

BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY!

Herbicide



GLYGRAN 710 SG

Reg. No. L 8449 Act/Wet No. 36 of/van 1947

3: 9/7/2013 - Aug2019

A water-soluble granule, non-selective, systemic post-emergence herbicide with slight or no soil activity, for the control of perennial and annual weeds in agriculture, as well as in forestry plantations/areas, non-crop and industrial areas.

'n Water-oplosbare korrel, nie-selektiewe, sistemiese na-opkoms onkruidoder met min of geen grondaktiwiteit vir die beheer van meer- en eenjarige onkruid in landbou, asook in bosbouplantasies/areas, nie-gewas en nywerheidsgebiede.

ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL

glyphosate (glycine) **710 g ae/kg** glifosaat (glisien)
(glyphosate ammonium salt) 780 g/kg (glifosaat ammoniumsout)

HRAC HERBICIDE GROUP CODE **G9** HRAC ONKRUIDODER GROEPKODE

kg

villa 

Registration holder / Registrasiehouer:

Villa Crop Protection (Pty) Ltd.

Co. Reg. No. / Mpy. Reg. Nr. 1992/002474/07

PO Box / Posbus 10413, Aston Manor, 1630

Tel: 011 396 2233

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UN Number: 3077

Willow Set & Print 011 394-4486



CAUTION
VERSIGTIG



DIRECTIONS FOR USE ENCLOSED

REFER TO DETAILS PRINTED
ON CONTAINER/BAG

Batch number:
Lotnommer:

GERUIGSAANWYSINGS INGESLUIT
Date formulated:
Formuleringsdatum:

VERWYS NA BESONDERHEDE
GEDRUK OP HOUER/SAK

GLYGRAN 710 SG

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HRAC HERBICIDE GROUP CODE / HRAC ONKRUIDDODER GROEPKODE: G9

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 (glyphosate ammonium salt / glifosaat ammoniumsout) 780 g/kg

Registration holder / Registrasiehouer:

VILLA CROP PROTECTION (PTY) LTD.

Co. Reg. No. 1992/002474/07 Mpy. Reg. Nr.

PO Box / Posbus 10413, KEMPTON PARK, 1620

Tel. (011) 396 2233

CAUTION / VERSIGTIG**WARNINGS**

- Handle the product with caution.
- Irritating to eyes and skin.
- Harmful when swallowed.
- Do not mix, store or apply **GLYGRAN 710 SG** solutions in galvanised steel or unlined steel (except stainless steel) containers or spray tanks, since a reaction will cause hydrogen gas to form, which is highly combustible.
- Store in a cool, dry, well-ventilated place.
- Store away from food, feeds, seed, fertilizers and other agricultural chemicals.
- Keep out of reach of children, uninformed persons and animals.
- Re-entry: Do not enter treated area until spray deposit has dried 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 spray over or allow drift to contaminate water or adjacent areas.

• **NOTE**

GLYGRAN 710 SG is a highly active herbicide, which in small quantities, when used incorrectly, can cause serious damage to crop seedlings, deciduous fruit trees and grape vines during the budding and early season growth stages. Under the following conditions it can cause serious damage as far as 3 to 5 km from the nearest spray path of the aircraft: Cloudy weather with relative humidity above 80 % and low air movement of less than 5 km per hour. When such conditions prevail, aerial application should **NOT** be carried out where crop seedlings, deciduous fruit trees and grape vines in budding or early development stages are present within 5 km of the nearest spray path of the aircraft.

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 weeds to the remedy concerned, as well as by the method, time and accuracy of application. The registration holder further 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 in event of any uncertainty.

PRECAUTIONS

- Do not inhale the spray mist or spray fumes.
- Wear a face shield and rubber gloves when handling and preparing the product and when applying the spray mixture.
- Avoid skin and eye contact.
- Do not eat, drink or smoke while mixing and applying the product, or before washing hands and face and change of clothing.
- Wash with soap and water immediately after use or accidental skin contact.
- Wash contaminated clothing after use.

- In case of contact with eyes, immediately flush the eyes with clean, gently flowing lukewarm water or saline solution for 20 minutes, holding the eyelid(s) open. If irritation persists, seek medical advice.
- Prevent drift of spray on to other crops, grazing, rivers, dams or areas not under treatment as this may cause serious crop damage.
- Clean application equipment after use.
- Do not dispose of wash water where it can contaminate other crops, grazing, rivers or dams.
- Clean spraying equipment directly after use by rinsing with clean water and dispose of wash water where it will not contaminate crops, grazing, boreholes, rivers or dams.
- Containers/packages must be completely emptied before being disposed of in a safe way.
- **Do not** re-use the empty container/package for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.
- Direct or spray drift contact by **GLYGRAN 710 SG** on to leaves and/or immature bark of desired plants can result in serious localised or translocated damage.

RESISTANCE WARNING

GLYGRAN 710 SG is a group code G9 herbicide. Any weed population may contain individuals naturally resistant to **GLYGRAN 710 SG** and other group code G9 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **GLYGRAN 710 SG** or any other group code G9 herbicide.

To delay herbicide resistance:

- avoid exclusive repeated use of herbicides from the same herbicide group code. Alternate or tank mix with products from different herbicide group codes,
- integrate other control methods (chemical, cultural, biological) into weed control programmes.

IMPORTANT

- Inconsistent control of certain grass populations and other weeds such as *Lolium* species, *Phalaris* species, *Avena* species, (reported known resistance), *Chenopodium* species (plants with waxy leaves), *Conyza bonariensis* (Flax-leaf fleabane), *Commelina benghalensis* (Benghal wandering Jew), *Ipomoea* species (natural resistance) occur, due to resistance against **Glyphosate**.
- Some of these populations might be resistant to products containing **Paraquat** and **Diquat**.
- Some populations might be resistant to products containing the aryloxyphenoxy propionates, cyclohexanediones and sulfonylureas, but might also have resistance against the **Glyphosate** containing products, e.g. **GLYGRAN 710 SG**.
- Due to the fact that these resistance populations vary in size and localities and are difficult to ascertain, it is essential that each land must be inspected annually to identify possible resistance early.
- **IF THE ABOVE-MENTIONED PREVENTATIVE MEASURES ARE NOT STRICTLY ADHERED TO, THE REGISTRATION HOLDER CANNOT BE HELD RESPONSIBLE FOR THE FAILURE OF GLYGRAN 710 SG TO CONTROL RESISTANT WEEDS.**

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

DIRECTIONS FOR USE: Use only as directed.

General information and use restrictions:

- **Control of weeds in Glyphosate tolerant maize (e.g. Pioneer R and BR cultivars) and soybean (e.g. Pannar and Link Seed cultivars) crops:**
This product can only be used post-emergence over-the-top of, or directed onto modified maize and soybean cultivars that are designated as **containing the Glyphosate tolerant gene**. Application of this product onto, or in any maize or soybean cultivars not properly developed as containing the **Glyphosate** tolerant gene, may cause severe injury or death of maize crop plants.
- Herbicidal action of **GLYGRAN 710 SG** may become visible from five (5) days after application depending on weed species, growth stage and environmental conditions.
- Apply **GLYGRAN 710 SG** 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 translocating nutrients into their roots, bulbs, rhizomes and stolons. Any re-growth should be spot sprayed.
- Do not spray whilst weeds are wet, dormant or under stress nor when covered in a layer of dust or when damaged by frost.

- Application with low volume sprayers (e.g. self-drive “high boy” sprayers) at high speeds (> 10 km per hour) may produce dust clouds that will affect the activity of the active ingredient adversely due to adsorption of dust particles on the weeds’ leaf surfaces.
- **GLYGRAN 710 SG** is rain fast within one (1) hour after application. Rain or irrigation within 1 hour after application can have an adverse effect on efficacy.
- In mixed weed situations (annuals amongst problem perennials), mow or spray out annuals, wait for vigorous re-growth of perennials and then spray or spot spray re-growth.
- When applied in a tank mix with other chemicals, adhere to the label recommendations of all products applied.
- Pre-plant weed control on sandy soil (<10 % clay) should take place at least 7 days before transplanting tomato or tobacco seedlings.

Compatibility:

- **GLYGRAN 710 SG** can be tank mixed with the following chemicals: **Cantron® 480 SC/Astron® 480 SC, Halo 750 WDG, MCPA 400 SL** (Potassium salt), **2,4-D Amine 480 SL** (Dimethyl ammonium salt), **Elegance 500 WP, Laurel 800 WDG**, certain **Triazine** formulations (with the addition of **Velocity®-Super**), **Diuron 800 SC** and **Diuron 800 WP** (with the addition of **Velocity®-Super** (Ammonium sulphate) or **Velocity®-DryMax, Villa 51** and **Terbuweed 600 WDG**. A low pH of the tank mixture could induce the precipitation of hormone herbicides such as **MCPA**. Ensure that only **Velocity®-Super** is used in mixtures of **GLYGRAN 710 SG** and **MCPA 400 SL**, as this adjuvant will not reduce the tank mixture pH drastically.

NOTE

The addition of **Velocity®-Super** (2 %) or **Velocity®-DryMax** or **Villa 51** (0.05 %) to the spray water before adding **Diuron** or an applicable **Triazine** in tank mixtures with **GLYGRAN 710 SG**, improves compatibility.

Surfactants/Additives:

- For optimum results, a minimum of 1 % **GLYGRAN 710 SG** concentration in the total spray volume is recommended. Where the application is based on a percentage solution rather than a dosage per hectare rate, apply as a full cover application (but not to the point of run-off).
- For improved control of Wandering Jew, Field bind weed, Morning glory and Common purslane, **GLYGRAN 710 SG** can be mixed with **2,4-D Amine 480 SL** or **MCPA 400 SL** at a maximum of 500 ml per hectare. **Do not** add a buffering agent when preparing tank mixtures with any of these 2 products.
- Always add ammonium sulphate (e.g. **Velocity®-Super** or **Velocity® DryMax**) to the spray mixture.

Application information:

- Correctly calibrate all sprayers under field conditions and ensure that the spraying equipment is in good working order.
- Apply **GLYGRAN 710 SG** at a minimum volume rate of 200 litres spray mixture per hectare. Where lower volume rates are used, the application must be done with purpose designed low volume spray equipment (e.g. self-drive “high boy” sprayers).
- The application speed of low volume sprayers must not exceed 25 km per hour on an even soil bed. Where the soil bed is more uneven (e.g. due to clods) a maximum application speed of 15 km per hour must be used.
- Ensure that the spray equipment is clean and free of dust or sediment from other chemicals.
- Always use clean water. Avoid the use of brackish or muddy water, or water with a high colloid content derived from soils high in organic matter.
- In situations where drift may be hazardous, use low pressures of 100 to 200 kPa or low drift nozzles or add a drift retardant adjuvant when spraying.
- Do not spray when wind speed exceeds 10 km per hour.
- Ensure a fine even droplet distribution (**NOT** a mist spray) and thorough coverage of the target weeds.

Aerial application:

Aerial application of **GLYGRAN 710 SG** may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS 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:

- **The use of a suitable drift retardant adjuvant and/or low drift nozzles (e.g. straight stream nozzles) is recommended. In the case of fixed-wing aircraft flying at a speed faster than 130 mph, the maximum deflection angle of the nozzles or spray stream, as measured from a horizontal straight backwards orientation, may not exceed 30 degrees. In the case of slower flying fixed wing aircraft the maximum deflection angle, as described above, may not exceed 55 degrees.**
- Volume: A spray mixture volume of 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 aerially at a lower volume rate than recommended above.
- Droplet coverage: 30 to 40 droplets per cm² must be recovered at the target area.
- Droplet size: A droplet spectrum with a VMD of 350 to 400 micron is recommended. Limit the production of fine droplets less than 150 micron (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 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 15 km per hour.
- 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.

APPLICATION RATES

Tables 1.1 to 1.8:	Control of annual broadleaf & grass weeds in crops (pre-planting / arable land) and general weed control.
Tables 1.9 to 1.10:	Control of annual broadleaf & grass weeds in winter rainfall areas, Western cape, including tank mixtures with other herbicides.
Tables 2.1 to 2.2:	Crop recommendations (Glyphosate tolerant maize, soybeans, other crops, pre-planting/arable land), including tank mixtures with other herbicides.
Tables 3.1 to 3.4:	Control of problem weeds (perennial grasses, Nutsedges) & noxious weeds.
Tables 4.1 to 4.3:	Specialised practises (Forestry applications, Industrial weed control, Sugarcane).
Table 5:	Pasture renovation
Table 6:	Wipe-type application.

Dilution rates:

Best results will be obtained when **GLYGRAN 710 SG** represents a minimum concentration of 1.0 %, or more, of the total spray volume used.

For example:

- 1.0 kg in 100 ℓ water = 1.0 % solution
- 2.0 kg in 250 ℓ water = 0.8 % solution. Add an additional 0.75 kg **GLYGRAN 710 SG** to the tank.
- 0.10 kg (100 g) in 10 ℓ water (1.0 % solution)
- 0.216 kg (216 g) in 10 ℓ water (2.16 % solution)

Application Dosages:

Weed spectra in crops are variable according to region, soil type and climatic factors that change seasonally. Therefore, varied and uneven emergence of various weed species may occur at any specific site, where one or more species may dominate. The dosages recommended, aim to cover a broad spectrum of weeds if they are sprayed before upright growing weeds reach 10 cm in height (e.g. Khaki weed), or flat growing weeds reach the 6 to 8 leaf stage (e.g. Common purslane).

1. CONTROL OF ANNUAL BROADLEAF & GRASS WEEDS IN CROPS (PRE-PLANTING / ARABLE LAND) AND GENERAL WEED CONTROL

- Use **GLYGRAN 710 SG** after harvesting of previous crop.
- Do not disturb target plants before 6 hours after application (before planting of crops) and prior to emergence of the new crop.

Annual broadleaf weeds:

Table 1.1: Annual broadleaf weeds - The following broadleaf weeds will be controlled at the dosage rates and growth stages as indicated below.

GLYGRAN 710 SG		
0.5 to 0.8 kg / ha	0.8 to 1.5 kg / ha	1.5 to 2.5 kg / ha
1 to 12 leaf	12 leaf to pre-flower	Flowering
<i>Alternanthera pungens</i>		Khaki bur weed
<i>Amaranthus hybridus</i>		Cape pigweed
<i>Amaranthus spinosus</i>		Thorny pigweed
<i>Amaranthus thunbergii</i>		Red pigweed
<i>Arctotis venusta</i>		Free State daisy
* <i>Argemone subfusiformis</i>		White flowered Mexican poppy
<i>Bidens pilosa</i>		Blackjack
<i>Boerhavia diffusa</i>		Spiderling
<i>Cenia turbinata</i>		Goose daisy
* <i>Chenopodium album</i>		White goosefoot
* <i>Chenopodium ambrosioides</i>		American goosefoot
* <i>Chenopodium carinatum</i>		Green goosefoot
* <i>Chenopodium murale</i>		Nettle-leaved goosefoot
<i>Cirsium arvense</i>		Canada thistle
<i>Citrullus lanatus</i>		Bitter apple
<i>Cotula tenella</i>		Cotula
<i>Cucumis</i> spp.		Wild cucumber
<i>Datura ferox</i>		Large thorn apple
<i>Datura stramonium</i>		Thorn apple
<i>Galinsoga parviflora</i>		Gallant soldier
* <i>Gisekia pharnaceiodes</i>		Gisekia
<i>Gnaphalium subfalcatum</i>		Cudweed
<i>Lepidium africanum</i>		Pepper cress
<i>Medicago</i> spp.		Medics
<i>Pentzia grandiflora</i>		Stinkweed
<i>Physalis angulata</i>		Wild gooseberry
<i>Pseudognaphalium luteo-album</i>		Cudweed
<i>Pseudognaphalium undulatum</i>		Undulate cudweed
<i>Spergula arvensis</i>		Corn spurry
<i>Stellaria media</i>		Chickweed

* Variable control. Take care to avoid the development of resistance. Refer to “**RESISTANCE WARNING**” above.

Table 1.2: Annual broadleaf weeds - The following broadleaf weeds will be controlled at the dosage rates and growth stages as indicated below.

GLYGRAN 710 SG		
0.7 to 1.0 kg / ha	1.0 to 1.5 kg / ha	1.5 to 2.0 kg / ha
1 to 12 leaf	12 leaf to pre-flower	Flowering
<i>Arctotheca calendula</i>		Cape marigold
** <i>Conyza canadensis</i>		Horseweed fleabane
** <i>Conyza floribunda</i>		Tall fleabane
<i>Coronopus didymus</i>		Swinecress
<i>Crotalaria sphaerocarpa</i>		Mealie crotalaria
<i>Emex australis</i>		Spiny emex
<i>Fumaria muralis</i>		Fumitory
<i>Hibiscus cannabinus</i>		Kenaf
<i>Hibiscus trionum</i>		Bladderweed
* <i>Ipomoea purpurea</i>		Common morning glory
<i>Oxalis pes-caprae</i>		Yellow sorrel
* <i>Portulaca oleracea</i>		Purslane
<i>Schkuhria pinnata</i>		Dwarf marigold
*** <i>Senecio burchellii</i>		Molteno-disease-plant
*** <i>Senecio consanguineus</i>		Starvation senecio
<i>Sesamum triphyllum</i>		Wild sesame
<i>Sonchus oleraceus</i>		Sowthistle
<i>Tagetes minuta</i>		Khaki weed
<i>Tetragonia caesia</i>		Self-sown wheat
<i>Tribulus terrestris</i>		Dubbeltjie
<i>Veronica</i> spp.		Veronica

* Even at higher rates, the control of large established *Ipomoea* or *Portulaca* species may be variable, necessitating a follow-up application.

** Inconsistent control and resistance problems. Refer to "RESISTANCE WARNING" above.

*** Variable control. Take care to avoid the development of resistance. Refer to "RESISTANCE WARNING" above.

Table 1.3: Annual broadleaf weeds - The following broadleaf weeds will be controlled at the dosage rates and growth stages as indicated below.

GLYGRAN 710 SG		
1.2 to 1.5 kg / ha	1.5 to 2.5 kg / ha	2.5 to 3.0 kg / ha
1 to 12-leaf	12-leaf to pre-flower	Flower
<i>Acalypha glabrata</i>		----
<i>Ageratum conyzoides</i>		Invading ageratum
<i>Aizoon canariense</i>		----
<i>Boerhavia erecta</i>		Spiderling
<i>Cleome gynandra</i>		Spider wasp
* <i>Conyza bonariensis</i>		Flax-leaf fleabane
<i>Corchorus trilocularis</i>		----
<i>Echium lycopsis</i>		Purple echium
<i>Euphorbia chamaesyce</i>		Hairy creeping milk weed
<i>Euphorbia geniculata</i>		Painted milkweed
<i>Euphorbia hirta</i>		Red milkweed
<i>Euphorbia inaequilatera</i>		Smooth creeping milk weed
<i>Fimbristylis hispidula</i>		Slender sedge
<i>Flaveria bidentis</i>		Smelter's bush
<i>Gnaphalium undulatum</i>		Undulated cudweed
<i>Hypochoeris radicata</i>		Hairy wild lettuce
* <i>Ipomoea plebeia</i>		----
<i>Lactuca seriola</i>		Wild lettuce
<i>Lepidium bonariensis</i>		Pepper cress
<i>Melinis nerviglumis</i>		----
<i>Nicandra physaloides</i>		Apple of Peru
<i>Oenothera rosea</i>		Rose evening primrose
<i>Oxalis</i> spp.		Sorrel
<i>Oxygonum sinuatum</i>		----
<i>Parthenium hysterophorus</i>		Domonia weed
<i>Polygonum aviculare</i>		Prostrate knotweed
<i>Raphanus raphanistrum</i>		Wild radish
<i>Senecio apifolius</i>		----
<i>Sida cordifolia</i>		Heartleaf sida
<i>Sida rhombifolia</i>		Arrowleaf sida
<i>Solanum nigrum</i>		Deadly nightshade
<i>Tephrosia polystachya</i>		----
<i>Trianthema portulacastrum</i>		----
<i>Verbena officinalis</i>		European verbena

* Even at higher rates, the control of *Conyza* or *Ipomoea* species may be variable, necessitating a follow-up application.

Table 1.4: Annual broadleaf weeds - The following broadleaf weeds will be controlled at the dosage rates and growth stages as indicated below.

GLYGRAN 710 SG	
2.5 kg / ha	
1 to 12-leaf	
** <i>Malva parviflora</i>	Small mallow
+ <i>Erodium moschatum</i>	Musk heron's bill

NOTE

- * Not recommended for *Malva parviflora* (Small mallow) control at flowering. Use in conjunction with other registered products.
- + For control of *Malva parviflora* (Small mallow) and *Erodium moschatum* (Musk heron's bill) smaller than 12-leaf stage, apply **GLYGRAN 710 SG** at 2.5 kg per hectare in combination with a recommended **Triazine** rate for the soil type and crop.

Table 1.5: Annual broadleaf weeds - The following broadleaf weeds will be controlled at the dosage rates and growth stages as indicated below.

GLYGRAN 710 SG		
4.65 kg / ha		
1 to 12-leaf	12-leaf to pre-flower	Flower
<i>Rumex angiocarpus</i>		Sheep sorrel

Annual grasses:

NOTE

Even at the higher rates, the control of large, established tufted Ryegrass species and volunteer maize may be variable which may necessitate a follow-up application. Adjust the rates for volunteer maize according to weed size and density.

THE FOLLOWING GRASSES WILL BE CONTROLLED AT THE DOSAGE RATES AND GROWTH STAGES AS INDICATED BELOW.

Table 1.6: Annual grasses - The following grasses will be controlled at the dosage rates and growth stages as indicated below.

GLYGRAN 710 SG	
0.7 to 1.0kg / ha	1.5 kg / ha
1 leaf to pre flower	Flower
* <i>Avena</i> spp.	Wild oats
* <i>Avena fatua</i>	Common wild oats
<i>Briza maxima</i>	Quaking grass
<i>Bromus diandrus</i>	Ripgut brome
<i>Eleusine indica</i>	Goose grass
<i>Ehrharta longiflora</i>	Oat-seed grass
<i>Hordeum murinum</i>	Wild barley
* <i>Lolium multiflorum</i>	Italian ryegrass
* <i>Lolium temulentum</i>	Darnel
<i>Panicum schinzii</i>	Sweet buffalo grass
<i>Poa annua</i>	Winter grass
<i>Rhynchelytrum repens</i>	Natal red-top
<i>Secale cereale</i>	Rye
<i>Sorghum bicolor</i>	Wild grain-sorghum
<i>Tragus racemosus</i>	Large carrot-seed grass

* Inconsistent control and resistance problems. Refer to “**RESISTANCE WARNING**” above.

Table 1.7a: Annual grasses - The following grasses will be controlled at the dosage rates and growth stages as indicated below.

GLYGRAN 710 SG		
0.7 to 1.0 kg / ha	1.0 to 1.5 kg / ha	1.5 to 2.0 kg / ha
1 to 12-leaf	12-leaf to pre-flower	Flower
<i>Chloris virgata</i>		Feathertop chloris
<i>Paspalum urvillei</i> (seedlings)		Tall paspalum
* <i>Phalaris canariensis</i>		Canary grass
* <i>Phalaris minor</i>		Little-seeded canary grass
<i>Setaria pallide-fusca</i>		Red bristle grass
<i>Setaria verticillata</i>		Sticky bristle grass
<i>Triticum aestivum</i>		Volunteer wheat

* Inconsistent control and resistance problems. Refer to “**RESISTANCE WARNING**” above.

Table 1.7b: Annual grasses – Volunteer maize (EXCLUDING Glyphosate tolerant maize):

GLYGRAN 710 SG	
0.7 to 1.0 kg / ha	
1 to 5 leaf	
** <i>Zea mays</i>	Volunteer maize

** **GLYGRAN 710 SG** will not control volunteer **Glyphosate** tolerant maize. Use the higher dosage rate for maize in the 4 to 5-leaf stage.

Table 1.8: Annual grasses - The following grasses will be controlled at the dosage rates and growth stages as indicated below.

GLYGRAN 710 SG		
1.2 to 1.5 kg / ha	1.5 to 2.5 kg / ha	2.5 to 3.0 kg / ha
1 to 12-leaf	12-leaf to pre-flower	Flower
<i>Bothriochloa inculpta</i>		----
<i>Brachiaria eruciformis</i>		Sweet signal grass
<i>Dactyloctenium aegyptium</i>		Crowfoot
<i>Digitaria sanguinalis</i>		Crab finger-grass
<i>Echinochloa colona</i>		Marsh grass
<i>Echinochloa crus-galli</i>		Barnyard grass
<i>Eragrostis capensis</i>		----
<i>Eragrostis ciliaris</i>		----
<i>Eragrostis virescens</i>		Chilean love grass
<i>Heteropogon contortus</i>		Common spear grass
<i>Hyparrhenia gazensis</i>		----
<i>Panicum maximum</i>		Common buffalo grass
<i>Paspalum urvillei</i>		Tall Paspalum
<i>Pseudobrachiaria deflexa</i>		False signal grass
<i>Setaria sphacelata</i>		----
<i>Themeda triandra</i>		Red grass
<i>Tragus berteronianus</i>		Small carrot-seed grass
<i>Urochloa mosambicensis</i>		Bushveld herringbone grass
<i>Urochloa panicoides</i>		Herringbone grass
<i>Trystachia leucotrix</i>		----

Table 1.9: Difficult to control annual weeds broadleaf weeds and grasses in the winter rainfall areas.

The following application rates are recommended for spraying in midwinter in the winter rainfall areas when conditions are less favourable for uptake and translocation of herbicides.

GLYGRAN 710 SG		
1.5 to 1.8 kg / ha*	1.80 to 2.3 kg / ha*	2.3 to 2.5 kg / ha*
1 to 12-leaf	12-leaf to pre-flower	Flower
<i>Arctotheca calendula</i>		Cape marigold
<i>Chenopodium album</i>		White goosefoot
<i>Conyza floribunda</i>		Tall fleabane
<i>Erodium moschatum</i>		Musk heron's bill
<i>Hypochoeris radicata</i>		Hairy wild lettuce
** <i>Lolium</i> spp.		Ryegrass
<i>Medicago polymorpha</i>		Clover
<i>Raphanus raphanistrum</i>		Wild radish
<i>Sonchus oleraceus</i>		Sow thistle

* The addition of **Velocity®-Super** (2 %) or **Velocity®-DryMax** (1 %) to the spray mixture for control of these weeds is important.

** Inconsistent control and resistance problems have been confirmed. Refer to “**RESISTANCE WARNING**” above.

Table 1.10: Pre-plant application of **GLYGRAN 710 SG** plus **2,4-D Amine 480 SL** for control weeds in cereal crops in the Western Cape*:

GLYGRAN 710 SG 1.0 kg / ha	PLUS 2,4-D Amine 480 SL 0.75 l / ha
WEEDS CONTROLLED	
Refer to the 2,4-D Amine 480 SL label for list of weeds that are controlled by 2,4-D Amine 480 SL .	

* Inconsistent control and resistance of weeds are not uncommon in the Western Cape. Refer to “**RESISTANCE WARNING**” and **Table 1.9** above.

2. **SPECIFIC CROP RECOMMENDATIONS**

2.1 **Glyphosate tolerant maize:**

- **Broadcast (over the top) application:**
Broadcast application of **GLYGRAN 710 SG** can only be done after the ground cracking stage up to the **V8 stage** (V8 stage = when the first plants in the field have 8 leaves with closed collars around the main stem; however, the actual number of leaves may be more). **Do not** apply broadcast applications if the spray equipment will cause mechanical crop damage. **Broadcast application after the V8 stage may cause yield loss or delayed maturity.** Flat fan or twin jet nozzles, suitable for low water volume deliveries, are recommended. If follow-up applications are required to control specific weed species, e.g. *Cyperus esculentus*, the second application should not be made within 10 days of the first application. If the maize has grown beyond the V8 stage at this time, a directed follow-up application will be necessary (refer below).
- **Directed application:**
Directed **GLYGRAN 710 SG** applications can be made after the V8 stage, if row spacing permits the movement of the sprayer without causing mechanical damage to the crop. Row spacing of 1.5 and 2.1 metres are recommended for conventional tractor mounted spray rigs.
For the control of certain broadleaf weeds mentioned above, **GLYGRAN 710 SG** can be mixed with either **2,4-D Amine 480 SL** or **MCPA 400 SL** at 0.5 litre per hectare. Refer to the **2,4-D Amine 480 SL** or **MCPA 400 SL** labels for “**USE RESTRICTIONS**”.

2.2 **Glyphosate tolerant soybeans (broadcast application):**

GLYGRAN 710 SG may be applied post-emergent to **Glyphosate tolerant** soybeans from the ground cracking stage through to flowering. Allow a minimum of 2 weeks between application and harvest of the crop. Do not exceed the following **GLYGRAN 710 SG** application volumes per hectare:

- Cumulative total per season for all applications: 5.0 kg per hectare
- Pre-plant, pre-emergent applications: 1.5 kg per hectare
- Total in-crop applications from cracking to flowering: 3.6 kg per hectare
- Maximum pre-harvest application rate: 1.0 kg per hectare

Refer recommendations under “**APPLICATION DOSAGES**”.

Table 2.1:

Crop & Weed type	Dosage rate	Stage of weed growth
Glyphosate tolerant Maize & Soybeans:		
General post emergence weed control		
Annual grasses and broad leaf weeds:	1.0 kg/ha	Apply before 100 mm height or 8-leaf stage.
	1.3 kg/ha	Apply between 100 and 200 mm or up to the 12-leaf stage.
Difficult to control species requiring a follow-up spray (variable control*): <i>Wandering Jew*</i> <i>Commelina benghalensis</i> <i>Morning glory*</i> <i>Ipomoea purpurea</i> <i>Common purslane*</i> <i>Portulaca oleracea</i> <i>Devil's thorn</i> <i>Tribulus terrestris</i>	1.5 kg/ha	Apply at the 3-leaf stage; follow up with 1.5 kg per hectare 10 to 20 days later.
		Apply at the 4- to 5- leaf stage; follow up with 1.5 kg per hectare 10 to 20 days later.
		Apply before flowering.
		Apply before first flowers appear.

Crop & Weed type	Dosage rate	Stage of weed growth
Difficult to control biennial and perennial weed species: Yellow nutsedge (<i>Cyperus esculentus</i>)	1.5 kg/ha	Apply at the 3- to 4-leaf stage and follow up with 1.5 kg per hectare, 10 to 20 days later.
<i>Coryza</i> spp.		Apply before 8-leaf stage.
<u>Glyphosate tolerant Maize only:</u>		
Improved residual control of broadleaf weeds. Above-mentioned General post-emergence weed control dosage rates PLUS 0.8 to 1.6 kg per hectare Terbuweed 600 WDG . Consult the Terbuweed 600 WDG label for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE .		
Improved control of Yellow nutsedge and certain broadleaf weeds. Above-mentioned General post-emergence weed control dosage rates PLUS 50 grams per hectare Halo 750 WDG . Consult the Halo 750 WDG label for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE .		
Post-emergence application of GLYGRAN 710 SG plus Cantron® 480 SC/Astron® 480 SC on glyphosate tolerant maize cultivars:		
<ul style="list-style-type: none"> • GLYGRAN 710 SG at 0.65 to 0.8 kg / ha Plus 210 to 260 ml / ha Cantron® 480 SC/Astron® 480 SC. 		
<u>Notes:</u>		
<ul style="list-style-type: none"> • This treatment can be applied as a stand-alone post-emergence application or as a follow up to a pre-emergence application of Cantron® 480 SC/Astron® 480 SC in tank mixture with Metolachlor 800 EC or Platinum Plus 915 EC or Leap 840 EC as indicated on the registered labels. • Use the higher dosage rate for more difficult weeds or higher weed pressure situations. Apply to young actively growing weeds. • Refer to the Cantron® 480 SC/Astron® 480 SC label for USE RESTRICTIONS and DIRECTIONS FOR USE. 		
<u>Glyphosate tolerant Soybeans only:</u>		
Improved control of Yellow nutsedge and certain broadleaf weeds. Above-mentioned General post-emergence weed control dosage rates PLUS 18 g per hectare Elegance 500 WP . Consult the Elegance 500 WP label for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE .		
Improved residual control of various broadleaf weeds. Above-mentioned General post-emergence weed control dosage rates PLUS 18 to 36 grams per hectare Laurel 800 WDG , as per recommended soil type. Consult the Laurel 800 WDG label for WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE .		

NOTE

Carefully read “**Broadcast**” and “**Directed application**” above for application spray instructions in maize.

The following weed species will NOT be controlled at these recommended rates:

Cynodon dactylon - Common quick grass
Convolvulus arvensis - Field bind weed
Oenothera stricta - Evening primrose
Panicum maximum - Common buffalo grass
Paspalum spp. – Paspalum species

2.3 Other crops:

Table 2.2:

Crop		Remarks
Almonds, Aloes, Apples, Apricots, Avocados, Bananas, Blackberry, Cherries, Citrus, Coffee, Granadilla, Guava, Hops, Kiwi fruit, Litchis, Macadamia nuts, Mangoes, Nectarines, Olives, Pawpaw, Peaches, Pears, Pecan nuts, Pineapples, Plums, Prickly pears, Prunes, Quince, Tea		<ul style="list-style-type: none"> Refer to Tables 1.1 to 1.9 and 3.1 to 3.4 for dosage rates of GLYGRAN 710 SG. Protect young trees with green bark from direct spray. Direct spray onto weeds. Do not spray onto pruned trees until wounds have sealed properly.
Crop	Dosage rates	Remarks
Grape vines*	<ul style="list-style-type: none"> Apply before bud burst to vines older than 2 years. Younger vines with green bark should be shielded. Direct spray onto weeds. Do not spray onto pruned vines until wounds have sealed properly. 	
	0.8 kg / ha PLUS 3.0 l/ha MCPA 400 SL	Early winter: (Weeds under 15 cm height). Not for Small mallow (<i>Malva parviflora</i>), Cape marigold (<i>Arctotheca calendula</i>), Oat seed grass (<i>Erharta</i> spp.), Blue echium (<i>Echium vulgare</i>), Ryegrass (<i>Lolium</i> * spp.), Sow thistle (<i>Sonchus oleraceus</i>) and Brome spp. (<i>Bromus</i> spp.)
	1.0 kg / ha PLUS 4.0 l/ha MCPA 400 SL	Late winter: (Weeds under 30 cm height). Use the higher rates for Bur clover (<i>Medicago polymorpha</i>), Prostrate knotweed (<i>Polygonum aviculare</i>) and Sheep sorrel, (<i>Rumex angiocarpus</i>).
Sisal	Annual weeds: Tables 1.1 to 1.10 Perennial weeds: Tables 3.1 to 3.4	Apply to nursery and mature plants as a directed inter-row spray.

* Inconsistent control and resistance of weeds are not uncommon in the Western Cape. Refer to “**RESISTANCE WARNING**” and **Table 1.9** above.

3. CONTROL OF PROBLEM AND NOXIOUS WEEDS

3.1 Perennial grasses:

Table 3.1: Control of perennial grass species.

<i>Botanical name</i>	<i>Common name</i>	<i>Dosage rate</i>		<i>Remarks</i>
		<i>kg / ha</i>	<i>% Solution*</i>	
<i>Cynodon dactylon</i>	Common couch grass	3.0	1.2	Summer rainfall region: Apply to active growth in autumn or summer. Follow-up application in summer at 2.1 kg per hectare. If re-growth occurs, spray with a 1.3 % solution.
		4.6	---	Winter rainfall region: Apply as above in autumn.
<i>Eragrostis curvula</i>	Weeping love grass	1.0	0.4	Only grass that germinated from seeds, i.e. not grass tufts. Apply on to actively growing plants in summer or autumn. Seedlings. Up to 60 cm height.
		2.1	0.8	
<i>Paspalum dilatatum</i>	Common Paspalum	3.0	1.2	Apply on active growing plants. Follow-up with half the recommended dosage rate if re-growth occurs..
<i>Paspalum paspalodes</i>	Couch Paspalum	3.0	1.2	Apply in summer at flowering but before seed drop. If re-growth occurs, spray with a 1.2 % solution or 2.1 kg per hectare. Apply the higher rate in the winter rainfall region.
<i>Panicum maximum</i>	Common buffalo grass	2.1	0.8	Apply in summer to actively growing plants in the early growth stage. If re-growth occurs, spray with a 0.8 % solution.
<i>Pennisetum clandestinum</i>	Kikuyu	2.1	0.8	Apply in summer to actively growing plants. If re-growth occurs, spray with a 0.8 % solution.
<i>Setaria megaphylla</i>	Bush buffalo grass	3.1	1.2	Apply to actively growing plants in autumn or summer. If re-growth occurs, spray with a 0.8 % solution.
<i>Sorghum halepense</i>	Johnson grass	2.1	0.8	Apply in summer or autumn. If re-growth occurs, spray with a 0.8 % solution.
<i>Sorghum verticilliflorum</i>	Common wildsorghum	1.0	0.4	Apply to actively growing plants in summer or autumn.
<i>Stipa trichotoma</i>	Nassella tussock	2.1	0.8	Apply in winter using high water volumes. If re-growth occurs, spray with a 1.0 % solution.

* Based on knapsack application delivering 250 litres spray mixture per hectare. Application of a % solution with a knapsack sprayer must be calibrated such that it will equal the delivery of the corresponding litres per hectare dosage rate.

3.2 Nutsedges:

Table 3.2: Control of nutsedges.

<i>Botanical name</i>	<i>Common name</i>	<i>Dosage rate</i>		<i>Remarks</i>
		<i>kg / ha</i>	<i>% Solution*</i>	
<i>Cyperus esculentus</i>	Yellow nutsedge	3.0	1.2	Apply in summer at pre-flowering stage. If re-growth occurs, spray with a 0.8 % solution or 1.5 kg per hectare (best results in Feb/March).
<i>Cyperus rotundus</i>	Purple nutsedge			

* Based on knapsack application delivering 250 litres spray mixture per hectare. Application of a % solution with a knapsack sprayer must be calibrated such that it will equal the delivery of the corresponding litres per hectare dosage rate.

3.3 Nutsedges:

Table 3.3: Improved consistency of Yellow nutsedge (*Cyperus esculentus*) control.

<i>Purpose of Application</i>	<i>Dosage rate kg / ha</i>
Improved consistency of Yellow nutsedge (<i>Cyperus esculentus</i>) control in Glyphosate tolerant maize with a tank mixture with Halo 750 WDG .	1.3 PLUS 50 g Halo 750 WDG

- Add 2 % **Velocity®-Super** and 0.05 % **Villa 51** to the tank mixture.
- Refer to the “**REMARKS**” above.
- Refer to the **Halo 750 WDG** label for **USE RESTRICTIONS** and **DIRECTIONS FOR USE** and list of additional weeds controlled by this product.

3.4 Noxious weeds:

Table 3.4: Control of noxious plant species.

Botanical name	Common name	Dosage rate		Remarks
		kg / ha	% Solution	
<i>Acacia mearnsii</i>	Black wattle	1.5	0.8 to 1.0	Apply in summer to young trees ranging from 0.1 to 1.5 m high.
<i>Acacia saligna</i>	Port Jackson willow	1.0 to 2.0	0.8	Apply in autumn or spring. Seedlings only: Bipinnate leaf stage = 1.0 kg per hectare. Up to 60 cm high = 2.1 kg per hectare.
<i>Caesalpinia decapetala</i>	Mauritius thorn	1.5	0.6	Apply in summer by knapsack sprayer.
<i>Chromolaena odorata</i>	Paraffin weed	---	0.5	Slash re-growth in winter if necessary. Apply in summer to new growth when more than 0.5 m high.
<i>Convolvulus arvensis</i>	Field bindweed	3.1	1.2	Apply in summer at onset of flowering. If re-growth occurs spray with a 0.8 % solution.
<i>Lantana camara</i>	Common Lantana	3.1	1.2	Slash large bushes in winter if necessary. Apply on active growth in summer.
<i>Opuntia ficus-indica</i>	Prickly pear	---	16.5	For trees with 20 to 250 cladodes: Drill 4 to 12 holes in the stem and inject 3 ml of a 16.5 % solution per hole.
<i>Phytolacca hepatandra</i>	Ink berry	1.5	0.8	Apply in summer by knapsack sprayer.
<i>Plantago lanceolata</i>	Narrow-leaved ribwort	1.5	0.8	Apply in spring before flowering.
<i>Prosopis glandulosa</i>	Mesquite tree	-	1.5 to 2.5	Foliar applications: Apply to seedlings 1 to 2 m high. Seedlings should be actively growing and should not show any signs of wilting or any other stress. Seedlings should have enough foliage before spraying. Coppice applications: Coppice should not exceed 1 m height. The coppice should be well foliated before spraying. The coppice should be actively growing and should not show any signs of wilting or any other stress. Care should be taken to wet the coppice thoroughly on the outside as well as on the inside of the canopy. General: Control will only be for a year (one season). Provision should be made to treat escapes, coppice developments and new seedlings in the following year.
<i>Rubus cuneifolius</i>	American bramble	3.0	1.5 2.0	Slash rank growth in winter. Apply in autumn or summer when new growth is more than 0.5 m high. If re-growth occurs, spray with a 0.8 % solution. Knapsack sprayer. Mist blower.
<i>Sesbania punicea</i>	Red Sesbania	1.5	0.8	Seedling plants less than 1 m high: Use a 0.8 % solution. Tall shrubs: Slash, spray re-growth with a 0.8 to 1.0 % solution at 1 m high.
<i>Solanum mauritianum</i>	Bugweed	1.0	0.8	Apply in spring or summer. Large trees: Cut to 50 cm, allow new growth of at least 50 cm before application. Saplings: Apply directly to foliage.

4. SPECIALISED PRACTICES

4.1 FORESTRY AND INDUSTRIAL WEED CONTROL

Table 4.1: Dosage rates for weed control in forestry.

Situation	Weed species	Dosage rate			Remarks
		kg / ha	% Solution (kg in 100 l water)*	Spot spraying (kg in 100 l water)**	
Maintenance weed control in established forests	<i>Acacia mearnsii</i> (Black wattle)	1.5	0.6	0.8 to 1.0	Apply to young trees from 0.1 to 1.5 m high. Apply the lower dosage rate on trees up to 1.0 m height.
	<i>Solanum mauritianum</i> (Bugweed)	1.0	0.4	0.8	Large trees: Cut to 50 cm, allow new growth of at least 50 cm before application. Saplings: Apply directly to foliage.
	<i>Rubus</i> spp. (Bramble)	3.0	1.2	0.8	Cut and remove lush growth in winter. Apply when new growth is more than 0.5 m high. If re-growth occurs, spray with a 0.8 % solution.
Firebreaks Firebreaks preparation, either tracer belts or total area. Band preparation for tree seedlings Situations suitable for such treatments include: a) Virgin veld b) Clear felled forests	In both situations the weed population would include perennials and annuals. For some of the weeds controlled refer to the list under Industrial weed control.	2.1	1.0	1.1	A minimum of 250 litres spray mixture per hectare must be applied when using the 1.0 % solution. A follow-up treatment may be necessary to control some hardy perennials using a 1.1 % solution on a spot spray basis.
<i>Eucalyptus grandis</i> (Blue gum)	Single stem stumps	2.5 % solution			Apply a 50 ml solution to a clean cambium area immediately after felling.
	Multi-stem stumps	3.5 % solution			Apply a 100 ml solution to a clean, fully exposed cambium layer immediately after felling. If re-growth occurs, spray with a 1.0 % solution.

* Based on knapsack application delivering 250 litres spray mixture per hectare. Application of a % solution with a knapsack sprayer must be calibrated such that it will equal the delivery of the corresponding litres per hectare dosage rate.

** Where spot spraying is done using a percentage solution, apply as a full cover application (but not to the point of run-off).

Table 4.2: Dosage rates for Industrial weed control.

Botanical name	Common name	Dosage rate		Remarks
		kg / ha	% Solution**	
Perennial grasses:				
<i>Cynodon dactylon</i>	Common couch grass	3.0	1.2	Apply to vigorously growing plants in summer or autumn when nutrients are actively translocated to roots, rhizomes and stolons. Follow-up with 2.1 kg per hectare (a 1.3 % solution) if any re-growth occurs.
<i>Cynodon nlemfuensis</i>	East African grass	3.0	1.2	
<i>Pennisetum clandestinum</i>	Kikuyu	2.1	1.0	Spray on active growth in summer. Spray re-growth with 2.0 kg per hectare or a 0.8% solution.
<i>Paspalum paspalodes</i>	Couch Paspalum	3.0	1.2	Apply on active growing plants. Follow-up with half the recommended dosage rate if re-growth occurs.
<i>Paspalum dilatatum</i>	Common Paspalum	3.0	1.2	
Nutsedges:				
<i>Cyperus esculentus</i>	Yellow nutsedge	3.0	1.2	Apply during flowering stage. Spray re-growth with 2.0 kg per hectare or a 0.8 % solution.
<i>Cyperus rotundus</i>	Purple nutsedge	3.0	1.2	
Annual broadleaf weeds:				
<i>Amaranthus hybridus</i>	Cape pigweed	2.1 to 3.0	0.8 to 1.2	Use 2.1 kg per hectare (a 0.8 % solution) when weeds are in the early growth stages. Use 2.7 kg per hectare (a 1.1 % solution) when weeds are in the early flowering stage. Use 3.0 kg per hectare (a 1.2 % solution) when weeds are in the seeding stage, but still actively growing. Do not apply on to matured weeds that are in a stage of desiccation.
<i>Amaranthus spinosus</i>	Thorny pigweed			
<i>Argemone subfusiformis</i>	White flowered mexican poppy			
<i>Bidens bipinnata</i>	Spanish black jack			
<i>Bidens pilosa</i>	Black jack			
<i>Chenopodium album</i>	White goosefoot			
<i>Conyza floribunda</i> *	Tall fleabane			
<i>Datura ferox</i>	Large thorn apple			
<i>Datura stramonium</i>	Thorn apple			
<i>Oxalis pes-caprae</i>	Yellow sorrel			
<i>Polygonum aviculare</i>	Prostrate knotweed			
<i>Richardia brasiliensis</i>	Tropical richardia			
<i>Senecio ilicifolius</i>	Ragwort			
<i>Schkuhria pinnata</i>	Dwarf marigold			
<i>Tagetes minuta</i>	Khaki weed			

* Even at higher rates, the control of *Conyza* species may be variable, necessitating a follow-up application.

** Based on knapsack application delivering 250 litres spray mixture per hectare. Application of a % solution with a knapsack sprayer must be calibrated such that it will be equal to the corresponding litres per hectare dosage rate (**NOTE** - where spot spraying is done, using a percentage solution, apply as a full cover application (but not to the point of run-off)).

4.2 SUGARCANE

Table 4.3:

<i>Situation</i>	<i>Dosage rate</i>	<i>Remarks</i>
Last ratoon eradication (Minimum tillage)	4.10 to 5.20 kg / ha	GLYGRAN 710 SG will effectively kill the last ratoon sugarcane after it has been harvested and allowed to re-grow to a height of \pm 45 cm, when tillering is complete. Spray actively growing sugarcane when tillers have emerged, using 100 to 400 litres per hectare. Re-growth can be removed by hand. Contact your distributor for detailed information on all aspects of minimum tillage before spraying.
Spot eradication of diseased plants	5 % solution	For spot eradication of diseased (e.g. smut) and Off-type cane stools. Apply as a directed spray on the target plant foliage.
Pre-plant	Annual weeds: 0.52 to 1.55 kg / ha Perennial weeds: Refer Table 1.	Apply on to actively growing weeds.
Spot spraying fields	1 % solution	Direct spot spraying on to actively growing weeds around fields, telephone poles, etc.

5. PASTURE RENOVATION

Table 5:

<i>Situation</i>	<i>Remarks</i>
Conventional Perennial running grass infestation:	Mechanical and chemical renovation:
Light pressure	Prepare seedbed. Allow perennial running grass and annual weeds to emerge. Apply GLYGRAN 710 SG at the recommended dosage rates for the weeds (Table 2). Sow new pasture 3 to 4 days after spraying.
Heavy pressure	Cultivate weeds and allow for re-growth. Apply the recommended rate of GLYGRAN 710 SG . Allow for one week after spraying before a second cultivation, seedbed preparation and planting / sowing.
Pre-sowing weed control	New germinating weeds can be controlled with 0.52 to 1.55 kg per hectare. <i>Cyperus</i> spp. (Nutsedge) will require 3.0 kg per hectare. Sow new pasture 3 to 4 days after application.
Pasture replacement and field improvement	Reduce trash by mowing or heavy grazing 3 to 4 weeks prior to application of GLYGRAN 710 SG on re-growth. Plant new pasture 3 to 4 days after application.
Pasture maintenance	Control perennial and annual weeds in pastures by spot spraying with a 1 % solution or using wipe type equipment where weeds project above the pasture (Table 2).

NOTES

- Refer to the recommended dosage from the **Tables** above to control annual and perennial weeds during renovation of established pastures.
- Use conventional or direct drill planting methods.
- Ensure that rank weed growth does not prevent spray coverage on the target area.
- Do not spray on to 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 re-growth during summer and spray re-growth late summer or spring. Establish new pasture in the autumn thereafter.

6. WIPE TYPE APPLICATION

Table 6:

Type of applicator	% Solution	Remarks
Hand held roller applicators	<u>Annuals:</u> 2.5 % <u>Perennials:</u> 5.0 %	100 to 150 litres per hectare solution recommended where conventional spraying is not practical, i.e. low trellised or bush vines, etc.
Handheld or tractor mounted rope wick applicator	25 %	Apply up to 3 litres per hectare dosage rate solution in orchards and where weed/crop height differentiation exists, e.g. control of volunteer crop or resistant late germinating weeds in beans and groundnuts.
NOTES		
<ul style="list-style-type: none"> Use an approved wipe type applicator. These applicators make use of an absorbent material to transfer the GLYGRAN 710 SG solution on to plants with which the applicator comes into contact. Ensure that the wiper surface is kept clean. The wiper must not come into contact with the crop. 		

The following products mentioned in this label are equivalent to the products mentioned below:

- CANTRON® 480 SC** (L 8365 / N-AR 1323 / W 130651) = **ASTRON® 480 SC** (L 8366) = **CANONNE 480 SC** (L 8735) (**Mesotrione**),
- VELOCITY®-SUPER** (L 9603 / W 130996) = **AMS-SUPER** (L 9758),
- VELOCITY®-DRYMAX** (L 9454 / W 130995 / N-AR 1528) = **AMS-GRANULE** (L 9610),
- VILLA 51** (L 8050 / W 130454 / N-AR 1090) = **WEN 51** (L 8315),
- HALO 750 WDG** (L 8283 / N-AR 1337) = **CROWN 750 WDG** (L 8282) = **STRIGO 750 WDG** (L 8671),
- LEAP 840 EC** (L 8064 / N-AR 1103) = **PREMIUM 840 EC** (L 8066) = **ARMANN SUPER 840 EC** (L 8373),
- METOLACHLOR 800 EC** (L 7137) = **METOLACHLOR 800 EC** (L 7433) = **MAESTRO PLUS 800 EC** (L 8090),
- PLATINUM PLUS 915 EC** (L 7844) = **METOLACHLOR 915 EC** (L 7841 / N-AR 1361) = **MAESTRO GOLD 915 EC** (L 8249),
- MCPA 400 SL** (L 5793 / N-AR 1092) = **MCPA 400 SL** (L 5795 / W 130452),
- 2,4-D AMINE 480 SL** (L 4505 / W 130459 / N-AR 1096) = **AMINO 480 SL** (L 8034) = **2,4-D AMINE SL** (L 8145),
- LAUREL 800 WDG** (L 8061 / N-AR 1339) = **FLUMETSULAM 800 WDG** (L 8062) = **RAPIER 800 WDG** (L 8494) and
- TERBUWEED 600 WDG** (L 8800) = **TERBUCIDE 600 WDG** (L 8799) = **TERBUMAIS 600 WDG** (L 8798).

CANTRON® 480 SC, LEAP 840 EC, METOLACHLOR 800 EC, PLATINUM PLUS 915 EC, HALO 750 WDG, VELOCITY®-SUPER, VELOCITY®-DRYMAX, AMINO 480 SL, ELEGANCE 500 WP, LAUREL 800 WDG, TERBUWEED 600 WDG, MCPA 400 SL, WEN 51, AMS-SUPER, AMS-GRANULE and/en **VILLA 51** are registered products of / is geregistreerde produkte van **Villa Crop Protection (Pty) Ltd.**

PREMIUM 840 EC, ASTRON® 480 SC, CROWN 750 WDG, METOLACHLOR 800 EC, METOLACHLOR 915 EC, 2,4-D AMINE 480 SL, FLUMETSULAM 800 WDG, TERBUCIDE 600 WDG, MCPA 400 SL are registered products of / is geregistreerde produkte van **Universal Crop Protection (Pty) Ltd.**

CANONNE 480 SC, ARMANN SUPER 840 EC, MAESTRO PLUS 800 EC, MAESTRO GOLD 915 EC, 2,4-D AMINE SL, TERBUMAIS 600 WDG, RAPIER 800 WDG and/en **STRIGO 750 WDG** are registered products of / is geregistreerde produkte van **Cropasure (Pty) Ltd.**

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