

[Sales Panel]

For further information see attached pamphlet
Vir verdere inligting sien aangehegte pamflet



WIPER™ 710 SG

Reg. No. / Nr. L11041, Act No. / Wet Nr. 36 of/ van 1947

READ THE LABEL BEFORE USE

KEEP OUT OF REACH OF CHILDREN AND ANIMALS

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 non-crop and industrial areas.

'n Wateroplosbare korrel, nie-selektiewe, sistemiese na-opkoms onkruidodder met min of geen grondaktiwiteit vir die beheer van meer- en eenjarige onkruid in landbou, asook in nie-gewas en nywerheidsgebiede.

GROUP/GROEP	9	HERBICIDE/ONKRUIDDODER
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Active ingredient:

Aktiewe bestanddeel:

Glyphosate (glycine).....710 g/kg..... Glifosaat (glisien)
(glyphosate ammonium salt).....780 g/kg (glifosaat ammoniumsout)

CONTENTS

kg

INHOUD



WARNING

GHS Hazard Statements

May be harmful if swallowed
May be harmful in contact with skin
Harmful if inhaled
Causes skin irritation.
Causes serious eye irritation
May cause an allergic skin reaction
Toxic to aquatic life with long lasting effects.

GHS Precautionary Statements

Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash hands thoroughly after handling.



REGISTRATION HOLDER / REGISTRASIEHOUER:

AECI® Limited / AECI® Beperk

Reg. No. / Nr. 1924/002590/06

P.O. Box / Posbus 14418

Witfield, 1467

Tel : (011) 823 8000

www.aeciph.com/www.aeciworld.com

WIPER™ Trademark pending of AECI® Limited / 'n hangende handelsmerk van AECI® Beperk.

IN CASE OF POISONING PLEASE PHONE / IN GEVAL VAN VERGIFTIGING SKAKEL 0861555777 / 082 446 8946

Batch No:

Lotnommer:

Date of manufacture:

Datum van vervaardiging:

UN No. / VN Nr. 3077. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Glyphosate ethanolamine salt)

WIPER™ 710 SG

Reg. No. / Nr. L11041, Act No. / Wet Nr. 36 of/ van 1947

READ THE LABEL BEFORE USE
KEEP OUT OF REACH OF CHILDREN AND ANIMALS

A non-selective post-emergence soluble liquid herbicide for the control of annual - and perennial weeds as indicated on the label

GROUP	9	HERBICIDE
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Active ingredient:

Glyphosate (glycine) 710 g/kg
(glyphosate ammonium salt) 780 g/kg

**WARNING****REGISTRATION HOLDER:****AECI® Limited**

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WARNINGS:**GHS Hazard Statements**

May be harmful if swallowed
May be harmful in contact with skin
Harmful if inhaled
Causes skin irritation.
Causes serious eye irritation
May cause an allergic skin reaction
Toxic to aquatic life with long lasting effects.

Withholding periods:

The following withholding period should be adhered to between the last application and harvesting:	
Maize (Grazing)	28 days
Maize (Green mealies)	42 days
Soybeans	14days

- Handle with care.
- May cause mild skin and eye irritation.
- Poisonous by swallowing, inhalation and skin contact.
- Do not mix, store or apply **WIPER 710 SG** solutions in galvanised steel or unlined steel (except stainless steel) containers or spray tanks, as a reaction will cause hydrogen gas to form, which is highly combustible.

- Store under lock and key in a cool, dry place, away from food, feeds, seed and fertilizers.
- 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.
- In case of poisoning, take the patient immediately to a doctor and make this label available to him/her.
- **WIPER 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.
- **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.**

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 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 AGAINST THE REMEDY CONCERNED AS WELL AS BY THE METHOD, TIME AND ACCURACY OF APPLICATION. THE REGISTRATION HOLDER FURTHERMORE DOES NOT ACCEPT RESPONSIBILITY 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 THE EVENT OF ANY UNCERTAINTY.

PRECAUTIONS:

GHS Precautionary Statements

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wash body thoroughly after handling.

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area.

Wash hands thoroughly after handling. Do not touch eyes.

Avoid release to the environment.

Wear protective gloves.

IF ON SKIN: Wash with plenty water.

Get medical help.

IF SWALLOWED: Get medical help.

Rinse mouth

Specific treatment

If skin irritation occurs: Get medical help.

Take off contaminated clothing and wash it before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical help. If skin irritation or rash occurs: Get medical help.

Collect spillage.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- Avoid eye and skin contact.
- Wear protective rubber gloves, rubber boots and face shield when handling the concentrate and during mixing.
- Wash with soap and water after use and after accidental skin contact.
- Prevent drift onto other crops, grazing, rivers, dams or areas not under treatment or to nearby water sources.
- Prevent contamination of food, feed, drinking water and eating utensils
- Do not add foliar fertilisers to **WIPER 710 SG**.
- Thoroughly clean spraying equipment directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- Containers and packages must be completely emptied before being disposed of. Shake out thoroughly into the applicator and destroy the empty container thereafter in the described manner.
- Shake all the pesticide formulation of the container into the spray or mixing tank or if it is directly dispensed onto treatment areas, over the area. Turn the bag or box inside out. Hold the bag over the spray or mixing tank or treatment area and rinse bag or box with running water for thirty seconds. Shake the rinsate off into the tank. Repeat the rinsing twice. Cut the bag or box into pieces and dispose of via normal refuse disposal. Do not burn, bury or donate the bag or box to any other parties that may use it as a container for food.

RELEVANT SUBSTANCES

Substance name (IUPAC/EC)	CAS –No.	Concentration % by weight
	EC-No.	
Glyphosate ethanolamine salt	40465-66-5	70-80%
	854-494-5	
Others to 100%		

NOTE: The other ingredients not included above, do not cause or contribute towards the correct GHS classification of **WIPER 710 SG** and are therefore, in terms of the South African Regulations for Hazardous Chemical Agents - 2021; Regulation 14(b), not listed.

FIRST AID TREATMENT:

In case of inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if you feel unwell.

In case of skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation persists.

In case of eye contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation persists.

In case of ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if you feel unwell.

NOTE TO PHYSICIAN:

Treat symptomatically.

RESISTANCE WARNING

WIPER 710 SG is a Group Code 9 Herbicide. Any weed population may contain individuals naturally resistant to **WIPER 710 SG** and other Group Code 9 Herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weed may not be controlled by **WIPER 710 SG** or any other Group Code 9 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.

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

MODE OF ACTION:

The mode of action for Glyphosate is by inhibition of 5-enolpyruvylshikimate-3-phosphate synthase (**EPSP synthase**).

WEED RESISTANCE MANAGEMENT:

- 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), *Coryza bonariensis* (Flax-leaf fleabane), *Commelina benghalensis* (Benghal wandering Jew), *Ipomoea* species (natural resistance) occur, due to resistance against **glyphosate**.
- Some populations might be resistant to products containing the aryloxyphenoxy propionates, cyclohexanediones and sulfonyleureas, but might also have resistance against the **glyphosate** containing products, e.g. **WIPER 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 abovementioned preventative measures are not strictly adhered to, the registration holder cannot be held responsible for the failure of **WIPER 710 SG** to control resistant weeds.

DIRECTIONS FOR USE: Use only as directed

GENERAL INFORMATION AND USE RESTRICTIONS:

NOTES:

- Use of **WIPER 710 SG** according to label instructions should result in normal development and growth of glyphosate tolerant soybean or glyphosate tolerant maize varieties. Various environmental conditions, agronomic practices and other diverse factors make it impossible to eliminate all risks associated with this product, even when applications are done according to label specifications. In certain cases, these factors can result in unforeseen results including yield loss.
- **WIPER 710 SG** must only be used for post-emergence, over the top or directed application on to genetically improved soybean maize varieties that have been developed as containing the Pioneer glyphosate tolerant gene. Severe crop injury or total killing of the maize or soybean crop will result if any variety or hybrid, not properly indicated as containing the glyphosate tolerant gene, is sprayed with this product.
- Herbicidal action of **WIPER 710 SG** may become visible from five (5) days after application depending on weed species, growth stage and environmental conditions.
- Apply **WIPER 710 SG** post-emergence on 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 onto dust particles on the weeds’ leaf surfaces.
- **WIPER 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.
- Allow 6 hours after application before planting operation.
- In mixed weed situations (annuals in amongst problem perennials), control annuals by mowing or chemical control. Wait for vigorous re-growth of perennials and then spray or spot spray re-growth.
- When **WIPER 710 SG** is used in conjunction with any other agricultural remedy, adhere to all **WARNINGS, PRECAUTIONS** and **DIRECTIONS FOR USE** mentioned on that label.
- There are no crop rotation restrictions following application of this product.
- Pre-plant weed control on sandy soil (<10 % clay) should take place at least 7 days before transplanting tomato or tobacco seed

MIXING INSTRUCTIONS:

- 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.
- Analysis of the water source is recommended to confirm the levels of sodium, calcium and magnesium salts, as well as carbonate and bicarbonate fractions, as too high levels of these compounds may cause antagonism with the glyphosate active ingredient.
- For hard and brackish water correction, add Velocity-Glifo, Velocity-Dry, ATP Amsul-50 or Amsul-Dry ammonium sulphate to the spray water before adding **WIPER 710 SG**.
- Add the ammonium sulphate to the water first; then add the **WIPER 710 SG**, followed by the recommended tank mixture product.
- Ensure agitation during mixing and spraying. Dissolve the required quantity **WIPER 710 SG** in a small volume of water and then add to the filling spray tank while agitating. Clean this container by rinsing and adding the rinsate to the spray tank. Never mix undiluted products or their premixes before adding to the tank.
- When **WIPER 710 SG** is used in a water-oil mixture, first dissolve the **WIPER 710 SG** in the spray water before adding the oil.

COMPATIBILITY:

- **WIPER 710 SG** can be tank mixed with ACETOCHLOR 840 EC, ALACHLOR 480 CS, **Mesoclear™ 480 SC** (Reg. No. L11039, Act 36 of 1947), **Thala™ 960 EC** (Reg. No. L11059, Act No. 35 of 1947), Metolachlor 915 EC, Acetochlor 900 EC, **2,4-D Amine 480 SL** (Reg. No. L5233, Act No. 36 of 1947), Halosulfuron-methyl 750 WDG, MCPA 400 SL, Chlorimuron-ethyl 750 WG, Flumetsulam 800 WDG and **Biodew®** (Reg. No. L8120, Act 36 of 1947) certain Triazine formulations (with the addition of Ammonium sulphate), Diuron 800 SC and Diuron 800 WP (with the addition of Ammonium sulphate or Velocity-Dry, **Biodew** and Terbutylazine 900 WDG, Terbutylazine 600 WDG. Ensure compatibility by preparing a small scale test mixture before a large scale field application. Observe all label recommendations.

SURFACTANTS / ADDITIVES:

- For optimum results, a minimum of 1.0 % **WIPER 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 Benghal wandering Jew, Field bind weed, Morning glory and Common purslane, **WIPER 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 to the spray mixture (e.g. Imiboost / ASC).

APPLICATION INFORMATION:

- Correctly calibrate all sprayers under field conditions and ensure that the spraying equipment is in good working order.
- Apply **WIPER 710 SG** at a maximum volume rate of 200 litres spray mixture per hectare.
- Where the volume rate is less than 120 litres per, 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 rust, dust and sediment from other chemicals.

- 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 (NOT a mist spray), even droplet distribution and thorough coverage of the target weeds.
- Thoroughly clean the entire sprayer after application.

AERIAL APPLICATION:

- Aerial application of **WIPER 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 aurally 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:
 - reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage),
 - 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.**

CROP RECOMMENDATIONS

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).
Tables 5	Pasture renovation
Tables 6	Wipe-type application.

DILUTION RATES:

Best results will be obtained when **WIPER 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 **WIPER 710 SG** to the tank.
- 0.10 kg (100 g) in 10 litres water (1.0 % solution)
- 0.216 kg (216 g) in 10 litres 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 **WIPER 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.

Table 1.1: Annual broadleaf weeds - The following broadleaf weeds will be controlled at the dosage rates

WIPER 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 stage	12-leaf stage to pre-flowering	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 paiviflora</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”

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

WIPER 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 stage	12-leaf stage to pre-flowering	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>	Devil's thorn = 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.

WIPER 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 stage	12-leaf stage to pre-flowering	Flowering
<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 plebeian</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.

WIPER 710 SG	
2.5 kg/ha	
1 to 12-leaf stage	
<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 **WIPER 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.

WIPER 710 SG		
4.65 kg/ha		
1 to 12-leaf stage	12-leaf stage to pre-flowering	Flowering
<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.

WIPER 710 SG	
0.7 to 1.0 kg/ha	1.5 kg/ha
1-leaf stage to pre-flowering	Flowering
<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.

WIPER 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 stage	12-leaf stage to pre-flowering	Flowering
<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):

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

** WIPER 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.

WIPER 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 stage	12-leaf stage to pre-flowering	Flowering
<i>Bothriochloa insculpta</i>	-	
<i>Brachiaria eruciformis</i>	Sweet signal grass	
<i>Dactyloctenium aegyptium</i>	Crowfoot	
<i>Digitaria sanguinalis</i>	Crab fingergrass	
<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 Region.

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.

WIPER 710 SG		
1.5 to 1.8 kg/ha*	1.8 to 2.3 kg/ha*	2.3 to 2.5 kg/ha*
1 to 12-leaf stage	12-leaf stage to pre-flowering	Flowering
<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.**	Rye grass	
<i>Medicago polymorpha</i>	Clover	
<i>Raphanus raphanistrum</i>	Wild radish	
<i>Sonchus oleraceus</i>	Sowthistle	

*The addition of ammonium sulphate 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 WIPER 710 SG plus 2,4-D Amine 480 SL for control weeds in cereal crops in the Western Cape*:

WIPER 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 Crops Recommendations;

2.1 Glyphosate tolerant maize:

- Broadcast (over the top) application:**

Broadcast application of **WIPER 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 lowwater volume deliveries, are recommended. If follow-up applications are required to control specificweed 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 **WIPER 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, **WIPER 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):

WIPER 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 **WIPER 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 to recommendations under “Application Dosages”.

Table 2.1:

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

* Variable weed control

Glyphosate tolerant Maize only:

Improved residual control of broadleaf weeds.

Above-mentioned General post-emergence weed control dosage rates PLUS 0.53 to 1.1 kg per hectare Terbutylazine 900 WDG is recommended.

Consult the Terbutylazine 900 WDG label for **WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE.**

2.3 Other crops:

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		✧ Refer to Tables 1.1 to 1.9 and 3.1 to 3.4 for dosage rates of WIPER 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
Grapevines*	✧ 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.
		2.1	0.8	Seedlings: Up to 60 cm height.
<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 regrowth 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 wild sorghum	1.0	0.4	Apply to actively growing plants in summer or autumn.
<i>Stipa trichotoma</i>	Nasella 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.

Botanical name	Common name	Dosage rates		Remarks
		kg/ha	% Solution	
<i>Cyperus esculentus</i>	Yewllow 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 February/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 Noxious Weeds:

Table 3.4: Control of noxious plant species.

Botanical name	Common name	Dosage rates		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 60cm 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.

Table 3.4 (continued): Control of noxious plant species.

<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 punicae</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* (in 100 ℓ water)	Spot spraying (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.
	<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 1.0 % 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 1.2 % solution. A follow-up treatment may be necessary to control some hardy perennials using a 1.5 % 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 1.3 % 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 rates		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.
<i>Amaranthus spinosus</i>	Thorny pigweed			
<i>Argemone subfusiformis</i>	White flowered Mexican poppy			
<i>Bidens bipinnata</i>	Spanish black jack			Use 2.7 kg per hectare (a 1.1 % solution) when weeds are in the early flowering stage.
<i>Bidens pilosa</i>	Blackjack			
<i>Chenopodium album</i>	White goosefoot			Use 3.0 kg per hectare (a 1.2 % solution) when weeds are in the seeding stage, but still actively growing.
<i>Conyza floribunda*</i>	Tall fleabane			
<i>Datura ferox</i>	Large thorn apple			
<i>Datura stramonium</i>	Thorn apple			Do not apply on to matured weeds that are in a stage of desiccation.
<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

<i>Situation</i>	<i>Dosage rates</i>	<i>Remarks</i>
Last ratoon eradication (Minimum tillage)	4.10 to 5.20 kg / ha	WIPER 710 SG will effectively kill the last ratoon sugarcane after it has been harvested and allowed to re-grow to a height of + 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 WIPER 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 WIPER 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. Cyperus 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 WIPER 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:

<i>Type of applicator</i>	<i>% Solution</i>	<i>Remarks</i>
Handheld roller applicators	Annuals: 2.5 % Perennials: 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 %ss	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:

- Use an approved wipe type applicator. These applicators make use of an absorbent material to transfer the **WIPER 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.

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