waterlogged etc.	600 – 800	Small mallow / Kiesieblaar ( <i>Malva parviflora</i> )	600 – 800	Moet nie toedien op plante wat onder stremming verkeer nie, bv. droogte, versuip, ens.
	600 – 800	Plantain / Tonglaar ( <i>Plantago lanceolate</i> )	600 – 800	
Remove excess plant material after mowing, prior to spraying.		<u>ANNUAL WEEDS &amp; SEEDLINGS / EENJARIGE ONKRUIDE EN SAAILINGE</u>		Verwyder oortollige plantmateriaal na sny, voor bespuiting.
Apply 50 to 200ℓ / ha spray volume and ensure even droplet distribution on target foliage.	200 -1000	Well developed annual weeds, seedlings and young plants may be controlled. Goed ontwikkelde eenjarige onkruid, saailinge en jong plante mag beheer word.	200 -1000	Dien 50 tot 200ℓ / ha spuitmengsel toe en verseker 'n egalige druppelverspreiding op die teiken se blare.
		<u>FOLLOW UP TREATMENT / OPVOLGBESPUITING</u>		

<b>TABLE 4: GROWTH REGULATION (CHEMICAL MOWING)</b>				
<b>TABEL 4: GROEIREGULERING (CHEMIESE SNY)</b>				
<b>REMARK</b>	<b>RATE (ml / ha)</b>	<b>WEED / ONKRUID</b>	<b>DOSIS (ml / ha)</b>	<b>OPMERKINGS</b>
NB: All Remarks listed in Table 4 apply to ALL the weeds listed in Table 4.	Up to 600	All weeds in Table 4. Use the lower rate indicated above. Alle onkruid in Tabel 4. Gebruik laagste dosis bo aangedui.	Tot 600	LET WEL: Alle Omerkings gelys onder Tabel 4 is van toepassing op ALLE onkruid gelys onder Tabel 4.

<b>TABLE 5: PASTURE ESTABLISHMENT</b>			
<b>TABEL 5: WEIDINGSVESTIGING</b>			
<b>REMARKS</b>	<b>SITUATION</b>	<b>SITUASIE</b>	<b>OPMERKINGS</b>
Mechanical and chemical establishment:	Conventional Perennial running grass infestation	Konvensioneel Meerjarige rankgras-infestasië	Meganiese en chemiese vestiging:
Prepare pasture seedbed. Allow perennial running grass and annual weeds to emerge. Apply <b>GLYPHOGAN</b> at recommended rates for weeds present (see Table 1). Sow new pasture 3 to 4 days after spraying	Low pressure	Ligte druk	Berei saadbed voor. Laat meerjarige rankgras en eenjarige onkruid ontkiem. Dien <b>GLYPHOGAN</b> toe volgens aanbevole dosisse vir onkruidspektrum (sien Tabel 1). Saai nuwe weiding 3 tot 4 dae na toediening.
Cultivate the weeds and allow regrowth to occur. Spray at the recommended rate. Allow 7 days after spraying before a second cultivation, seedbed preparation and planting	Heavy pressure	Hoë druk	Bewerk die onkruid en laat hergroei toe. Spuit dan die aanbevole dosis. Laat 7 dae toe voor 'n tweede bewerking, saadbedvoorbereiding en plant / saai.
New germinating annual weeds can be controlled with 1 to 3ℓ /ha. Sow new pastures 3 to 4 days after spraying.	Pre-sowing weed control	Onkruidbeheer voor saai	Nuut ontkiemende onkruid kan beheer word met 1 tot 3ℓ / ha. Saai die nuwe weiding 3 tot 4 dae na toediening.
Reduce trash levels by mowing or heavy grazing 3 to 4 weeks prior to application on regrowth. Drill the new pasture 3 to 4 days after spraying.	Direct Drill (Pasture replacement and veld improvement)	Direkte plant (Weiding vervanging en veldverbetering)	Verminder plantmateriaal deur af te sny of te beweï 3 tot 4 weke voor toediening op hergroei. Plant die nuwe weiding 3 tot 4 dae na toediening.
Control perennial and annual weed infestations in pastures by spot spraying with a 2% solution or using wipe-type equipment to weeds projecting above the pasture (See Table 6).	Pasture maintenance	Instandhouding van weiding	Beheer een- en meerjarige onkruid in weidings deur kolbespuitings met 'n 2% oplossing of gebruik 'n bestryktipe toediener waar onkruid bokant die weiding uitsteek (Sien Tabel 6).

**TABLE 5: PASTURE ESTABLISHMENT****TABEL 5: WEIDINGSVESTIGING****NOTES:**

Use recommended rates for the control of perennial (see Table 1) and annual weeds (see Table 2) when renewing established pastures.

Use conventional or direct drill planting methods. Ensure that rank weed growth does not prevent spray from reaching the target plants.

Do not spray old heavy growth of Kikuyu or Common quick grass with a reduced green leaf area. Burn at the end of winter to reduce dry mass. Allow to regrow in summer and spray regrowth late summer for autumn establishment of new pasture.

**NOTAS:**

Gebruik die aanbevole dosis om meerjarige (Tabel 1) en eenjarige (Tabel 2) onkruid te beheer tydens die opknapping van gevestigde weiding.

Gebruik konvensionele of direkte plantmetodes. Verseker dat geil onkruidgroeï nie verhoed dat teikenplante benat word nie.

Moet nie ou, swaar gevestigde Kikoejoe of Gewone kweek met verminderde groen blaaroppervlak bespuit nie. Brand die grasmassa aan die einde van die winter. Laat hergroeï en bespuit dan in die laat somer vir herfsvestiging van die nuwe weiding.

<b>TABLE 6: WIPE-TYPE APPLICATION</b> <b>TABEL 6: BESTRYKTOEDIENING</b>				
<b>REMARKS</b>	<b>RATE (l / ha)</b>	<b>APPLICATOR TYPE / TIPE TOEDIENER</b>	<b>DOSIS (l / ha)</b>	<b>OPMERKINGS</b>
Recommended where conventional spraying is not practical, e.g. low trellised or bush vines etc.	Output of 100 to 150l solution / ha  Annuals: 5%  Perennials: 10%	Hand held roller applicators  Rollertipe handtoedieners	Lewering van 100 tot 150l oplossing / ha  Eenjariges: 5%  Meerjariges: 10%	Word aanbeveel waar die konvensionele bespuiting onprakties is, bv. laag opgeleide of bosstok wingerde.
Recommended in situations around tree crops and where weed and crop height differs e.g. control of volunteer crop or resistant or late germinating weeds in beans and groundnuts.	Output up to 3l / ha or 50% solution	Hand held or tractor-mounted ropewick applicator  Touptipe handmodel of trekkegemonteerde toediener	Lewering van 3l / ha of 'n 50% oplossing	Word aanbeveel in boorde en waar die onkruid- en gewashoogtes verskil, bv. vir beheer van opslag- of laatontkiemende onkruid in boontjies en grondboontjies.
NOTES:  Use a wipe-type applicator which has been approved. These applicators make use of an absorbent material to transfer <b>GLYPHOGAN</b> solution onto plants with which the applicator comes into contact.  Ensure that the wipe surface is kept clean. The wiper <b>MUST NOT</b> come into contact with the crop.		NOTAS:  Gebruik 'n goedgekeurde bestryktipe toediener. Die toedieners maak gebruik van absorberende material om die <b>GLYPHOGAN</b> oor te dra op die plante waarmee dit in aanraking kom.  Verseker dat die bestrykoppervlakte skoon gehou word. Die bestrykoppervlakte <b>MOET NIE</b> in aanraking met die gewas kom nie.		

## WAARKSUWINGS

- Skadelik indien ingesluk. Vermy kontak met vel en oë. Voorkom inaseming van spuitmis en dampe.
- Moet nie meng of berg of toedien vanuit gegalvaniseerde staal of ongevoerde houers nie (behalwe vlekvrystaal), aangesien dit chemies met die staal reageer om waterstofgas te vorm wat hoogs ontvlambaar is.
- Berg in 'n koel, droë en goed geventileerde plek, weg van direkte sonlig.
- Stoor weg van voedsel, voer, saad en ander landbouchemikalieë.
- Hou buite bereik van kinders, oningeligte persone en diere.

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

## VOORSORGMAATREËLS

- Moet nie eet, drink of rook terwyl die produk hanteer word nie.
- Vermy besoedeling van voedsel, voer, drinkwater en eetgerei.
- Dra geskikte beskermende klere en handskoene. In geval van toevallige vel of oog kontak, was deeglik met seep en water
- Vermy kontak met die spuitstof sover moontlik tydens toediening.
- Voorkom wegdrywing na gevoelige of eetbare gewasse, weiding en enige ander gebied wat nie behandel word nie aangesien ernstige gewasskade kan voorkom
- Keer die leë houer om oor die spuitenk of mengbak en dreineer vir minstens 30 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 10% van die houer. Gooi die spoelwater by die inhoud van die spuitenk voordat die houer op die voorgeskrewe wyse vernietig word. Vernietig leë houer deur gate daarin te maak en plat te druk. Moet vir geen ander doel gebruik word nie.

## VOORKOMING VAN WEERSTAND EN DIE BESTUUR DAARVAN

**GLYPHOGAN 360 SL** behoort tot die glisien onkruidodergroep oftewel HRAC onkruidodergroepkode G. In enige natuurlike plantpopulasie mag daar as gevolg van genetiese variasie onkruidbiotipes voorkom wat weerstandbiedend is teen **GLYPHOGAN** en ander onkruidoders wat in die onkruidodergroepkode G val. Hierdie weerstandbiedende individue kan uiteindelik die onkruidpopulasie oorheers as hierdie onkruidoders aanhoudend gebruik word. Hierdie weerstandbiedende onkruid sal nie deur **GLYPHOGAN** of enige ander groepkode G onkruidoder beheer word nie. Om die seleksie van weerstandbiedende onkruid te vertraag kan die volgende gedoen word:

- Integreer bewerking en ander meganiese beheermetodes (insluitende nie-selektiewe onkruidoders

gedurende die braakperiode) in onkruidbeheerprogramme waar moontlik.

- Vermy die aanhoudende gebruik van produkte wat dieselfde werkingswyse het. Beplan gewasrotasie sodat van produkte met 'n ander werkingswyse gebruik gemaak kan word.

Vir meer inligting rakende die vermyding van onkruidweerstand, skakel met 'n plaaslike Makhteshim-Agan verteenwoordiger

## **GEBRUIKSAANWYSINGS: GEBRUIK SLEGS SOOS AANGEDUI**

### **ALGEMENE INLIGTING**

- Die onkruidodende effek van **GLYPHOGAN** is eers vanaf twee weke na toediening sigbaar.
- Dien **GLYPHOGAN** na opkom van aktiefgroeiende onkruid toe, gerig op die blare en onvolwasse bas. Bespuit moeilik beheerbare meerjarige onkruid in die herfs ten tye van aktiewe translokasie van plantvoedingstowwe na die wortels, knolle, wortelstokke of uitlopers. Behandel hergroei met 'n kolbespuiting.
- Moet nie spuit as die onkruid nat, dormant, onder stremming, met stof bedek of deur ryp beskadig is nie.
- Reën of besproeiing binne 6 uur na toediening mag die effektiwiteit van **GLYPHOGAN** verminder.
- In gemengde onkruidsituasies (waar een- en meerjarige onkruid saam voorkom), moet die eenjarige onkruid chemies of meganies beheer word. Wag vir geil hergroei van meerjarige onkruid en bespuit of kolbehandel hergroei.
- Indien in 'n tenkmengsel met ander chemikalieë toegedien word, geld die etiketaanbeveling van alle betrokke produkte.
- Voorplant onkruidbespuitings op sandgrond (<10% klei) moet 14 - 21 dae voor uitplant van saailinge plaasvind. Veral tamatie- en tabaksaailinge is baie gevoelig vir die oordraging van glifosaat.

### **MENGBAARHEID**

**GLYPHOGAN** kan in 'n tenkmengsel met die volgende chemikalieë gebruik word:

- MCPA (kaliumsout)
- Simazine SC and WP (met die byvoeging van ammoniumsulfaat)
- Diuron SC en WP (met ammoniumsulfaat).

**NOTA:** Die byvoeging van ammoniumsulfaat (2%) in die spuittenk voor Diuron of Simazine bygevoeg word in tenkmengsel met **GLYPHOGAN**, verbeter verenigbaarheid.

### **TOEDIENINGSINLIGTING**

- **GLYPHOGAN** kan toegedien word in spuitvolumes van 12 tot 600ℓ / ha.
- Maak seker dat spuittoerusting skoon en vry is van roes, stof of sediment van ander plaagdoders.
- Gebruik altyd skoon water. Voorkom die gebruik van brak- of modderige water of water met 'n hoë kolloïed inhoud afkomstig van gronde hoog in organiese materiaal. Waar alkaliese- en/of harde water voorkom, behoort 'n buffer volgens aanbevelings op die etiket bygevoeg te word.
- Kalibreer alle spuite korrek onder veldtoestande.
- In situasies waar spuitnewel nadelig kan wees moet 'n lae druk van 100 tot 200kPa en/of lae newelspuitkoppe gebruik word.
- Moet nie in windsnelhede van meer as 10km/h spuit nie.

- Verseker 'n fyn, egalige druppelverspreiding en 'n deeglike bedekking van die teikenonkruid.

### Lugtoediening:

**GLYPHOGAN 360 SL** kan slegs deur 'n geregistreerde Lugbespuitingsoperateur met 'n korrek gekalibreerde, geregistreerde vliegtuig volgens die instruksies van SANS Kode 10118 (Aerial Application of Agricultural Pesticides) uit die lug bespuit word. Verseker dat die spuitmengsel eweredig oor die teikenarea versprei word, en die verlies aan spuitmengsel tydens toediening tot 'n minimum beperk word. Dit is daarom belangrik om aan die volgende vereistes te voldoen:

- Volume: 'n Spuitmengsel volume van 30 tot 50ℓ / ha word aanbeveel. Hierdie produk is nie teen 'n verlaagde volume getoets nie. Die registrasiehouer kan nie effektiwiteit waarborg, of verantwoordelik gehou word vir enige nadelige effekte indien hierdie produk teen 'n laer volume, as hierbo aanbeveel, toegedien word nie.
- Druppel bedekking: 30 tot 40 druppels per cm<sup>2</sup> moet op die teikenarea herwin word.
- Druppelgrootte: 'n Druppelspektrum met 'n VMD van 300 tot 400 mikrons word aanbeveel. Beperk die produksie van druppels kleiner as 150 mikrons (hoë drywing en verdampingspotensiaal) tot 'n minimum.
- Vlieg hoogte: Handhaaf die hoogte van die spuitbalk bo die teiken op 3 tot 4 meter. Moet nie spuit wanneer die vliegtuig duik, uitklim of draai nie.
- Gebruik geskikte atomiseringsapparaat wat die vereiste druppelgrootte en bedekking sal produseer, maar die minste verlies van produk verseker. Die spuitstelsel moet 'n druppelspektrum met die kleinste moontlike Relatiewe Span produseer.
- Plaas al die atomiseerders in die binneste 60 tot 75% van die vlerkspan om te verhoed dat druppels binne in die vlerkpuntvorteks beweeg.
- Die gebruik van 'n geregistreerde drywingsbeheer middel en/of 'n lae drywing lugbespuiting spuitneus (bv. "straight stream nozzle") word aanbeveel.
- Die verskil in temperatuur tussen die nat- en droëboltermometer van 'n swaaihirometer, moet nie 8°C oorskry nie.
- Stop bespuiting indien die windspoed 10km/h oorskry.
- Stop bespuiting tydens turbulente, onstabiele en droë toestande gedurende die hitte van die dag.
- Bespuiting onder temperatuur inversie toestande (deur bo of binne die inversie laag te spuit) en/of hoë lugvog toestande (relatiewe humiditeit 80% en meer) mag tot volgende probleme aanleiding gee:
  - a) verlaagde effektiwiteit aangesien die druppels as 'n wolk in die lug bly hang en moontlik verdamp (onvoldoende bedekking op teiken).
  - b) skade aan nie-teiken gewasse of sensitiewe areas as gevolg van wegdrywing van die spuitwolk na nie-teiken area.
- Verseker dat die Lugbespuitingsoperateur presies weet watter lande bespuit moet word.
- Dit is noodsaaklik om 'n versekering van die Lugbespuitingsoperateur te verkry dat aan al die bogenoemde vereistes voldoen sal word en dat data van belang in 'n logboek saamgevat is vir toekomstige verwysing.

### BEVORDERINGSMIDDELS

- Vir optimum resultate word 'n minimum van 1.5% **GLYPHOGAN** oplossing per totale spuitvolume aanbeveel. Indien dit laer is, behoort 0.5% bevorderingsmiddel (0.5ℓ/100ℓ water) by die spuitvolume gevoeg te word.  
Byvoorbeeld: 3.0ℓ in 200ℓ water / ha (1.5% oplossing) = Geen bevorderingsmiddel nodig nie.  
3.0ℓ in 400ℓ water / ha (0.7% oplossing) = Voeg 2.0ℓ bevorderingsmiddel by die totale spuitvolume.

- GLYPHOFIX (L5389) 'n middle met 'n hoë bevorderingsformulering, mag by spuitoplossing gevoeg word as bevorderingsmiddel teen 0.5 tot 0.75ℓ GLYPHOFIX per 100ℓ spuitmengsel.
- GLYPHOFIX mag aanvullend tot **GLYPHOGAN** gebruik word deur 1.0ℓ **GLYPHOGAN** met 2.0ℓ GLYPHOFIX in die spuitmengsel te vervang. **MOET NIE MEER AS 50% VAN DIE AANBEVOLE GLYPHOGAN VERVANG NIE**, bv. 4.0ℓ / ha **GLYPHOGAN** = 3.0ℓ **GLYPHOGAN** + 2.0ℓ GLYPHOFIX / ha.
- Voeg 'n geskikte buffer by die water wat die pH en harde water kan regstel voor die byvoeging van **GLYPHOGAN**.

## ONKRUIDBEHEER

Persentasieberekening, br. 1.5% oplossing = 1.5ℓ **GLYPHOGAN** in 98.5ℓ water = 100ℓ spuitoplossing.

Bespuitingstydkode:

VL	-	Vroeë lente	S	-	Somer
H	-	Herfs	W	-	Winter

Tabel 1:	Meerjarige onkruid
Tabel 2:	Nie-gewas en industriële gebruik
Tabel 3:	Gewasaanbevelings, boomgewasse, voorplant, bosbou, bloekomuitwissing en suikerriet.
Tabel 4:	Groei regulering (Chemiese sny)
Tabel 5:	Weidingsopknapping
Tabel 6:	Bestrykingstoediening

LW: Tabele met toedieningshoeveelhede verskry op die Engelse kant.