

BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY!

Herbicide



PANGA 360 SL

Reg. No. L 7812 Act/Wet No. 36 of/van 1947

5: 21/12/2012 – Aug2019

*A soluble concentrate 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. PANGA 360 SL can also be used as a growth regulator to reduce the growth of weeds.*

*'n Oplosbare konsentraat 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. PANGA 360 SL kan ook gebruik word as 'n groeireguleerder vir die vertraging van groei van onkruid.*

ACTIVE INGREDIENT / AKTIEWE BESTANDEDEL

glyphosate (glycine) 360 g ae/l glifosaat (glisien)  
(glyphosate isopropylamine salt) 480 g/l (glifosaat isopropielamiensout)

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



**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

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24 HR EMERGENCY NUMBERS:

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Villa Crop Protection Emergency number: +27 63 698 0668

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UN Number: 3082

Willow Set & Print 011 394-4486

GEbruiksAANwysings INGESLUIT

VERWYS NA BESONDERHEDE  
GEDRUK OP HOUER/SAK

Date formulated:

Formuleringsdatum:

DIRECTIONS FOR USE ENCLOSED

REFER TO DETAILS PRINTED  
ON CONTAINER/BAG

Batch number:

Lotnummer:



CAUTION  
VERSIGTIG



**PANGA 360 SL**

Reg. No. L 7812 Act/Wet No. 36 of/van 1947

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 (glyphosate isopropylamine salt / glifosaat isopropielamiensout) ..... 480 g/l

Registration holder / Registrasiehouer:

**VILLA CROP PROTECTION (PTY) LTD.**

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

PO Box / Posbus 10413

ASTON MANOR, 1630 Tel. (011) 396 2233

**CAUTION / VERSIGTIG****WARNINGS**

- Handle product with caution.
- Irritating to eyes and skin.
- Harmful when swallowed.
- Do not mix, store or apply **PANGA 360 SL** 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 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**

**PANGA 360 SL** 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, applying or before washing hands and face or change of clothing.
- Wash with soap and water immediately after use and 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 onto other crops, grazing, rivers, dams or areas not under treatment as this may cause serious crop damage.
- Clean the application equipment after use and do not dispose of wash water where it can contaminate other crops, grazing, rivers or dams.
- **TRIPLE RINSE** empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a minimum of a third of that of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner.
- Destroy the container by perforation and flattening and dispose of it in a safe way.
- **Do not** re-use the empty container for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.
- Direct or spray drift contact by **PANGA 360 SL** onto leaves and/or immature bark of desired plants can result in serious localised or translocated damage.

### **RESISTANCE WARNING**

**PANGA 360 SL** is a group code G9 herbicide. Any weed population may contain individuals naturally resistant to **PANGA 360 SL** 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 **PANGA 360 SL** 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 bengalensis* (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 sulfonyleureas, but might also have resistance against the **Glyphosate** containing products e.g. **PANGA 360 SL**.
- 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 **PANGA 360 SL** 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:**

- The herbicidal action is only visible from two weeks after application onwards.
- Apply **PANGA 360 SL** 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.
- Rain or irrigation within 6 hours after application can reduce the efficacy of **PANGA 360 SL**.
- In mixed weed situations (annuals in 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 the label recommendations of all products apply.
- Pre-plant weed control on sandy soil (< 10 % clay) should take place at least 7 days before transplanting tomato- or tobacco seedlings.

**Compatibility:**

- **PANGA 360 SL** can be tank mixed with the following chemicals: **MCPA** (Potassium salt), certain **Terbutylazine** formulations\* (with the addition of **Velocity®-Super** or **AMS-Super** or **Velocity®-Drymax** or **AMS-Granule**), **DIURON SC** and **WP** (with the addition of **Velocity®-Super** or **AMS-Super** or **Velocity®-Drymax** or **AMS-Granule**). Low pH could induce the precipitation of hormone herbicides such as **MCPA**. Ensure that only **Velocity®-Super** or **AMS-Super** is used in mixtures of **PANGA 360 SL** and **MCPA**, as these adjuvants will not reduce the pH drastically.

**NOTE**

The addition of **Velocity®-Super** or **AMS-Super** or **Velocity®-Drymax** or **AMS-Granule** (maximum registered rate) to the spray water before adding **Diuron** or certain **Terbutylazine** formulations\* in tank mixtures with **PANGA 360 SL** improves compatibility. However, since the formulation of other products may change without the knowledge of **Villa Crop Protection (Pty) Ltd.** and the quality of water may vary from farm to farm, a **compatibility test** must always be carried out prior to application to confirm compatibility.

(\* - **Triazine** formulations containing **Atrazine** are considered as being **incompatible** with **PANGA 360 SL**).

**Surfactants / Additives:**

- For optimum results a minimum of 1.5 % **PANGA 360 SL** solution in the total spray volume is recommended. If it is less, a surfactant should be added to the spray mixture.
- For water with high alkalinity, a buffer should be added according to the label instructions.
- Add **Velocity®-Super** or **AMS-Super** or **Velocity®-Drymax** or **AMS-Granule** to the application water, for hard and brackish water correction, before the addition of **PANGA 360 SL**.

**Application information:**

- Correctly calibrate all sprayers under field conditions and ensure that the spraying equipment is in good working order.
- **PANGA 360 SL** can be applied in spray volumes ranging from 12 to 600 litres per hectare.
- Ensure that the spray equipment is clean and free of rust, dust and sediment from other chemicals.
- Always use clean water. Avoid the use of brack or muddy water, or water with a high colloid content derived from soils high in organic matter.
- In situations where drift may be hazardous, use low pressures of 100 to 200 kPa and/or low drift nozzles 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.

**Aerial application:**

Aerial application of **PANGA 360 SL** 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 30 to 50 litres per hectare is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aurally at a lower volume rate than recommended above.
- **Droplet coverage:** 30 to 40 droplets per cm<sup>2</sup> must be recovered at the target area.
- **Droplet size:** A droplet spectrum with a VMD of 300 to 350 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 to 3:  | Noxious and Problem weeds.  |
| Tables 4 to 5:  | Annual weeds (broadleaved & grasses), Perennial grasses.              |
| Table 6:        | Crop recommendations, tree crops, pre-planting.                       |
| Tables 7 to 8:  | Specialised practises (forestry & Eucalyptus eradication, sugarcane). |
| Tables 9 to 11: | Industrial weed control.  |
| Table 12:       | Pasture renovation.   |
| Table 13:       | Wipe-type application.  |

### **Weed control:**

Percentage calculation, e.g.

1.5 % solution = 1.5 litres **PANGA 360 SL** in 98.5 litres water = 100 litres spray solution.

## 1. CONTROL OF NOXIOUS AND PROBLEM WEEDS

### 1.1 Noxious weeds

**Table 1.**

| <i>Botanical name</i>         | <i>Common name</i>    | <i>DOSAGE</i> |                   | <i>Remarks</i>  |
|-------------------------------|-----------------------|---------------|-------------------|---|
|                               |                       | <i>l / ha</i> | <i>% Solution</i> |   |
| <i>Acacia mearnsii</i>        | Black wattle          | 3.0           | 1.5               | Apply in summer to young trees from 0.1 to 2.0 m high.  |
| <i>Acacia saligna</i>         | Port Jackson willow   | 2.0 to 4.0    | 1.5               | Apply in autumn or spring.<br><b>Seedlings only:</b><br>Bipinnate leaf stage = 2 litres per hectare.<br>Up to 60 cm high = 4 litres per hectare.  |
| <i>Caesalpinia decapetala</i> | Mauritius thorn       | 3.0           | 1.5               | Apply with a knapsack sprayer during summer.  |
| <i>Chromolaena odorata</i>    | Paraffin weed         | ---           | 1.0               | Slash re-growth in winter if necessary.<br>Apply in summer to new growth when more than 0.5 m high.   |
| <i>Convolvulus arvensis</i>   | Field bindweed        | 6.0           | 3.0               | Apply in summer at onset of flowering. If re-growth occurs spray with a 1.5 % solution.   |
| <i>Lantana camara</i>         | Common Lantana        | 6.0           | 3.0               | Slash large bushes in winter if necessary.<br>Apply on active growth in summer.   |
| <i>Opuntia ficus-indica</i>   | Prickly pear          | ----          | 33                | <b>For trees with 20 to 250 cladodes:</b> Drill 4 to 12 holes in the stem and inject 3 ml of a 33 % solution per hole.  |
| <i>Phytolacca heptandra</i>   | Ink berry             | 3.0           | 1.5               | Apply in summer with a knapsack sprayer.  |
| <i>Plantago lanceolata</i>    | Narrow-leaved ribwort | 3.0           | 1.5               | Apply in spring before flowering.   |
| <i>Prosopis glandulosa</i>    | Mosquito tree         | -             | 3 to 5            | <b>Foliar applications:</b><br>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.<br><b>Coppice applications:</b><br>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.<br><b>General:</b><br>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. |

Table 1 (continue)

| Botanical name             | Common name      | DOSAGE |            | Remarks  |
|----------------------------|------------------|--------|------------|--|
|                            |                  | ℓ / ha | % Solution |  |
| <i>Rubus cuneifolius</i>   | American bramble | 6.0    | 3.0<br>4.0 | 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 1.5 % solution.<br>Knapsack sprayer.<br>Mist blower. |
| <i>Sesbania punicae</i>    | Red Sesbania     | 3.0    | 1.5        | <b>Seedling plants less than 1 m high:</b> Use a 1.5 % solution.<br><b>Tall shrubs:</b> Slash, spray re-growth with a 1.5 to 2.0 % solution at 1 m high.                               |
| <i>Solanum mauritianum</i> | Bugweed          | 2.0    | 1.5        | Apply in spring or summer.<br><b>Large trees:</b> Cut to 50 cm, allow new growth of at least 50 cm before application.<br><b>Saplings:</b> Apply directly to foliage.                  |

## 1.2 Perennial grasses

Table 2.

| Botanical name                 | Common name          | DOSAGE     |            | Remarks  |
|--------------------------------|----------------------|------------|------------|--|
|                                |                      | ℓ / ha     | % Solution |  |
| <i>Cynodon dactylon</i>        | Common couch grass   | 6.0        | 3.0        | <b>Summer rainfall region:</b><br>Apply to active growth in autumn or summer. Follow-up application in summer at 4 litres per hectare. If re-growth occurs, spray with a 2.5 % solution. |
|                                |                      | 9.0        | ---        | <b>Winter rainfall region:</b><br>Apply as above in autumn.  |
| <i>Eragrostis curvula</i>      | Weeping love grass   | 2.0<br>4.0 | 1.5<br>1.5 | Only grass that germinated from seeds, i.e. not grass tufts. Apply onto actively growing plants in summer or autumn.<br>Seedlings.<br>Up to 60 cm height.                                |
| <i>Paspalum dilatatum</i>      | Common Paspalum      | 6.0        | 3.0        | Apply in summer at flowering, but before seed drop. If re-growth occurs, spray with a 1.5 % solution.  |
| <i>Paspalum paspalodes</i>     | Couch Paspalum       | 8.0 to 9.0 | ---        | Apply in summer at flowering, but before seed drop. If re-growth occurs, spray with a 2 % solution or 4 litres per hectare. Apply the higher rate in the winter rainfall region.         |
| <i>Panicum maximum</i>         | Common buffalo grass | 4.0        | 2.0        | Apply in summer to actively growing plants in the early growth stage. If re-growth occurs, spray with a 1.5 % solution.  |
| <i>Pennisetum clandestinum</i> | Kikuyu               | 4.0        | 2.0        | Apply in summer to actively growing plants. If re-growth occurs, spray with a 1.5 % solution.  |
| <i>Setaria megaphylla</i>      | Bush buffalo grass   | 6.0        | 3.0        | Apply to actively growing plants in autumn or summer. If re-growth occurs, spray with a 1.5 % solution.  |

**Table 2. (continue)**

| <b>Botanical name</b>           | <b>Common name</b> | <b>DOSAGE</b> |                   | <b>Remarks</b>   |
|---------------------------------|--------------------|---------------|-------------------|--|
|                                 |                    | <b>ℓ / ha</b> | <b>% Solution</b> |  |
| <i>Sorghum halepense</i>        | Johnson grass      | 4.0           | 2.0               | Apply in summer or autumn. If re-growth occurs, spray with a 1.5 % solution.                         |
| <i>Sorghum verticilliflorum</i> | Common wildsorghum | 2.0           | 1.5               | Apply to actively growing plants in summer or autumn.  |
| <i>Stipa trichotoma</i>         | Nassella tussock   | 4.0           | 1.5               | Apply in winter using high water volumes. If re-growth occurs, spray with a 1.5 % or a 2 % solution. |

### 1.3 Nutsedges

**Table 3.**

| <b>Botanical name</b>     | <b>Common name</b> | <b>DOSAGE</b> |                   | <b>Remarks</b>   |
|---------------------------|--------------------|---------------|-------------------|--|
|                           |                    | <b>ℓ / ha</b> | <b>% Solution</b> |  |
| <i>Cyperus esculentus</i> | Yellow nutsedge    | 6.0           | ---               | Apply in summer at pre-flowering stage. If re-growth occurs, spray with a 1.5 % solution or 3.0 litres per hectare (best results attained in Feb/March). |
| <i>Cyperus rotundus</i>   | Purple nutsedge    |               |                   |  |

## 2. CONTROL OF ANNUAL WEEDS

### 2.1 Annual broadleaved weeds

#### **NOTE**

- \* - Even at the higher rates, the control of large established *Ipomoea* species\* (Common morning glory) and *Portulaca* species\* (Purslane) may be variable, necessitating a follow-up application.
- \*\* - Inconsistent control of certain populations of *Chenopodium* species\*\* may be experienced. Avoid resistance by alternating the use of **PANGA 360 SL** with products from different chemical classes (refer “**RESISTANCE WARNING**”).
- \*\*\* - Inconsistent control and resistance may occur with control of *Coryza* species.\*\*\*
- \*\*\*\* - Inconsistent control.

The following broadleaved weeds will be controlled at the dosage rates and growth stages as indicated below:

**Table 4.1.**

| <b>PANGA 360 SL</b>                |                              |                              |
|------------------------------------|------------------------------|------------------------------|
| <b>0.5 to 0.75 ℓ / ha</b>          | <b>0.75 to 1.0 ℓ / ha</b>    | <b>1.25 to 1.5 ℓ / ha</b>    |
| <b>1 to 12-leaf</b>                | <b>12-leaf to pre-flower</b> | <b>Flower</b>                |
| <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>           |                              | Erect Boerhavia              |
| <i>Cenia turbinata</i>             |                              | Goose daisy                  |
| <i>Chenopodium album</i> **        |                              | White goosefoot              |
| <i>Chenopodium ambrosioides</i> ** |                              | American goosefoot           |
| <i>Chenopodium carinatum</i> **    |                              | Green goosefoot              |



Table 4.1. (continue)

| PANGA 360 SL                        |                       |                         |
|-------------------------------------|-----------------------|-------------------------|
| 0.5 to 0.75 l / ha                  | 0.75 to 1.0 l / ha    | 1.25 to 1.5 l / ha      |
| 1 to 12-leaf                        | 12-leaf to pre-flower | Flower                  |
| <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 pharnaceioides</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               |

## 2.2 Annual broadleaved weeds

The following broadleaved weeds will be controlled at the dosage rates and growth stages as indicated below:

Table 4.2.

| PANGA 360 SL                      |                       |                       |
|-----------------------------------|-----------------------|-----------------------|
| 0.75 to 1.0 l / ha                | 1.00 to 1.50 l / ha   | 1.50 to 2.00 l / ha   |
| 1 to 12 leaf                      | 12 leaf to pre-flower | Flower                |
| <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              |

## 2.3 Annual broadleaved weeds

The following broadleaved weeds will be controlled at the dosage rates and growth stages as indicated below:

**Table 4.3.**

| <b>PANGA 360 SL</b>              |                              |                           |
|----------------------------------|------------------------------|---------------------------|
| <b>1.25 to 1.50 l/ha</b>         | <b>1.50 to 2.00 l/ha</b>     | <b>2.50 to 3.00 l/ha</b>  |
| <b>1 to 12-leaf</b>              | <b>12-leaf to pre-flower</b> | <b>Flower</b>             |
| <i>Acalypha glabrata</i>         |                              | ----                      |
| <i>Ageratum conyzoides</i>       |                              | Invading ageratum         |
| <i>Aizoon canariense</i>         |                              | ----                      |
| <i>Boerhavia erecta</i>          |                              | Erect boerhavia           |
| <i>Cleome gynandra</i>           |                              | Spider wasp               |
| <i>Conyza bonariensis</i> ***    |                              | Flax-leaf fleabane        |
| <i>Corchorus trilobularis</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          |

## 2.4 Annual broadleaved weeds

The following broadleaved weeds will be controlled at the dosage rates and growth stages as indicated below:

**Table 4.4.**

| <b>PANGA 360 SL</b>        |                              |                    |
|----------------------------|------------------------------|--------------------|
| <b>0.75 to 3.00 l / ha</b> | <b>3.00 l / ha</b>           | <b>3.00 l / ha</b> |
| <b>1 to 12-leaf</b>        | <b>12-leaf to pre-flower</b> | <b>Flower</b>      |
| <i>Erodium moschatum</i>   | Musk heron's bill            |                    |
| <i>Malva parviflora</i> *  | Small mallow                 |                    |

\* - Not recommended for *Malva parviflora* (Small mallow) control at flowering. Use in conjunction with other registered products. Refer to the “**Compatibility**” statement above.

### **NOTE**

For control of *Oenothera stricta* (Evening primrose) smaller than 12-leaf stage, apply **PANGA 360 SL** at 3 litres per hectare in combination with a recommended **Terbuthylazine** rate for the crop. Refer to the “**Compatibility**” statement above.

## 2.5 Annual broadleaved weeds

The following broadleaved weeds will be controlled at the dosage rates and growth stages as indicated below:

**Table 4.5.**

| <b>PANGA 360 SL</b>        |                              |                            |
|----------------------------|------------------------------|----------------------------|
| <b>7.50 to 9.00 l / ha</b> | <b>7.50 to 9.00 l / ha</b>   | <b>7.50 to 9.00 l / ha</b> |
| <b>1 to 12-leaf</b>        | <b>12-leaf to pre-flower</b> | <b>Flower</b>              |
| <i>Rumex angiocarpus</i>   | Sheep sorrel                 |                            |

## 2.6 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 4.6.**

| <b>PANGA 360 SL</b>         |                              |                           |
|-----------------------------|------------------------------|---------------------------|
| <b>0.5 to 0.75 l / ha</b>   | <b>0.75 to 1.0 l / ha</b>    | <b>1.25 to 1.5 l / ha</b> |
| <b>1 to 12-leaf</b>         | <b>12-leaf to pre-flower</b> | <b>Flower</b>             |
| <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      |                           |

\* - Refer to “**RESISTANCE WARNING**” above.

## 2.7 Grasses

The following grasses will be controlled at the dosage rates and growth stages as indicated below:

**Table 4.7.**

| <b>PANGA 360 SL</b>                  |                              |                            |
|--------------------------------------|------------------------------|----------------------------|
| <b>0.75 to 1.00 l / ha</b>           | <b>1.00 to 1.50 l / ha</b>   | <b>1.50 to 2.00 l / ha</b> |
| <b>1 to 12-leaf</b>                  | <b>12-leaf to pre-flower</b> | <b>Flower</b>              |
| <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            |
| <i>Zea mays</i> #                    |                              | Volunteer maize            |

\* - Refer to “**RESISTANCE WARNING**” above.

# - **PANGA 360 SL** will not control **Glyphosate** resistant maize.

## 2.8 Grasses

The following grasses will be controlled at the dosage rates and growth stages as indicated below:

**Table 4.8.**

| <b>PANGA 360 SL</b>             |                              |                            |
|---------------------------------|------------------------------|----------------------------|
| <b>1.25 to 1.50 l / ha</b>      | <b>1.50 to 2.00 l / ha</b>   | <b>2.50 to 4.00 l / ha</b> |
| <b>1 to 12-leaf</b>             | <b>12-leaf to pre-flower</b> | <b>Flower</b>              |
| <i>Bothriochloa insculpta</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>     |                              | ----                       |

## 2.9 Difficult to control weeds

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:

**Table 5.**

| <b>PANGA 360 SL</b>          |                              |                    |
|------------------------------|------------------------------|--------------------|
| <b>3.0 l / ha</b>            | <b>3.5 l / ha</b>            | <b>3.75 l / ha</b> |
| <b>1 to 12-leaf</b>          | <b>12-leaf to pre-flower</b> | <b>Flower</b>      |
| <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 spp.*</i>          |                              | Ryegrass           |
| <i>Medicago polymorpha</i>   |                              | Clover             |
| <i>Raphanus raphanistrum</i> |                              | Wild radish        |
| <i>Sonchus oleraceus</i>     |                              | Sow thistle        |

\* - Refer to “**RESISTANCE WARNING**” above.

## 3. SPECIFIC CROP RECOMMENDATIONS

**Table 6.**

| <b>Crop</b>   | <b>Remarks</b>   |
|---|--|
| <b>3.1</b> Almonds, Aloes, Apples, Apricots, Avocados, Bananas, Blackberry, Cherries, Citrus, Coffee, Granadilla, Guava, Hops, Kiwi fruit, Litchi's, Macadamia nuts, Mangoes, Nectarines, Olives, Pawpaw, Peaches, Pears, Pecan nuts, Pineapples, Plums, Prickly pears, Prunes, Quince, Tea | <ol style="list-style-type: none"> <li>1. Refer to weed tables for dosage rates of <b>PANGA 360 SL</b>.</li> <li>2. Protect young trees with green bark from direct spray.</li> </ol>  |
| <b>3.2</b> Vines and Fruit trees  | <ul style="list-style-type: none"> <li>• Apply before bud burst to vines older than 2 years. Younger vines with green bark should be shielded.</li> <li>• Spray should be directed onto weeds.</li> <li>• <b>Do not spray onto pruned vines or fruit trees until wounds have been sealed properly.</b></li> </ul> <p><b>Crop cover destruction in grapevines:</b></p> <ul style="list-style-type: none"> <li>• For the control of <i>Avena</i> species** (Bearded oats, Common oats), <i>Lolium</i> species* (Italian ryegrass, Darnel) and <i>Secale cereale</i>* (Rye), apply <b>PANGA 360 SL</b> at 1.0 litre per hectare.</li> <li>• Apply at 10 days or more after pruning and before bud burst.</li> </ul> |
| <b>3.3</b> Sisal  | <ul style="list-style-type: none"> <li>• Applications can be performed on nursery and mature plants.</li> </ul>  |
| <b>3.4</b> Arable land  | <ul style="list-style-type: none"> <li>• Use <b>PANGA 360 SL</b> after harvesting of the previous crop.</li> <li>• Do not disturb target plants before 6 hours after application (before planting of crops) and prior to emergence of the new crop.</li> </ul>   |

#### 4. SPECIALISED PRACTICES

##### 4.1 Forestry applications

**Table 7.**

| Situation   | Weed species   | Dosage rate  |   | Remarks  |
|---|--|--------------|---|--|
|   |  | ℓ / ha       | % Solution<br>PANGA 360<br>SL (ℓ in 100 ℓ<br>water) |  |
| Maintenance weed control in established forests   | <i>Acacia mearnsii</i><br>(Black wattle)   | 3.0 to 4.0   | 1.5 to 2.0  | Apply to young trees from 0.1 to 2 m high.   |
|   | <i>Solanum mauritianum</i><br>(Bugweed)  | 2.0          | 1.5   | <b>Large trees:</b> Cut to 50 cm, allow new growth of at least 50 cm, before application.<br><b>Saplings:</b> Apply directly to foliage.   |
|   | <i>Rubus</i> spp.<br>(Bramble)   | 6.0          | 3.0   | Slash rank growth in winter. Apply when new growth is more than 0.5 m high. If re-growth occurs, spray with a 1.5 % solution.  |
| <b>Firebreaks</b><br>Firebreaks preparation either tracer belts or total area<br><br><b>Band preparation for tree seedlings</b><br>Situations suitable for such treatments include:<br>a) Virgin veldt<br>b) Clear felled forests | In both situations the weed population would include perennials and annuals<br><br>For list of some of the weeds controlled refer to list under <b>Industrial weed control</b> | 4.0          | 2.0   | A minimum of 200 litres spray mixture per hectare must be applied when using a 2 % solution.<br><br>A follow-up treatment may be necessary to control some hardy perennials, using a 2 % solution on a spot spray basis. |
| <i>Eucalyptus grandis</i><br>(Blue gum)   | Single stem stumps   | 5 % solution |   | Apply 50 mℓ solution to a clean cambium area immediately after felling.  |
|   | Multi-stem stumps  | 7 % solution |   | Apply 100 mℓ solution to a clean, fully exposed cambium layer immediately after felling. If re-growth occurs, spray with a 2 % solution.   |

## 4.2 Sugarcane

**Table 8.**

| <i>Situation</i>                          | <i>Dosage rate</i>   | <i>Remarks</i>  |
|---|--|---|
| Last ratoon eradication (Minimum tillage) | 8.0 to 10.0 ℓ / ha   | <b>PANGA 360 SL</b> 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.<br>Spray actively growing sugarcane when tillers have emerged, using 100 to 400 litres per hectare. Re-growth can be removed by hand.<br><b>Contact your distributor for detailed information on all aspects of minimum tillage before spraying.</b> |
| Spot eradication of diseased plants       | 10 % solution  | For spot eradication of diseased (eg. Smut) and Off-type cane stools. Apply as a directed spray on the target plant foliage.  |
| Pre-plant                                 | <b>Annual weeds:</b><br>1.0 to 3.0 ℓ / ha<br><b>Perennial weeds:</b><br>Refer Table 1. | Apply onto actively growing weeds.  |
| Spot spraying fields                      | 2 % solution   | Direct spot spraying onto actively growing weeds around fields, telephone poles, etc.   |

## 5. INDUSTRIAL WEED CONTROL

The rates listed below only apply to industrial weed control.

**Table 9.**

| <i>Botanical name</i>                                | <i>Common name</i> | <i>DOSAGE RATE</i> |                   | <i>Remarks</i>  |
|--|--------------------|--------------------|-------------------|---|
|  |                    | <i>ℓ / ha</i>      | <i>% Solution</i> |   |
| <b>Perennial grasses:</b><br><i>Cynodon dactylon</i> | Common couch grass | 6.0                | 3.0               | Apply to vigorous growing plants in summer or in autumn when nutrients are actively translocated to roots, rhizomes and stolons.<br>Follow-up with 4 litres per hectare (2.5 % solution) if any re-growth occurs. |
| <i>Cynodon nlemfuensis</i>                           | East African grass | 6.0                | 3.0               |   |
| <i>Pennisetum clandestinum</i>                       | Kikuyu             | 4.0                | 2.0               | Spray on active growth in summer. Spray re-growth with 3 litres per hectare or a 1.5 % solution.  |
| <i>Paspalum paspalodes</i>                           | Couch paspalum     | 6.0                | 3.0               | Apply on active growing plants. Follow-up with half the recommended dosage rate if re-growth occurs.  |
| <i>Paspalum dilatatum</i>                            | Common paspalum    | 6.0                | 3.0               |   |
| <b>Nutsedges:</b><br><i>Cyperus esculentus</i>       | Yellow nutsedge    | 6.0                | 3.0               | Apply during flowering stage. Spray re-growth with 3 litres per hectare or a 1.5 % solution.  |
| <i>Cyperus rotundus</i>                              | Purple nutsedge    | 6.0                | 3.0               |   |

**Table 10.**

| Botanical name                   | Common name                  | DOSAGE RATE |            | Remarks  |
|----------------------------------|------------------------------|-------------|------------|--|
|                                  |                              | l / ha      | % Solution |  |
| <b>Annual broadleaved weeds:</b> |                              |             |            |  |
| <i>Amaranthus hybridus</i>       | Cape pigweed                 | 4 to 6      | 2 to 3     | <p>Use 4 litres per hectare (2 % solution) when weeds are in the early growth stages.</p> <p>Use 5 litres per hectare (2.5 % solution) when weeds are in the early flowering stage.</p> <p>Use 6 litres per hectare (3 % solution) when weeds are in the seeding stage, but still actively growing.</p> <p>Do not apply onto matured weeds that are in a stage of desiccation.</p> |
| <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                   |             |            |  |

**Table 11.**

| Botanical name                  | Common name             | DOSAGE RATE |            | Remarks  |
|---------------------------------|-------------------------|-------------|------------|--|
|                                 |                         | l / ha      | % Solution |  |
| <b>Annual grasses:</b>          |                         |             |            |  |
| <i>Aristida junciformis</i>     | Bristle grass           | 4 to 6      | 2 to 3     | <p>Use 4 litres per hectare (2 % solution) when weeds are in the early growth stages.</p> <p>Use 5 litres per hectare (2.5 % solution) when weeds are in the early flowering stages.</p> <p>Use 6 litres per hectare (3 % solution) when weeds are in the seeding stages, but still actively growing.</p> <p>Do not apply onto matured weeds that are in a stage of desiccation.</p> |
| <i>Cymbopogon plurinodis</i>    | Bitter turpentine grass |             |            |  |
| <i>Digitaria sanguinalis</i>    | Crab finger-grass       |             |            |  |
| <i>Diheteropogon filifolius</i> | Wire blue stem          |             |            |  |
| <i>Eleusine indica</i>          | Goose grass             |             |            |  |
| <i>Eragrostis curvula</i>       | Weeping love grass      |             |            |  |
| <i>Eulalia villosa</i>          | Golden velvet grass     |             |            |  |
| <i>Loudetia simplex</i>         | Russet grass            |             |            |  |
| <i>Monocymbium ceresiiforme</i> | Wild oat grass          |             |            |  |
| <i>Panicum maximum</i>          | Common buffalo grass    |             |            |  |
| <i>Panicum natalense</i>        | Natal buffalo grass     |             |            |  |
| <i>Rhynchelytrum repens</i>     | Natal red-top           |             |            |  |
| <i>Sporobolus africanus</i>     | Rush grass              |             |            |  |
| <i>Stiburus alopecuroides</i>   | Pongwa grass            |             |            |  |
| <i>Tragus racemosus</i>         | Large carrot-seed grass |             |            |  |
| <i>Urochloa panicoides</i>      | Herring-bone grass      |             |            |  |



## 6. PASTURE RENOVATION

**Table 12.**

| <i>Situation</i>  | <i>Remarks</i>  |
|---|---|
| <b>Conventional Perennial running grass infestation</b> | <b>Mechanical and chemical renovation:</b>  |
| Light pressure  | Prepare seedbed. Allow perennial running grass and annual weeds to emerge. Apply <b>PANGA 360 SL</b> at 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 <b>PANGA 360 SL</b> . Allow one week after spraying before a second cultivation, seedbed preparation and planting/sowing.      |
| Pre-sowing weed control                                 | New germinating weeds can be controlled with 1.0 to 3.0 litres per hectare. <i>Cyperus</i> spp. (Nutsedge) will require 6 litres per hectare. Sow new pasture 3 to 4 days after application.          |
| <b>Pasture replacement and field improvement</b>        | Reduce trash by mowing or heavy grazing 3 to 4 weeks prior to application of <b>PANGA 360 SL</b> on re-growth. Plant new pasture 3 to 4 days after application.                                       |
| <b>Pasture maintenance</b>                              | Control perennial and annual weeds in pastures by spot spraying with a 2 % 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 onto 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.

## 7. WIPE TYPE APPLICATION

**Table 13.**

| <i>Type of applicator</i>                         | <i>Dosage rate ℓ / ha</i>                                  | <i>Remarks</i>   |
|---|--|--|
| Hand held roller applicators                      | <u>Annuals:</u> 5 %<br><u>Perennials:</u> 10 %             | 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 applicators | Delivery of up to 3 ℓ / ha<br><b>OR</b><br>a 50 % solution | Apply up to 3 litres per hectare solution in orchards and where weed/crop height differentiation exist e.g. control of a 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 **PANGA 360 SL** solution onto 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 may be replaced with equivalent products:

- **VELOCITY®-SUPER** (L 9603) = **AMS-SUPER** (L 9758) and
- **VELOCITY®-DRYMAX** (L 9454 / W 130995 / N-AR 1528) = **AMS-GRANULE** (L 9610).

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