

READ THE LABEL BEFORE USE. KEEP OUT OF REACH OF CHILDREN AND ANIMALS. SHAKE THE BOTTLE WELL BEFORE USE

Herbicide



MALLET 100 SL

Reg. No. L 8049 Act No. 36 of 1947
W1301285

3.18/01/2023 – Feb2024

A selective water-soluble herbicide for pre- and post-emergence weed control in crops as indicated.

ACTIVE INGREDIENT

imazethapyr (imidazolinone) 100 g/l

GROUP

2

HERBICIDE



WARNING

Hazard Statements:

Causes skin irritation.
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

Avoid release into the environment.
Dispose of contents/container to suitable landfill in accordance with local regulations.

DIRECTIONS FOR USE ENCLOSED
Batch Number:
Date of Manufacture:



villa

UN Number: 3082

Registration holder: VILLA CROP PROTECTION (PTY) LTD.
Co. Reg. No. 1992/002474/07
P.O. Box 10413, Aston Manor, 1630
Tel. (011) 396 2233
Website: www.villacrop.co.za

24 HR EMERGENCY NUMBERS:
Griffon Poison Centre: +27 82 446 8946
24 HR Transport / Spill Emergency no: (Hazcall24) +27 86 044 4411
(Client: Villa Crop Protection)

MALLET 100 SL

Reg. No. L 8049 Act No. 36 of 1947
W1301285

HRAC HERBICIDE GROUP CODE: 2

ACTIVE INGREDIENT:

imazethapyr (imidazolinone)..... 100 g/l

Registration holder:

VILLA CROP PROTECTION (PTY) LTD.

Co. Reg. No. 1992/002474/07

P.O. Box 10413, Aston Manor, 1630

Tel. (011) 396 2233

WARNINGS**Withholding periods:**

The following waiting periods should lapse between application of MALLET 100 SL and the planting of follow-up crops, to prevent damage to the next crop:	
Dry beans, Soybeans and Groundnuts	None
Other legume crops (other than Dry beans, Soybeans or Groundnuts)	10 months
Wheat	6 months
All other crops (including Popcorn & Sweetcorn)	24 months
Maize (refer to Table 1 for cultivars to be used)	20 months, depending on various factors*
<p>* Depending on the following factors and their inter-relationship, the waiting period may be shorter: i.e. soil type, rainfall or irrigation, application rate used and maize variety to be planted. Contact the supplier for further information.</p> <ul style="list-style-type: none"> The waiting periods recommended here will however only be valid if: The standard recommended MALLET 100 SL rate for the soil type was applied and a minimum of 350 mm, well-distributed rainfall and/or irrigation has been recorded, which was enough to ensure a reasonable field legume harvest. This rain or irrigation must have occurred after the application of MALLET 100 SL, but prior to the planting of the next crop. If the higher dosage rate was applied for the control of <i>Tribulus terrestris</i>, the waiting periods recommended in the table above, must be extended by a further 12 months, to at least 20 months, before a crop sensitive to MALLET 100 SL, can be planted with relative safety. The land should always be deep ploughed before planting a follow-crop. Test planting is nevertheless recommended. 	

NOTE

ABOVE-MENTIONED WITHHOLDING PERIODS REFER TO COMPLIANCE WITH LOCAL MAXIMUM RESIDUE LIMITS (MRL'S). HOWEVER, IT IS IMPORTANT TO NOTE THAT IMPORT TOLERANCES OF OTHER COUNTRIES MIGHT POSSIBLY BE EXCEEDED. IF THE TREATED CROP WILL BE EXPORTED, FIRST CONSULT THE RELEVANT IMPORTER OR EXPORTING BODY REGARDING THE USE OF THIS PRODUCT, MRL'S AND RECOMMENDED WITHHOLDING PERIODS.

Hazard statements:

Causes skin irritation.
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

- **Allow 85 days between application and harvest of the crop.**
- Handle with care.
- Poisonous by swallowing.
- Store in a cool, dry place under lock and key, away from food, feed, seed, fertilizers and other agricultural remedies.
- Keep out of reach of children, animals and uninformed persons.

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 the event of any uncertainty.

PRECAUTIONS

Precautionary statements:

Wash hands and face thoroughly after handling.
Avoid release into the environment.
Wear impervious rubber gloves and boots, protective clothing, and chemical safety goggles.
IF ON SKIN: Wash with plenty of water and non-abrasive soap.
See label for specific treatment.
If skin irritation occurs get medical help.
Take off contaminated clothing and wash it before reuse.
Collect spillage.
Dispose of contents/container to suitable landfill in accordance with local regulations.

- Avoid inhalation of the spray mist.
- Do not eat, drink or smoke while applying, mixing or before washing hands and face or change of clothing.
- Prevent spray drift onto other crops, grazing, rivers, dams and areas not under treatment.
- Clean spraying equipment directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- **TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS:** Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler www.croplife.co.za. Do not bury, burn, or donate the container to any other parties that may use it as a container for food or beverages.
- Prevent contamination of food, feeds, drinking water and eating utensils.

Relevant hazardous components	
Imazethapyr	10.5 %
Ammonium hydroxide	< 5 %

FIRST AID TREATMENT

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure.

- **Inhalation:** Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if patient feels unwell.
- **Skin:** Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Obtain medical attention if irritation persists.
- **Eyes:** Flush eyes with clean water. Lift eyelids to facilitate irrigation. If present, remove contact lenses and continue rinsing.
- **Ingestion:** Seek medical attention or call a poison control centre for treatment advice. Do not induce vomiting unless instructed to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water.

RESISTANCE WARNING

MALLET 100 SL is a group code 2 herbicide. Any weed population may contain individuals naturally resistant to **MALLET 100 SL** and other group code 2 herbicides. The resistant individuals can eventually

dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **MALLET 100 SL** or any other group code 2 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

MALLET 100 SL is a systemic herbicide, absorbed by the roots and foliage, with translocation in the xylem and phloem, and accumulation in the meristematic regions. The active ingredient, **Imazethapyr** is a branched chain amino acid synthesis inhibitor. Hence, it reduces levels of valine, leucine and isoleucine, leading to disruption of protein and DNA synthesis.

USE RESTRICTIONS

- Do not apply products containing the active ingredient Imazethapyr (e.g., **MALLET 100 SL (L 8049)** & **IMAZETHAPYR 100 SL (L 8051)** in soybeans or drybeans, if maize has been treated with Mesotrione-containing products such as **Cantron® 480 SC/Astron® 480 SC**, during the previous season on the same field.
- Do not use **MALLET 100 SL** on acid soils with pH (KCl) below 5.0.
- Do not apply the post emergence treatment on soils below 15 % clay.
- Do not exceed a dosage rate higher than 700 ml per hectare **MALLET 100 SL** on a land per season.
- When **MALLET 100 SL** is applied post emergence of the crop, the crop can be treated at any time after the third trifoliolate leaf has emerged fully, but before flowering.
- Avoid post-emergence application of **MALLET 100 SL** to plants under stress, due to factors such as drought or flooding, nematode infestations, diseases, nutritional imbalances, or plants put under stress, due to prior use of other herbicides.
- Do not apply **MALLET 100 SL** as post-emergence treatment to the soybean cultivar, PAN 717.
- If a deep cultivation is required to aerate the soil **before** the post-emergence application has been made, **MALLET 100 SL** can be applied immediately after the cultivation or any time up to 14 days after this cultivation, provided the crop has not yet started to flower. Further shallow cultivations may be carried out.

Table 1. Guidance for the selection of maize hybrids as tested for planting after the application of **MALLET 100 SL** in the western Free State, western Northwest Province and northern parts of the Northern Cape Province.

Group	Comments	Maize hybrid
A	<u>Nil Waiting Period:</u> Consult your seed supplier for CLEARFIELD cultivars available for your area. This group can also be planted where MALLET 100 SL was applied to the previous season's groundnut, soybean or dry bean fields, in districts where a dry season, or very low rainfall was recorded (i.e., less than 350 mm of rain). This group can also be planted in the same season that MALLET 100 SL has been applied where wind has covered or damaged new groundnut plantings.	All CLEARFIELD maize hybrids
	<u>10 Month Waiting Period:</u> Where the higher recommended rate of 450 to 500 ml per hectare MALLET 100 SL , for the control of <i>Tribulus terrestris</i> , was used the previous season. This group of maize hybrids, considered to be semi-tolerant to imidazolinone herbicides, can be planted if an average seasonal rainfall, or more, was recorded during the previous season. However, if below average and especially, if less than 350 mm of rainfall was recorded during the previous season, only use a CLEARFIELD maize hybrid, as recommended in section A above.	PHB 30H22 PHB 3394 PHB 35A19 CRN 3549

C	<p>10 Month Waiting Period: Where the standard registered rate of MALLET 100 SL for the specific soil type was used during the previous season. This group of semi-tolerant maize hybrids can be planted only where average rainfall, or higher, was recorded during the previous season. If less than the average rainfall was recorded the previous season, use only the maize hybrids listed in sections A or B above. If less than 350 mm rain was recorded during the previous season, use only CLEARFIELD maize hybrids, as mentioned in section A above.</p>	CRN 3414
		CRN 3505
		CRN 3604
		CRN 3631
		CRN 3760
		CRN 3891
		CRN 4502
		LS 8503
		PAN 6146
		PAN 6233
		PAN 6364
		PHB 30D05
		PHB 30T43
		PHB 3203
		PHB 32K39
		PHB 32K61
		SC 707
		SNK 2147
		SNK 2401
		SNK 2640
SNK 2776		
SNK 2860		
Goldfinger		
Highflyer		
Woodriver		
D	For all maize hybrids not listed in the tables above, a waiting period of at least 20 months is recommended in the western Free State, western Northwest Province and northern Northern-Cape Province production areas. However, a test planting is still recommended. In case of doubt, choose a yellow maize hybrid over a white hybrid.	

GENERAL INFORMATION

- **MALLET 100 SL** may be used either pre- or post-emergence of weeds and the crop.
- **It is preferred that about 10 mm rain should fall within seven (7) days after a pre-emergence application, in order to leach the MALLET 100 SL into the top layer of the soil, where it can be absorbed by roots of germinating weeds.**
- Internodes shortening and/or temporary chlorosis (yellowing) of the crop may occur occasionally, especially if heavy rainfall (more than 15 mm per hour) is recorded shortly after a post-emergence application of **MALLET 100 SL**. These effects can be more pronounced when crops are growing under stressful environmental conditions. Normal growth and appearance should resume within one to two weeks. No adverse affect on the yield has been recorded.
- If dry weather conditions prevail for a period longer than seven days after application, weeds may start to germinate and grow. If this happens, a shallow cultivation (3 to 5 cm) must be done to control weeds and incorporate the herbicide into the top layer of the soil. The same shallow cultivation may be necessary when heavy rains fall within a few hours of an application of **MALLET 100 SL** as the post-emergence efficacy of **MALLET 100 SL** may be reduced resulting in poorer weed control. Such cultivation should not influence the residual efficacy of **MALLET 100 SL**.
- If heavy rainfall is recorded on sandy soils within a few days after a pre-emergence application, the **MALLET 100 SL residues** could leach out of the weeds' germinating area, resulting in poor weed control.
- Susceptible weeds will stop growing within two to three days after the post-emergence application of **MALLET 100 SL**. Over the next 10 to 14 days these weeds will start to yellow, and after three to five weeks will either die or will be out competed by the crop. Weeds will germinate after the pre-emergence application of **MALLET 100 SL**, but the susceptible weeds will soon show yellowing, and growth will be terminated.
- For increased weed control of especially *Tagetes minuta*, a shallow surface blend or inter-row cultivation (less than 5 cm deep), should be carried out at least once before the crop forms a canopy. Ensure that the cultivation is not too deep as optimum control of weeds may be reduced, requiring further cultivations.

- In treated fields with high weed population pressures, the control of late season weeds may appear to be unacceptable. This is due to the interception of the herbicide by the dense weed and crop canopy, resulting in insufficient herbicide residue levels in the soil for late germinating weeds.
- Ensure thorough coverage and wetting of the weeds, especially under dense crop foliage situations.

DIRECTIONS FOR USE: Use only as directed.

Compatibility:

- **MALLET 100 SL** is compatible with most commonly used pyrethroids, as well as with **Acetochlor**, **Alachlor**, **Metazachlor** and **Metolachlor** at their recommended dosages.
- **MALLET 100 SL** is not compatible with post-emergence grass herbicides, due to conflicting modes of action.
- When **MALLET 100 SL** is used in conjunction with any other agricultural remedy, all **WARNINGS**, **PRECAUTIONS** and **DIRECTIONS FOR USE** mentioned on that label, must be adhered to.

Mixing instructions:

- Half fill the spray tank with clean water.
- The addition of a registered buffering agent is recommended when water with a pH higher than 8 is to be used for spraying.
- Ensure agitation of water in the spray/mixing tank.
- Shake the **MALLET 100 SL** container well, measure out the required volume and pre-mix this with at least 10 litres water, before adding to the spray tank. If any other product is to be mixed with **MALLET 100 SL**, pre-mix the required volume of product **separately** in similar fashion.
- Fill the spray/mixing tank with clean water to the required level, while maintaining agitation, to ensure thorough mixing of the spray mixture before commencement of application. Maintain agitation while spraying.
- In the case of post-emergence spraying, add a suitable non-ionic surfactant and **Velocity®-Super** to the spray tank. The required amount of both these products must first be pre-mixed with at least 10 litres water before adding to the spray tank.
- The prepared spray mixture must not be left in the spray tank for any length of time, e.g., overnight.

Soil nutrient status:

- Plant nutrient requirements must be at optimum levels for the specific soil type and crop (even in regions of relatively low cropping potential), by performing soil analysis ahead of time and correcting any major or minor nutrient deficiencies.
- This applies especially to soil phosphate levels where the ideal value should be between 20 to 25 ppm.

Recommendations for application:

- Use accurately calibrated equipment, in good working order with appropriate, correctly spaced nozzles, and with an efficient agitation mechanism.
- In the case of pre-emergence application, prepare a fine, even, and firm seedbed free of weeds, trash and clods.

Aerial application:

Aerial application of **MALLET 100 SL** may only be performed 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:

- Volume: The following spray mixture volumes are recommended: **Pre-emergence** – 30 litres per hectare. **Post-emergence** – 30 to 35 litres per hectare. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended above.
- Droplet coverage: The following number of droplets per cm² must be recovered at the target area: **Pre-emergence** - 20 to 30. **Post-emergence** - 35 to 45.
- Droplet size: The following droplet spectra are recommended: **Pre-emergence** - VMD of 350 to 400 micron. **Post-emergence** - VMD of 300 to 350 micron. 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

1. DRY BEANS (*Phaseolus vulgaris* & *Phaseolus coccineus*)

Apply as:

- a) a single pre-emergence application, or
- b) a programme pre-emergence followed by a post-emergence application.

Aerial application: Apply as for Ground application in a minimum of 35 litres water per hectare. Refer to "**Aerial application**" instructions under "**DIRECTIONS FOR USE**" above.

NOTE

Application recommendations for pre- and post-emergence treatment differ depending on climatic conditions.

% Clay	Pre-emergence application Rate / ha	Post-emergence "follow-up" treatment Rate / ha
0 to 15	300 mℓ	A "follow-up" treatment is not recommended for this soil type
16 to 25	400 mℓ OR	300 mℓ PLUS Velocity®-Super PLUS a suitable non-ionic surfactant
	400 mℓ followed by	
26* to 30	500 mℓ OR	300 mℓ PLUS Velocity®-Super PLUS a suitable non-ionic surfactant
	400 mℓ followed by	

NOTE

* - If a follow-up treatment of **MALLET 100 SL** is intended on soils exceeding 26 % clay, **do not** exceed 400 mℓ per hectare as a pre-emergence treatment.

COMMENTS - DRY BEANS

Pre-emergence application Rate / ha	Post-emergence "follow-up" treatment Rate / ha
<p>Apply MALLET 100 SL as a pre-emergence (to crop and weeds) treatment onto a well-prepared seedbed with an even surface and free of clods.</p> <p><u>Ground application: Boom and nozzle sprayer:</u> Overall application. Apply MALLET 100 SL with a suitable ground sprayer in a minimum of 200 litres of water per hectare to the soil, during or soon after planting.</p> <p>MALLET 100 SL can be mixed with a registered pre-emergence grass herbicide at its registered rate for increased grass control.</p> <p>Refer to "WEEDS TABLE" for list of weeds controlled by MALLET 100 SL applied in this way.</p>	<p>For improved control of late-season broadleaf weeds (especially <i>Tagetes minuta</i>), a "follow-up" treatment can be applied after a pre-emergence application of MALLET 100 SL.</p> <p><u>Ground application: Boom and nozzle sprayer:</u> Overall application. Apply MALLET 100 SL with a suitable ground sprayer in at least 200 litres of water per hectare in a tank mixture with Velocity®-Super and a suitable non-ionic surfactant.</p> <p>Apply this treatment 2 to 3 weeks after the MALLET 100 SL pre-emergence application.</p> <p>This post-emergence application can only be used on the following dry bean cultivars: PAN 148, Kranskop, Sabie, Helderberg, Teebus and Kamberg.</p> <p>CAUTION Dense row crops will intercept spray droplets resulting in reduced spray deposition on weeds and soil, resulting in reduced efficacy. Correctly placed drop-arm nozzles are recommended to alleviate this problem.</p> <p>Refer to "WEEDS TABLE" for a list of weeds controlled by MALLET 100 SL applied in this way.</p>

2. GROUNDNUTS

Apply as:

- a) a single pre-emergence application, or
b) a single post-emergence application (a follow-up treatment is not recommended).

Aerial application: Apply as for Ground application in a minimum of 35 litres water per hectare. Refer to "**Aerial application**" instructions under "**DIRECTIONS FOR USE**" above.

NOTE

Application recommendations for pre- and post-emergence treatment differ depending on climatic conditions.

% Clay	Pre-emergence application Rate / ha	Post-emergence "follow-up" treatment Rate / ha
0 to 15	300 mℓ	Not recommended
16 to 25	400 mℓ	Not recommended
	--	700 mℓ PLUS Velocity®-Super PLUS a suitable non-ionic surfactant
26* to 30	500 mℓ	Not recommended
	--	700 mℓ PLUS Velocity®-Super PLUS a suitable non-ionic surfactant
NOTE * - A follow-up treatment, similar to dry beans and soybeans, is not recommended.		

COMMENTS – GROUNDNUTS

Pre-emergence application Rate / ha	Post-emergence "follow-up" treatment Rate / ha
<p>Ground application: Boom and nozzle sprayer: Overall application. Apply with a suitable ground sprayer in a minimum of 200 litres of water per hectare to the soil, during or soon after planting.</p> <p>MALLET 100 SL can be mixed with a registered pre-emergence grass herbicide at its registered rate for increased grass control. In areas where <i>Tribulus terrestris</i> is a problem, a pre-emergence application of 450 ml to 500 ml per hectare must be used.</p> <p>WARNING This higher dosage rate may result in MALLET 100 SL remaining active longer in lighter soils (where carry over to the following season is possible). Refer to "WEEDS TABLE" for list of weeds controlled by MALLET 100 SL applied in this way.</p>	<p>MALLET 100 SL can be applied as a post-emergence treatment, when conditions prevented it from being used as a pre-emergence application. Apply 14 to 25 days after planting of the crop (this will usually be when most of the weeds are 3 to 6 cm tall, in the 1 to 3 leaf stage).</p> <p>A registered pre-emergence grass herbicide application should precede this MALLET 100 SL application.</p> <p>Ground application: Boom and nozzle sprayer: Overall application. Apply with a suitable ground sprayer in a minimum of 200 litres water per hectare.</p> <p>CAUTION Dense row crops will intercept spray droplets resulting in reduced spray deposition on weeds and soil, resulting in reduced efficacy. Correctly placed drop-arm nozzles are recommended to alleviate this problem. Refer to "WEEDS TABLE" for list of weeds controlled by MALLET 100 SL.</p>

3. SOYBEANS

Apply as:

- a single pre-emergence application, or
- a programme pre-emergence followed by a post-emergence application, or
- a single post-emergence application.

Aerial application: Apply as for Ground application in a minimum of 35 litres water per hectare. Refer to "**Aerial application**" instructions under "**DIRECTIONS FOR USE**" above.

NOTE

Application recommendations for pre- and post-emergence treatment differ, depending on climatic conditions.

% Clay	Pre-emergence application Rate / ha	Post-emergence "follow-up" treatment Rate / ha	Post-emergence Rate / ha
0 to 15	300 ml	A "follow-up" treatment is not recommended for this soil type	Not recommended
16 to 25	400 ml OR	-	700 ml PLUS Velocity®-Super PLUS a suitable non-ionic surfactant
	400 ml followed by	300 ml PLUS Velocity®-Super PLUS a suitable non-ionic surfactant	
26* to 30	500 ml OR	-	700 ml PLUS Velocity®-Super PLUS a suitable non-ionic surfactant
	400 ml followed by	300 ml PLUS Velocity®-Super PLUS a suitable non-ionic surfactant	

NOTE

* - If a follow-up treatment of **MALLET 100 SL** is intended on soils with more than 26 % clay, **do not** apply more than 400 ml per hectare in the pre-emergence treatment.

COMMENTS - SOYBEANS

Pre-emergence application Rate / ha	Post-emergence "follow-up" treatment Rate / ha	Post-emergence Rate / ha
<p>Apply MALLET 100 SL as a pre-emergence (to crop and weeds) treatment onto a well-prepared seedbed with an even surface and free of clods.</p> <p><u>Ground application: Boom and nozzle sprayer:</u> Overall application. Apply with a suitable ground sprayer in a minimum of 200 litres water per hectare to the soil during or soon after planting.</p> <p>MALLET 100 SL can be mixed with a registered pre-emergence grass herbicide at the registered rate for better control of grasses. Refer to "WEEDS TABLE" for list of weeds controlled by MALLET 100 SL applied in this way.</p>	<p>For improved control of late-season broadleaf weeds (especially <i>Tagetes minuta</i>), a "follow-up" treatment can be applied after a pre-emergence application of MALLET 100 SL.</p> <p><u>Ground application: Boom and nozzle sprayer:</u> Overall application. Apply MALLET 100 SL with a suitable ground sprayer in at least 200 litres of water per hectare in a tank mixture with Velocity®-Super and a suitable non-ionic surfactant.</p> <p>Apply this treatment 14 to 25 days after the MALLET 100 SL pre-emergence application.</p> <p>This post-emergence application can be used on all soybean cultivars except PAN 717.</p> <p>CAUTION Dense row crops will intercept spray droplets, resulting in reduced spray deposition on weeds and soil, resulting in reduced efficacy. Correctly placed drop-arm nozzles are recommended to alleviate this problem. Refer to "WEEDS TABLE" for list of weeds controlled by MALLET 100 SL applied this way.</p>	<p>MALLET 100 SL can be applied as a post-emergence treatment when conditions prevented it from being used as a pre-emergence application.</p> <p>Apply 14 to 25 days after planting of the crop (this will usually be when most of the weeds are 3 to 6 cm tall, in the 1 to 3 leaf stage).</p> <p><u>Ground application: Boom and nozzle sprayer:</u> Overall application. Apply MALLET 100 SL with a suitable ground sprayer in at least 200 litres water per hectare.</p> <p>A registered pre-emergence grass herbicide application should precede this MALLET 100 SL application.</p> <p>CAUTION Dense row crops will intercept spray droplets, resulting in reduced spray deposition on weeds and soil, resulting in reduced efficacy. Correctly placed drop-arm nozzles are recommended to alleviate this problem. Refer to "WEEDS TABLE" for list of weeds controlled by MALLET 100 SL applied this way.</p>

Weeds normally controlled by MALLET 100 SL when applied pre-emergence:	
<i>Acanthospermum hispidum</i>	Upright starbur
<i>Amaranthus deflexus</i>	Perennial pigweed
<i>Amaranthus hybridus</i>	Common pigweed
<i>Amaranthus thunbergii</i>	Red pigweed
<i>Chenopodium album</i>	White goosefoot
<i>Galinsoga parviflora</i>	Gallant soldier
Weeds which are variably controlled (75 % to 80 %) by MALLET 100 SL on its own when applied pre-emergence:	
<i>Commelina benghalensis</i>	Benghal wandering Jew
<i>Cyperus esculentus*</i>	Yellow nutsedge
<i>Cyperus rotundus*</i>	Purple nutsedge
<i>Datura ferox</i>	Large thorn Apple
<i>Datura stramonium</i>	Thorn apple
<i>Galinsoga parviflora</i>	Gallant soldier
<i>Portulaca oleraceae</i>	Purslane
<i>Tagetes minuta**</i>	Khakhi weed
<i>Tribulus terrestris</i>	Dubbeltjie / Devil thorn
<i>Xanthium strumarium</i>	Cocklebur

Weeds controlled by MALLET 100 SL (post-emergence application) when preceded by a registered pre-emergence grass herbicide (including a MALLET 100 SL pre-emergence treatment):	
<i>Acanthospermum australe</i>	Eight seeded prostrate starbur
<i>Acanthospermum glabratum</i>	Five seeded prostrate starbur
<i>Acanthospermum hispidum</i>	Upright starbur
<i>Amaranthus deflexus</i>	Perennial pigweed
<i>Amaranthus thunbergii</i>	Red pigweed
<i>Chenopodium album</i>	White goosefoot
<i>Cleome monophylla</i>	Spindlepod
<i>Commelina benghalensis</i>	Wandering Jew
<i>Datura ferox</i>	Large thorn apple
<i>Datura stramonium</i>	Thorn apple
<i>Flaveria bidentis</i>	Smelter's bush
<i>Galinsoga parviflora</i>	Gallant soldier
<i>Nicandra physalodes</i>	Apple of Peru
<i>Physalis angulata</i>	Wild gooseberry
<i>Tagetes minuta*</i>	Khaki weed
<i>Triumfetta annua</i>	Lesser Cockle Bur
<i>Xanthium strumarium</i>	Cocklebur
Variable control (70 % to 80 %)of the following weeds is achieved with MALLET 100 SL alone (post-emergence application):	
<i>Bidens pilosa</i>	Blackjack
<i>Bidens formosa</i>	Cosmos
<i>Cyperus esculentus</i>	Yellow nutsedge
<i>Cyperus rotundus</i>	Purple nutsedge
<i>Digitaria sanguinalis</i>	Crab finger grass
<i>Echinochloa colona</i>	Marsh grass
<i>Echinochloa crus-galli</i>	Barnyard grass
<i>Eleusine indica</i>	Goose grass
<i>Eragrostis curvula</i>	Love grass
<i>Hibiscus trionum</i>	Bladderweed
<i>Ipomoea purpurea</i>	Morning glory
<i>Panicum schinzii**</i>	Sweet buffalo grass
<i>Portulaca oleracea</i>	Purslane
<i>Rottboelia exaltata</i>	Guinea fowl grass
<i>Schkuhria pinnata</i>	Dwarf marigold
<i>Sorghum halepense</i>	Johnson grass
<i>Tribulus terrestris</i>	Dubbeltjie / Devil thorn
<i>Zea mays***</i>	Volunteer maize

In areas where *Tribulus terrestris* is a problem, a dosage rate of at least 450 ml per hectare may be used as a pre-emergence treatment, irrespective of soil type, which will result in control of more than 80 %. This higher dosage rate on certain soils may, however, influence the waiting periods of follow-up crops. Refer to “**USE RESTRICTIONS**” above.

- * Only weeds, which are fully emerged, are well controlled - seedlings, which emerge after application, are only 60 to 70 % controlled.
- ** Plants turn purple within two to three weeks but take longer to die than most other weeds - minimum of four to five weeks.
- *** Maize varieties that are tolerant to **MALLET 100 SL** will not be controlled. Contact the supplier for information on tolerant maize varieties.

The following products mentioned in this label is equivalent to the products as listed below:

- **CANTRON® 480 SC** (L 8365 / N-AR 1323 / W 130664) = **ASTRON® 480 SC** (L 8366) = **CANONNE 480 SC** (L 8735),
- **MALLET 100 SL** (L 8049) = **IMAZETHAPYR 100 SL** (L 8051) and
- **VELOCITY®-SUPER** (L 9603 / W 130996) = **AMS-SUPER** (L9758) = **GLYPHO-BOOST** (L 7757)

MALLET 100 SL is a registered product of **VILLA CROP PROTECTION (PTY) LTD.**

VELOCITY®-SUPER, AMS-SUPER, GLYPHO-BOOST, ASTRON® 480 SC and **IMAZETHAPYR 100 SL** are registered products of **UNIVERSAL CROP PROTECTION (PTY) LTD.**

CANONNE 480 SC is a registered product of **CROPASURE (PTY) LTD.**

VELOCITY®-SUPER, CANTRON® 480 SC and **ASTRON® 480 SC** are registered trademarks of **VILLA CROP PROTECTION (PTY) LTD.**