



syngenta

Reg. No. L6795 Act No. 36 of 1947 N-AR 0817 (Namibia) W130328 (Botswana)

A suspension concentrate systemic pre- and post-emergence herbicide for the control of annual broadleaf weeds, grasses and the suppression of certain weeds in maize and sugarcane.



**Hazard Statements:** Suspected of damaging the unborn child. May cause damage to organs (nervous system, eyes) through prolonged or repeated exposure. Very toxic to aquatic life with long-lasting effects.

**EMERGENCY TEL NO.:**  
**+27 82 446 8946 (Griffon)**

GROUP 27 HERBICIDE

**Active Ingredient:**  
**mesotrione (callistemone)..... 480 g/l**



**Precautionary Statements: Prevention:** Obtain special instructions before use. Do not breathe the dust. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

UN 3082

**Response:** If exposed or concerned, get medical advice/attention. **Disposal:** Dispose of contents/container to an approved waste disposal plant. **Storage:** Store locked-up.

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WARNING

Registration holder  
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## 1. WARNINGS:

**Hazard statements:** Suspected of damaging the unborn child. May cause damage to organs (nervous system, eyes) through prolonged or repeated exposure. Very toxic to aquatic life with long-lasting effects.

**Withholding periods:** Minimum number of days between last application and harvest or grazing.

**MAIZE..... 56 days**  
**SUGARCANE..... 181 days**

- May irritate the eyes and skin.
- Keep out of reach of children, uninformed persons and animals.
- Store in a cool, dry place away from food and feed.
- **Do not use in sweet corn or popcorn.**
- **Aerial application:** (Only pre-emergence applications). Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not spray over or allow the drift to contaminate water or adjacent areas.
- **Re-entry:** Do not enter treated area until spray deposit has dried, unless wearing protective clothing.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the weed against the remedy concerned, as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation and the environment, or harm to people or animals 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, that could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

## 2. PRECAUTIONS:

**Precautionary statements:** Obtain special instructions before use. Do not breathe dust. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. **Response:** If exposed or concerned, get medical advice/attention. **Disposal:** Dispose of contents/container to an approved waste disposal plant. **Storage:** Store locked-up.

- Do not eat, drink, or smoke while handling this product.
- Prevent contamination of food, feed, drinking water and eating utensils.

### For safety when mixing:

- Wear eye protection (face shield). If you get **CALLISTO** in your eyes, flush it out immediately with running water for at least 15 minutes.
- Wear rubber gloves. If you get it on your skin, wash it off at once.
- If you get it on your clothes, change and wash them.
- Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three (3) times with a volume of water equal to a minimum of 10% of that of the container. Add the rinsate to the contents of the spray tank before destroying the container in the prescribed manner.

### For safety when spraying:

- Avoid inhalation of spray mist.
- Avoid contact with the spray as far as possible.
- Avoid spray drift onto susceptible crops, grazing, rivers, dams and areas not under treatment.

### For safety after spraying:

- Clean applicator thoroughly after use.
- Do not spray, drain or flush equipment on/or near trees, plants or where their roots may extend.
- Dispose of wash water where it will not contaminate crops, grazing, rivers, dams and areas not under treatment.
- Destroy empty container in the prescribed manner and do not re-use for any other purpose.

- Change and wash your work clothes. Wash yourself.

### 3. RELEVANT SUBSTANCES:

Chemical name	
mesotrione (ISO)	
Classification	Concentration (% w/w)
Repr. 2; H361d STOT RE 2; H373 (Nervous system, eyes) Aquatic Acute 1; H400 Aquatic Chronic 1; H410	≥ 50 - < 70
M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	

### 4. RESISTANCE MANAGEMENT:

**CALLISTO** is a group code 27 herbicide. Any weed population may contain individuals naturally resistant to **CALLISTO** and other group code 27 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly and exclusively in programs. These resistant weeds may not be controlled by **CALLISTO** or any other group code 27 herbicides.

#### 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 programs.

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

### 5. USE RESTRICTIONS:

#### 5.1 General

- Do not use **CALLISTO** on sweet corn, popcorn and inbred parent lines of maize hybrids or newly released cultivars without first consulting with your chemical supplier or with the seed company concerned.
- Do not apply **CALLISTO** through any irrigation system other than a centre pivot system.
- Disturbance of soil after both pre- and/or post-emergence applications can result in regermination of weeds resulting in reduced weed control.

#### 5.2 Follow-on Crops

The following waiting periods should be adhered to:

Wheat and barley	1 month
Grain sorghum	2 months
Potatoes	6 months
Soybeans, dry beans, groundnuts, sunflowers and cotton	9 months
All other crops	24 months

All rotational crops should be planted only after thorough cultivation. Since the product is metabolised by microbial

activity, periods of low microbial activity might extend the residual activity of **CALLISTO**. A deep plough action will allow for sufficient loosening of soil and compact layers, to ensure a complete turning of the soil.

**Warning:** Possible damage to triazine sensitive crops

- Where soils have been treated with lime to correct the soil pH, the possibility of crop damage increases dramatically in fields where triazines were previously applied. This is due to the triazine molecules being replaced on the clay complex with calcium cations and the triazine thus becoming more available in the soil-water complex. No triazine sensitive crops should be planted in the season after the soil pH adjustment with lime.
- Triazine sensitive crops include all broadleaf crops e.g., different bean crops, sunflowers and all cereals e.g., wheat.
- These warnings however do not guarantee that no damage would be experienced to even the following maize crop as large volumes of previously applied triazines might now be available depending on the volume of lime applied and the rainfall experienced.

**Warning:** Possible increased efficacy, phytotoxicity and residual action

- Increasing the soil pH levels above 7 could produce conditions for increased efficacy and reduced selectivity. This increased pH may also result in increased soil residual action by certain herbicides influencing the choice of following crops especially under irrigation.
- In situations where pH adjustments have been done, take care when sulphonyl urea herbicides, triazolopyrimidine sulfonanilide herbicides and imidazolinone herbicides, which are all sensitive to soil pH fluctuations, have been used or are about to be used.

**Contact your local SYNGENTA representative to discuss crop rotation and crop protection programs to follow before embarking on any pH adjustment program.**

#### 5.3 Factors affecting Weed Control

##### 5.3.1 Pre-emergence application

- A well-prepared seedbed, free of clods and weeds is a requirement for good pre-emergence weed control.
- Prolonged dry soil conditions after a **pre-emergence** application may result in reduced control of germinating weeds.
- In soils with abnormal high organic matter or organic matter residues on the soil surface e.g., burnt trash or "stoppels" reduced residual action may be seen.
- Do not use **CALLISTO** under stress conditions e.g., water logging, severe cold, excessive rain, poor fertilising, low pH, etc.
- Tank mixtures of **CALLISTO** with organophosphates e.g., chlorpyrifos should be avoided as damage to the maize might occur.
- **CALLISTO** can be used pre-emergence for maize where carbamate or organophosphate insecticides e.g., aldicarb or terbufos are used as soil applications.
- **CALLISTO** should not be applied in cropping systems where flood irrigation is used.

### 5.3.2 Post-emergence application

- When applying **CALLISTO** post-emergence, make sure that the application is on the true leaves of the weeds. Cotyledons are not true leaves.
- Applications should be done on weeds that are actively growing. **CALLISTO** is a systemic herbicide, which should be absorbed and translocated to be effective. This is not possible with plants under stress.
- Avoid drift to adjacent crops.
- When weeds are stressed due to drought, heat, lack of fertility, flooding or prolonged cool temperatures, control can be reduced or delayed since the weeds are not actively growing. Weed escapes may occur when the application is made under prolonged stress conditions. Optimum weed control will be obtained if the application of **CALLISTO** is delayed until the stress conditions have ended and weeds are once again actively growing. Care should be taken that the target weeds are still within the indicated growth stages at application.
- Temporary bleaching may occur under extreme weather conditions or when the crop is under stress due to inadequate or abnormally high moisture levels or extreme temperatures. Prolonged overcast conditions may also lead to temporary crop bleaching.
- Apply **CALLISTO** post-emergence to maize at least **28 days after** a carbamate or organophosphate insecticides e.g., aldicarb or terbufos has been applied to soil at planting.
- Do not apply **CALLISTO** in tank mixtures with organophosphate insecticides e.g., chlorpyrifos.
- **Do not** apply **CALLISTO** within seven (7) days before or within seven (7) days after organophosphate (e.g., terbuphos), carbamate (e.g., methomyl), or carbamate insecticide for foliar applications.

### 6. DIRECTIONS FOR USE: Use only as indicated.

#### 6.1 Compatibility

**CALLISTO** is compatible with ACCENT (L5157), BIODEW (L8120), BATELEUR GOLD (L6136), BREAKTHRU (L5895), BROADSTRIKE (L6180), COMPLEMENT SUPER (L8169), DUAL GOLD (L5749), GARDOMIL GOLD (L6246), GESAPRIM SUPER (L3914), GRAMOXONE (L1174), KARATE ZEON (L6330), KARATE (L3752), METAGAN GOLD (L5748), PENETREX (L4914), PRIMAGRAM GOLD (L7308), TRONIC (L3685), SOLITAIRE (L6962), DIURON 800 SC (L3200) and FALCON GOLD (L5748).

#### 6.2 Dilution Water

Use only clean water and buffer with a registered buffer.

#### 6.3 Mixing Instructions

- Fill the spray or premix tank with clean water and engage agitator. Agitation must be continued throughout the mixing and spraying operation. Resuspend the spray mixture if agitation was suspended for longer than 5 minutes.
- When the spray or premix tank is half-full with water, add **CALLISTO** slowly and agitate until completely dispersed.
- If tank-mixed, add **CALLISTO** first to the water,

then add all the other suspension concentrates e.g., PRIMAGRAM GOLD and only thereafter the emulsifiable concentrates e.g., KARATE or METAGAN GOLD or DUAL GOLD. Lastly add the adjuvant and then continue to fill the tank to the required level with water while agitating.

#### 6.4 Ground Application

- **CALLISTO** must be applied the same day as mixing.
- Apply by means of a tractor mounted boom sprayer which is correctly calibrated with continuous agitation to deliver at least 200 - 300 ℓ spray mixture/ha. Avoid overlapping of spray swaths.
- In case of certain pre-emergence applications with hydraulic nozzles and post-emergence applications with sleeve boom sprayers the water volume can be lowered to 100 ℓ spray volume/ha. However, the use of the registered adjuvants at the correct rates, correct nozzles and nozzle spacing, adequate coverage and nozzle sizes are then very important. The disregard of these factors will lead to poor control of certain weeds.
- Flat fan hydraulic nozzles (110°) are recommended for optimum coverage. Consult the mobile application Cropwise Spray Assist.
- In certain cases, sleeve boom sprayers may be used for **post-emergence** applications:
  - Sleeve boom sprayers must be correctly calibrated, well-maintained and fitted with the correct nozzles.
  - The air flow system on a sleeve boom sprayer should work properly and sprays should always cover the target plant fully.
  - The USE RECOMMENDATIONS as on this label should be followed and no changes in rates or product combinations or adjuvants should be done other than indicated on this label.
  - Droplet sizes that are prone to drift should be eliminated by the correct choice of nozzles.
  - **No pre-emergence** applications of **CALLISTO** should be done with sleeve boom sprayers.

Rain or irrigation of 10 - 20 mm is needed after application to leach the chemical into the germinating zone. If this precipitation does not happen within 14 days of application, reduced efficacy can be expected.

**If these precautions are not adhered to the registration holder cannot be held responsible for any non-performance or damages suffered.**

#### 6.5 Aerial Application

(**CALLISTO** is only registered pre-emergence for aerial application in maize)

#### Avoid chemical drift at all times.

Aerial application of **CALLISTO** may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS 10118 (Aerial Application of Agricultural Remedies). It is important to 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. Drift should be avoided at all times. It is

therefore essential that the following criteria are met:

a) Application parameters:

- **Volume:** A volume of 25 - 30 ℓ/ha is recommended. As **CALLISTO** has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy or be held responsible for any adverse effects if the product is applied aerially at a lower volume rate than recommended above.
- **Droplet coverage:** A droplet coverage of 20 - 30 droplets per cm<sup>2</sup> must be recovered at the target.
- **Droplet size:** A droplet spectrum with a VMD of 350 - 400 microns is recommended. Ensure that the production of fine droplets (less than 150 microns) is restricted to a minimum.
- **Flying height:** The height of the spray boom should be maintained at 3 - 4 metres above the target. Do not spray when aircraft is in a climb, at the top, during a dive, or when banking.

b) Equipment:

- Use suitable atomising equipment (hydraulic nozzles or rotary atomisers) that will produce the desired droplet size and coverage but which will ensure the minimum loss of product either through endodrift (within target field) or exodrift (outside target field).
- The operator must use a setup that will produce a droplet spectrum with the lowest possible relative span.
- All nozzles/atomisers should be positioned within the inner 60 - 75% of the wingspan to prevent droplets from entering the wingtip vortices.

c) Meteorological conditions:

- 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/h or reduces to less than 5 km/h.
- Aerial application of **CALLISTO** must not be done under turbulent, unstable conditions during the heat of the day when rising thermals and downdraughts occur.
- Also note that the application of **CALLISTO** under temperature inversion conditions (spraying in or above the inversion layer) 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 the movement of the suspended spray cloud away from the target field.
- Under the following climatic conditions it can cause serious damage as far as 3 - 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 sensitive crops, 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.

Ensure that the aerial spray operator knows which fields to spray. Supply the precise identification to the operator of the fields to be sprayed preferably by means of a map or GPS coordinates. Indicate to the operator adjacent environmental sensitive areas or sensitive neighbouring crops, beehives

or water sources that could be affected by the pesticide.

**Obtain 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.**

## 6.6 Centre Pivot Application

(Only pre-emergence in maize)

- **CALLISTO** and DUAL GOLD can be applied through a well-operated and well-maintained centre pivot irrigation system.
- The centre pivot should apply between 4,5 mm and 7,5 mm of water when applying 265 mℓ **CALLISTO**/ha and 710 mℓ DUAL GOLD/ha. Control should be for about 56 days whereafter the follow-on application should be applied by tractor sprayer.
- KARATE can be added to this pre-emergence mixture to control cutworms at the registered rate (70 mℓ/ha).
- Calculate the injection rate carefully and make sure it is correct.
- Apply within two (2) days of planting.
- Application should be done to fields which are well-prepared and with no germinating or established weeds.
- Applications should only be done through centre pivots equipped with an injector system.
  - Once **CALLISTO** has been applied on the whole of the centre pivot area, it should be set to apply the following water volumes:
    - 10 mm water per hectare when clay content is < 20%
    - 15 mm water per hectare when clay content is 20 - 35%
    - 20 mm water per hectare when clay content is > 35%
  - Keep soil wet for a period of 7 - 14 days after application.
  - Be aware that the distribution of **CALLISTO** and DUAL GOLD will only be as even as the application of the irrigation water.
  - Do not apply chemicals through the irrigation water in excessive wind speeds (< 6 ms<sup>-1</sup>).
  - Be careful when the irrigation system overlaps at the end of the cycle area as serious overdose and possible damage could occur.
  - Care should be taken when applying chemicals through the centre pivot as breakages or stoppages could lead to major over application of the chemicals.
  - Care should be taken not to contaminate boreholes or dams with accidental spillages of chemicals in the irrigation system. Injection of the chemicals close or at the centre is preferable. Both the injector pump and the water pump should be fitted with valves to stop injection as soon as the pivot's forward movement is stopped. The main irrigation water supply line should also be fitted with a non-return valve to prevent treated water to run back into the supply source.

## 7. CROPS:

### 7.1 MAIZE

- The clay content of the soil does not affect the dosage rate of **CALLISTO**.
- **CALLISTO** can be applied pre- or post-emergence of either the crop or the weeds.
- The pre-emergence application of **CALLISTO** must be done on a well-prepared weed-free seedbed to ensure

an even distribution.

- If **CALLISTO** is applied as indicated, at least 28 - 56 days control of the weeds as listed can be expected.

### 7.1.1 Pre-emergence application of CALLISTO plus DUAL GOLD or PRIMAGRAM GOLD

This pre-emergence application should be followed-up with post-emergence applications of registered mixtures of **CALLISTO**, GARDOMIL GOLD, METAGAN GOLD or GESAPRIM SUPER approximately 5 - 6 weeks later, as indicated on the registered labels.

<b>CALLISTO</b> 104 ml/ha <i>plus</i>	<i>either</i> <b>DUAL GOLD</b> 218 - 710 ml/ha	<i>or</i> <b>PRIMAGRAM GOLD</b> 690 - 2 448 ml/ha
<b>Botanical name</b>		<b>Common name</b>
<i>Acanthospermum hispidum</i> <i>Chenopodium album</i> <i>Echinocloa colona</i> <i>Nicandra physaloides</i> <i>Physalis angulata</i>		<b>upright starbur</b> <b>white goosefoot</b> <b>marsh grass</b> <b>apple-of-Peru</b> <b>wild gooseberry</b>

<b>CALLISTO</b> 104 ml/ha <i>plus</i>	<i>either</i> <b>DUAL GOLD</b> 284 - 710 ml/ha	<i>or</i> <b>PRIMAGRAM GOLD</b> 897 - 2 448 ml/ha
<b>Botanical name</b>		<b>Common name</b>
<b>The above-mentioned weeds plus</b>		
<i>Targetes minuta</i>		<b>khaki weed</b>

<b>CALLISTO</b> 156 ml/ha <i>plus</i>	<i>either</i> <b>DUAL GOLD</b> 320 - 710 ml/ha	<i>or</i> <b>PRIMAGRAM GOLD</b> 1 010 - 2 448 ml/ha
<b>Botanical name</b>		<b>Common name</b>
<b>The above-mentioned weeds plus</b>		
<i>Chenopodium carinatum</i> <i>Setaria pallida-fusca</i>		<b>green goosefoot</b> <b>red bristle grass</b>

<b>CALLISTO</b> 156 m /ha <i>plus</i>	<i>either</i> <b>DUAL GOLD</b> 426 - 710 m /ha	<i>or</i> <b>PRIMAGRAM GOLD</b> 1 344 - 2 448 m/ha
<b>Botanical name</b>		<b>Common name</b>
<b>The above-mentioned weeds plus</b>		
<i>Eleusine indica</i> <i>Panicum schinzii</i>		<b>goose grass</b> <b>sweet buffalo grass</b>

<b>CALLISTO</b> 208 ml/ha <i>plus</i>	<i>either</i> <b>DUAL GOLD</b> 426 - 710 ml/ha	<i>or</i> <b>PRIMAGRAM GOLD</b> 1344 - 2 448 ml/ha
<b>Botanical name</b>		<b>Common name</b>
<b>The above-mentioned weeds plus</b>		
<i>Amaranthus hybridus</i> <i>Brachiaria eruciformis</i> <i>Datura ferox</i> <i>Eragrostis curvula</i> <i>Hibiscus trionum</i> <i>Polygonum aviculare</i>		<b>common pigweed</b> <b>sweet signal grass</b> <b>large thorn apple</b> <b>weeping love grass</b> <b>bladder weed</b> <b>prostrate knotweed</b>

<b>CALLISTO</b> 208 ml/ha	<b>PRIMAGRAM GOLD</b> 1 344 - 2 448 ml/ha
<i>Crotalaria sphaerocarpa</i> <i>Tribulus terrestris</i>	<b>mealie Crotalaria</b> <b>dubbeltjie</b>

<b>CALLISTO</b> 208 ml/ha <i>plus</i>	<i>either</i> <b>DUAL GOLD</b> 568 - 710 ml/ha	<i>or</i> <b>PRIMAGRAM GOLD</b> 1792 - 2 448 ml/ha
<b>Botanical name</b>		<b>Common name</b>
<b>The above-mentioned weeds plus</b>		
<i>Cleome monophylla</i> <i>Commelina benghalensis</i> <i>Digitaria sanguinalis</i> <i>Hibiscus cannabinus</i> <i>Triumfetta pilosa</i>		<b>spindlepod</b> <b>Benghal wandering Jew</b> <b>crab fingergrass</b> <b>kenaf</b> -

<b>CALLISTO</b> 208 ml/ha	<b>PRIMAGRAM GOLD</b> 2 448 ml/ha
<i>Crotalaria sphaerocarpa</i> <i>Portulaca oleracea</i> <i>Tribulus terrestris</i>	<b>mealie Crotalaria</b> <b>purslane</b> <b>dubbeltjie</b>

<b>CALLISTO</b> 260 ml/ha <i>plus</i>	<i>either</i> <b>DUAL GOLD</b> 710 ml/ha	<i>or</i> <b>PRIMAGRAM GOLD</b> 2 448 ml/ha
<b>Botanical name</b>		<b>Common name</b>
<b>The above-mentioned weeds plus</b>		
<i>Urochloa panicoides</i> <i>Xanthium strumarium</i>		<b>herringbone grass</b> <b>cocklebur</b>

<b>CALLISTO</b> 260 ml/ha	<i>plus</i> <b>PRIMAGRAM GOLD</b> 2 448 ml/ha
<i>Crotalaria sphaerocarpa</i> <i>Portulaca oleracea</i> <i>Tribulus terrestris</i>	<b>mealie Crotalaria</b> <b>purslane</b> <b>dubbeltjie</b>

<b>Only suppression of</b>	
<i>Bidens bipinnata</i> <i>Bidens pilosa</i> <i>Citrullus lanatus</i> <i>Cosmos bipinnatus</i> <i>Cyperus esculentus</i> <i>Ipomoea purpurea</i>	<b>Spanish blackjack</b> <b>blackjack</b> <b>bitter apple</b> <b>cosmos</b> <b>yellow nutsedge</b> <b>common morning glory</b>

<b>CALLISTO</b> 260 ml/ha	<i>plus</i> <b>PRIMAGRAM GOLD</b> 2 448 ml/ha
<i>Crotalaria sphaerocarpa</i> <i>Portulaca oleracea</i> <i>Tribulus terrestris</i>	<b>mealie Crotalaria</b> <b>purslane</b> <b>dubbeltjie</b>

<b>Only suppression of</b>	
<i>Bidens bipinnata</i> <i>Bidens pilosa</i> <i>Citrullus lanatus</i> <i>Cosmos bipinnatus</i> <i>Cyperus esculentus</i> <i>Ipomoea purpurea</i>	<b>Spanish blackjack</b> <b>blackjack</b> <b>bitter apple</b> <b>cosmos</b> <b>yellow nutsedge</b> <b>common morning glory</b>

Consult the DUAL GOLD and the PRIMAGRAM GOLD label for WARNINGS, PRECAUTIONS and DIRECTIONS FOR USE.

### 7.1.2 Post-emergence application of CALLISTO plus METAGAN GOLD plus GESAPRIM SUPER plus an adjuvant OR CALLISTO plus PRIMAGRAM GOLD plus adjuvant OR CALLISTO plus GARDO GOLD plus adjuvant

**CALLISTO** must be applied post-emergence when the target

- grasses are between the 2 - 3-leaf stage;
- broadleaf weeds are between the 2 - 6-leaf stage.

**Recommended adjuvants:** In all post-emergence applications of **CALLISTO** an adjuvant must be used. The following adjuvants are recommended:

- BODEW at 100 ml/100 l spray volume
- BREAKTHRU at 50 ml/100 l spray volume
- COMPLEMENT SUPER at 100 ml/ha
- PENETREX at 500 ml/100 l spray volume
- SOLITAIRE at 100 ml/100 l spray volume
- TRONIC at 500 ml/ha

To enhance the activity on larger weeds 250 ml 2,4-D can be added to the tank mixtures mentioned below. The addition of 2,4-D is recommended for the control of morning glory and other problem weeds.

This post-emergence application should be preceded by a pre-emergence application of **CALLISTO**, **DUAL GOLD**, **GARDOMIL GOLD** or **GESAPRIM SUPER** as indicated on the registered labels.

<b>CALLISTO</b> 104 ml/ha	<i>plus</i> <b>METAGAN GOLD</b> 135 - 508 ml/ha	<i>plus</i> <b>GESAPRIM SUPER</b> 416 ml/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 104 ml/ha	<i>plus</i> <b>METAGAN GOLD</b> 81 - 454 ml/ha	<i>plus</i> <b>GARDOMIL GOLD</b> 502 ml/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 104 ml/ha	<i>plus</i> <b>PRIMAGRAM GOLD</b> 447 - 1 682 ml/ha		<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 104 ml/ha	<i>plus</i> <b>GARDO GOLD</b> 416 - 1 562 ml/ha		<i>plus</i> recommended adjuvant*
<b>Weeks control</b>	<b>Botanical name</b>	<b>Common name</b>	
4 4 4 4 4 4	<i>Amaranthus hybridus</i> <i>Crotalaria sphaerocarpa</i> <i>Galinsoga parviflora</i> <i>Hibiscus trionum</i> <i>Tagetes minuta</i> <i>Xanthium strumarium</i>	<b>common pigweed</b> <b>mealie</b> <i>Crotalaria</i> <b>gallant soldier</b> <b>bladder weed</b> <b>khaki weed</b> <b>cocklebur</b>	

<b>CALLISTO</b> 104 ml/ha	<i>plus</i> <b>METAGAN GOLD</b> 203 - 508 ml/ha	<i>plus</i> <b>GESAPRIM SUPER</b> 416 ml/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 104 ml/ha	<i>plus</i> <b>METAGAN GOLD</b> 149 - 454 ml/ha	<i>plus</i> <b>GARDOMIL GOLD</b> 502 ml/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 104 ml/ha	<i>plus</i> <b>PRIMAGRAM GOLD</b> 672 - 1 682 ml/ha		<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 104 ml/ha	<i>plus</i> <b>GARDO GOLD</b> 624 - 1 562 ml/ha		<i>plus</i> recommended adjuvant*
<b>Weeks control</b>	<b>Botanical name</b>	<b>Common name</b>	
<b>The above-mentioned weeds plus</b>			

<b>4</b> <b>4</b> <b>4</b>	<i>Cleome monophylla</i> <i>Datura ferox</i> <i>Datura stramonium</i>	<b>spindlepod</b> <b>large thorn apple</b> <b>thorn apple</b>
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<b>CALLISTO</b> 156 ml/ha	<i>plus</i> <b>METAGAN GOLD</b> 203 - 508 ml/ha	<i>plus</i> <b>GESAPRIM SUPER</b> 416 ml/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 156 ml/ha	<i>plus</i> <b>METAGAN GOLD</b> 149 - 454 ml/ha	<i>plus</i> <b>GARDOMIL GOLD</b> 502 ml/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 156 ml/ha	<i>plus</i> <b>PRIMAGRAM GOLD</b> 672 - 1 682 ml/ha		<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 156 ml/ha	<i>plus</i> <b>GARDO GOLD</b> 624 - 1 562 ml/ha		<i>plus</i> recommended adjuvant*
<b>Weeks control</b>	<b>Botanical name</b>	<b>Common name</b>	
<b>The above-mentioned weeds plus</b>			
8 8 8 8 8	<i>Bidens bipinnata</i> <i>Bidens pilosa</i> <i>Datura ferox</i> <i>Galinsoga parviflora</i> <i>Tagetes minuta</i>	<b>Spanish blackjack</b> <b>blackjack</b> <b>large thorn apple</b> <b>gallant soldier</b> <b>khaki weed</b>	

<b>CALLISTO</b> 156 ml/ha	<i>plus</i> <b>METAGAN GOLD</b> 305 - 508 ml/ha	<i>plus</i> <b>GESAPRIM SUPER</b> 416 ml/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 156 ml/ha	<i>plus</i> <b>METAGAN GOLD</b> 251 - 454 ml/ha	<i>plus</i> <b>GARDOMIL GOLD</b> 502 ml/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 156 ml/ha	<i>plus</i> <b>PRIMAGRAM GOLD</b> 1 010 - 1 682 ml/ha		<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 156 ml/ha	<i>plus</i> <b>GARDO GOLD</b> 938 - 1 562 ml/ha		<i>plus</i> recommended adjuvant*
<b>Weeks control</b>	<b>Botanical name</b>	<b>Common name</b>	
<b>The above-mentioned weeds plus</b>			
4	<i>Citrullus lanatus</i>	<b>bitter apple</b>	

<b>CALLISTO</b> 208 ml/ha	<i>plus</i> <b>METAGAN GOLD</b> 271 - 508 ml/ha	<i>plus</i> <b>GESAPRIM SUPER</b> 416 ml/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 208 ml/ha	<i>plus</i> <b>METAGAN GOLD</b> 217 - 454 ml/ha	<i>plus</i> <b>GARDOMIL GOLD</b> 502 ml/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			

<b>CALLISTO</b> 208 mℓ/ha	<i>plus</i> <b>PRIMAGRAM GOLD</b> 897 - 1 682 mℓ/ha	<i>plus</i> recommended adjuvant*
<b>or</b>		
<b>CALLISTO</b> 208 mℓ/ha	<i>plus</i> <b>GARDO GOLD</b> 832 - 1 562 mℓ/ha	<i>plus</i> recommended adjuvant*
<b>Weeks control</b>	<b>Botanical name</b>	<b>Common name</b>
<b>The above-mentioned weeds plus</b>		
4 4 4	<i>Commelina benghalensis</i> <i>Ipomoea purpurea</i>	<b>Benghal wandering Jew</b> <b>common morning glory</b> <b>dubbeltjie</b>
4	<i>Tribulus terrestris</i>	
8 8	<i>Cleome monophylla</i> <i>Hibiscus trionum</i>	<b>spindlepod</b> <b>bladder weed</b>

<b>CALLISTO</b> 208 mℓ/ha	<i>plus</i> <b>METAGAN GOLD</b> 406 - 508 mℓ/ha	<i>plus</i> <b>GESAPRIM SUPER</b> 416 mℓ/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 208 mℓ/ha	<i>plus</i> <b>METAGAN GOLD</b> 352 - 454 mℓ/ha	<i>plus</i> <b>GARDOMIL GOLD</b> 502 mℓ/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 208 mℓ/ha	<i>plus</i> <b>PRIMAGRAM GOLD</b> 1 344 - 1 682 mℓ/ha	<i>plus</i> recommended adjuvant*	
<b>or</b>			
<b>CALLISTO</b> 208 mℓ/ha	<i>plus</i> <b>GARDO GOLD</b> 1 242 - 1 562 mℓ/ha	<i>plus</i> recommended adjuvant*	
<b>Weeks control</b>	<b>Botanical name</b>	<b>Common name</b>	
<b>The above-mentioned weeds plus</b>			
4 4	<i>Digitaria sanguinalis</i> <i>Eleusine indica</i>	<b>crab fingergrass</b> <b>goose grass</b>	
8 8 8	<i>Amaranthus hybridus</i> <i>Commelina benghalensis</i> <i>Ipomoea purpurea</i>	<b>common pigweed</b> <b>Benghal wandering Jew</b> <b>common morning glory</b> <b>dubbeltjie</b>	
8	<i>Tribulus terrestris</i>		

<b>CALLISTO</b> 260 mℓ/ha	<i>plus</i> <b>METAGAN GOLD</b> 339 - 508 mℓ/ha	<i>plus</i> <b>GESAPRIM SUPER</b> 416 mℓ/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 260 mℓ/ha	<i>plus</i> <b>METAGAN GOLD</b> 285 - 454 mℓ/ha	<i>plus</i> <b>GARDOMIL GOLD</b> 502 mℓ/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 260 mℓ/ha	<i>plus</i> <b>PRIMAGRAM GOLD</b> 1 122 - 1 682 mℓ/ha	<i>plus</i> recommended adjuvant*	

<b>or</b>		
<b>CALLISTO</b> 260 mℓ/ha	<i>plus</i> <b>GARDO GOLD</b> 1 040 - 1 562 mℓ/ha	<i>plus</i> recommended adjuvant*
<b>Weeks control</b>	<b>Botanical name</b>	<b>Common name</b>
<b>The above-mentioned weeds plus</b>		
4	<i>Hibiscus cannabinus</i>	<b>kenaf</b>
8 8 8	<i>Citrullus lanatus</i> <i>Digitaria sanguinalis</i> <i>Eleusine indica</i>	<b>bitter apple</b> <b>crab fingergrass</b> <b>goose grass</b>

<b>CALLISTO</b> 260 mℓ/ha	<i>plus</i> <b>METAGAN GOLD</b> 508 mℓ/ha	<i>plus</i> <b>GESAPRIM SUPER</b> 416 mℓ/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 260 mℓ/ha	<i>plus</i> <b>METAGAN GOLD</b> 454 mℓ/ha	<i>plus</i> <b>GARDOMIL GOLD</b> 502 mℓ/ha	<i>plus</i> recommended adjuvant*
<b>or</b>			
<b>CALLISTO</b> 260 mℓ/ha	<i>plus</i> <b>PRIMAGRAM GOLD</b> 1 682 mℓ/ha	<i>plus</i> recommended adjuvant*	
<b>or</b>			
<b>CALLISTO</b> 260 mℓ/ha	<i>plus</i> <b>GARDO GOLD</b> 1 562 mℓ/ha	<i>plus</i> recommended adjuvant*	
<b>Weeks control</b>	<b>Botanical name</b>	<b>Common name</b>	
<b>The above mentioned weeds plus</b>			
8	<i>Crotalaria sphaerocarpa</i>	<b>mealie</b> <b>Crotalaria</b>	
<b>Up to 80% suppression of the following weeds</b>			
8 8 8 8 8	<i>Chloris virgata</i> <i>Cyperus esculentus</i> <i>Hibiscus cannabinus</i> <i>Urochloa panicoides</i> <i>Xanthium strumarium</i>	<b>feathertop</b> <b>Chloris</b> <b>yellow nutsedge</b> <b>kenaf</b> <b>herringbone grass</b> <b>cocklebur</b>	

Consult the GARDOMIL GOLD, GARDO GOLD, GESAPRIM SUPER, PRIMAGRAM GOLD, COMPLEMENT SUPER, PENETREX, SOLITAIRE and TRONIC labels for WARNINGS, PRECAUTIONS and DIRECTIONS FOR USE.

### 7.1.3 Glyphosate tolerant maize

- **CALLISTO** can be applied in tank mixes with either GARDO GOLD and TOUCHDOWN FORTE HITECH or METAGAN GOLD and TOUCHDOWN FORTE HITECH on glyphosate tolerant maize to provide knockdown and residual control.
- Any individual plants that do not contain the glyphosate tolerant gene would die when sprayed with glyphosate based products e.g., TOUCHDOWN FORTE HITECH. The utmost care should be taken not to apply this tank mixture to non-glyphosate tolerant maize. Follow the label instructions for the application of this tank mixture to glyphosate tolerant maize as described on the TOUCHDOWN FORTE HITECH label.
- When tank mixing **CALLISTO** and GARDO GOLD with TOUCHDOWN FORTE HITECH ammonium sulphate e.g., VELOCITY GLYFO must be used to correct the

quality status of the water, no adjuvants may be used and no other triazine containing products may be added to this tank mixture. The TOUCHDOWN FORTE HITECH and GARDO GOLD labels should be followed carefully.

- **CALLISTO**, METAGAN GOLD and/or GARDO GOLD may at no time be applied with any other glyphosate containing product other than TOUCHDOWN FORTE HITECH.
- No aerial application should be done with **CALLISTO** tank mixed with TOUCHDOWN FORTE HITECH.

#### 7.1.4 Difficult-to-control weeds

**Digitaria nuda** can be controlled for up to 56 days after the post-emergence spray with a program of:

260 ml **CALLISTO** + 710 ml DUAL GOLD/ha applied pre-emergence, followed by

260 ml **CALLISTO** + 1.8 l PRIMAGRAM GOLD/ha applied post-emergence of the maize.

An integrated weed control approach should be taken in controlling this weed:

- Ploughing and preparing a good, fine weed-free seedbed is of utmost importance and essential. A cultivation between the two herbicide applications should be done in order to spray the second application pre-emergence of the weeds but post-emergence of the maize.
- Crop rotation with broadleaf crops should also be implemented in order to reduce the seed bank by using other grass herbicides.

**Tribulis terrestris** can be controlled by adding either BROADSTRIKE 800WG or BATELEUR GOLD to the recommended rate of **CALLISTO**.

All WARNINGS, RECROPPING INTERVALS and RECOMMENDATIONS including RESISTANCE WARNINGS on the BATELEUR GOLD and BROADSTRIKE 800WG labels should be followed when used in combination with **CALLISTO**.

**Sorghum halepense** and **Sorghum bicolor** can be controlled by adding ACCENT at the recommended rates as on the ACCENT label to the **CALLISTO** + GARDO GOLD or **CALLISTO** + METAGAN GOLD + GESAPRIM SUPER recommendation. These product combinations may cause severe crop damages under adverse conditions.

- All WARNINGS, RECROPPING INTERVALS and RECOMMENDATIONS including RESISTANCE WARNINGS on the ACCENT label should be followed when used in combination with any of the above mentioned products.
- Selectivity warnings relating to the use of organophosphate insecticides, cultivars and application crop stage should be adhered to as applicable on the ACCENT label when using ACCENT in combination with **CALLISTO**.
- Always use an adjuvant as specified on the **CALLISTO** label.

## 7.2 SUGARCANE

(Plant- and ratoon cane)

### 7.2.1 Early post-emergence application of **CALLISTO** plus **FALCON GOLD** plus **DIURON 800 SC** plus a recommended adjuvant on sugarcane

- 1) The dosage rate of **CALLISTO** is not affected by the clay content of the soil.
- 2) The application of **CALLISTO** + **FALCON GOLD** + **DIURON 800 SC** + **COMPLEMENT SUPER** must be applied early post-emergence of the weeds.
- 3) At application, the growth stage of the
  - grasses should be between the 2 and 3 leaves without any tillers;
  - broadleaf weeds should be between 4 and 6 leaf stage.
- 4) In all post-emergence applications of **CALLISTO** an adjuvant must be used. The following adjuvants are recommended:
  - **COMPLEMENT SUPER** at 100 ml/ha
  - **TRONIC** at 500 ml/ha
- 5) Applications should be made during the late spring and summer season when the chance of rain is good.
- 6) **CALLISTO** should not be applied during seasons when no or little rain is expected.
- 7) Drip irrigation is not sufficient to activate **CALLISTO** in the absence of rainfall. Do not use if only drip irrigation is used.
- 8) **CALLISTO** should not be used in flood irrigation systems.
- 9) **CALLISTO** can be used under overhead irrigation provided the efficacy of such equipment is adequate to ensure optimal activation and uniform irrigation of the soil surface.
- 10) Residual activity of 8 - 10 weeks can be expected under favourable conditions.
- 11) **GRAMOXONE** can be added to the mixture at 500 ml/ha. The use of **GRAMOXONE** can cause severe damage to the cane and therefore applications with **GRAMOXONE** should be directed interrow sprays to prevent any damage to the cane.

<b>CALLISTO</b> 312 ml/ha	plus <b>FALCON GOLD 960 EC</b> 520 ml/ha	plus <b>DIURON 800 SC</b> 500 ml/ha	plus recommended adjuvant*
<b>Botanical name</b>		<b>Common name</b>	
<i>Acanthospermum hispidum</i>		<b>upright starbur</b>	
<i>Ageratum conyzoides</i>		<b>invading Ageratum</b>	
<i>Amaranthus hybridus</i>		<b>common pigweed</b>	
<i>Amaranthus spinosus</i>		<b>thorny pigweed</b>	
<i>Chenopodium album</i>		<b>white goosefoot</b>	
<i>Chenopodium carinatum</i>		<b>green goosefoot</b>	
<i>Cleome monophylla</i>		<b>spindlepod</b>	
<i>Commelina benghalensis</i>		<b>Benghal wandering Jew</b>	
<i>Convolvulus arvensis</i>		<b>field bindweed</b>	
<i>Corchorus trilocularis</i>		<b>wild jute</b>	
<i>Crotalaria sphaerocarpa</i>		<b>mealie crotalaria</b>	
<i>Datura ferox</i>		<b>large thorn apple</b>	
<i>Datura stramonium</i>		<b>thorn apple</b>	
<i>Digitaria sanguinalis</i>		<b>crab fingergrass</b>	
<i>Echinochloa colona</i>		<b>marsh grass</b>	



<i>Eleusine indica</i> <i>Hibiscus cannabinus</i> <i>Hibiscus trionum</i> <i>Ipomoea aristolochiaefolia</i> <i>Ipomoea purpurea</i> <i>Kyllinga erecta</i> <i>Nicandra physaloides</i> <i>Portulaca oleracea</i> <i>Pseudobrachiaria deflexa</i> <i>Richardia brasiliensis</i> <i>Sida cordifolia</i> <i>Sida rhombifolia</i> <i>Sida spinosa</i> <i>Tagetes minuta</i> <i>Tribulus terrestris</i> <i>Urochloa mosambicensis</i> <i>Urochloa panicoides</i>	<b>goose grass</b> <b>Kenaf</b> <b>Bladder weed</b> <b>small morning glory</b> <b>common morning glory</b> <b>white sedge</b> <b>apple-of-Peru</b> <b>purslane</b> <b>false signal grass</b> <b>tropical Richardia</b> <b>heart-leaf Sida</b> <b>arrow-leaf Sida</b> <b>spiny Sida</b> <b>khaki weed</b> <b>dubbeltjie</b> <b>bushveld herringbone grass</b> <b>herringbone grass</b>
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**At this rate and application stage the following weeds are controlled pre-emergence**

<i>Panicum schinzii</i>	<b>sweet buffalo grass</b>		
<b>CALLISTO</b> 312 ml/ha	<i>plus</i> <b>FALCON GOLD 960 EC</b> 1 041 ml/ha	<i>plus</i> <b>DIURON 800 SC</b> 500 ml/ha	<i>plus</i> recommended adjuvant*

<b>Botanical name</b>	<b>Common name</b>
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**All of the above-mentioned weeds will be controlled plus**

**Suppression (70 - 85% control)**

<i>Panicum maximum</i>	<b>common buffalo grass</b>
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**At this rate and application stage the following weeds are controlled pre-emergence**

<i>Aizoon glinoides</i> <i>Cyperus esculentus</i> <i>Panicum maximum</i> <i>Panicum schinzii</i> <i>Setaria pallide-fusca</i>	- <b>yellow nutsedge</b> <b>common buffalo grass</b> <b>sweet buffalo grass</b> <b>red bristle grass</b>
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<b>CALLISTO</b> 312 ml/ha	<i>plus</i> <b>FALCON GOLD 960 EC</b> 1 562 ml/ha	<i>plus</i> <b>DIURON 800 SC</b> 500 ml/ha	<i>plus</i> recommended adjuvant*
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<b>Botanical name</b>	<b>Common name</b>
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**All of the above-mentioned weeds will be controlled plus**

<i>Cyperus esculentus</i> <i>Panicum maximum</i> <i>Panicum schinzii</i>	<b>yellow nutsedge</b> <b>common buffalo grass</b> <b>sweet buffalo grass</b>
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**At this rate and application stage the following weeds are controlled pre-emergence**

<i>Aizoon glinoides</i> <i>Cyperus esculentus</i> <i>Panicum maximum</i> <i>Panicum schinzii</i> <i>Setaria pallide-fusca</i>	- <b>yellow nutsedge</b> <b>common buffalo grass</b> <b>sweet buffalo grass</b> <b>red bristle grass</b>
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<b>CALLISTO</b> 469 - 520 ml/ha	<i>plus</i> <b>FALCON GOLD 960 EC</b> 1 041 ml/ha	<i>plus</i> <b>DIURON 800 SC</b> 500 ml/ha	<i>plus</i> recommended adjuvant*
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<b>Botanical name</b>	<b>Common name</b>
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**All of the above-mentioned weeds will be controlled plus**

<i>Cyperus esculentus</i> <i>Panicum maximum</i> <i>Panicum schinzii</i>	<b>yellow nutsedge</b> <b>common buffalo grass</b> <b>sweet buffalo grass</b>
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**At this rate and application stage the following weeds are controlled pre-emergence**

<i>Aizoon glinoides</i> , <i>Cyperus esculentus</i> <i>Panicum maximum</i> <i>Panicum schinzii</i> <i>Setaria pallide-fusca</i>	- <b>yellow nutsedge</b> <b>common buffalo grass</b> <b>sweet buffalo grass</b> <b>red bristle grass</b>
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Consult the FALCON GOLD, DIURON, GRAMOXONE, COMPLEMENT SUPER, PENETREX, SOLITAIRE and TRONIC labels for WARNINGS, PRECAUTIONS and DIRECTIONS FOR USE.

**BATELEUR**<sup>®</sup>, **CALLISTO**<sup>®</sup>, **COMPLEMENT**<sup>®</sup>, **DUAL**<sup>®</sup>, **GARDO**<sup>®</sup>, **GARDOMIL**<sup>®</sup>, **GESAPRIM**<sup>®</sup>, **METAGAN**<sup>®</sup>, **PRIMAGRAM**<sup>®</sup>, **TOUCHDOWN**<sup>®</sup> and **KARATE**<sup>®</sup> are registered trade marks of a Syngenta Group Company. **TRONIC**<sup>®</sup> is a registered tradename of PLAASKEM. **PENETREX**<sup>®</sup> and **SOLITAIRE**<sup>®</sup> are registered tradenames of SAFAGRIC. **VELOCITY GLYFO** is a registered tradename of VILLA CROP CHEMICALS. **DIURON** and **BROADSTRIKE 80WG** are registered tradenames of DOW Agrosiences (PTY) LTD. **ACCENT** is a registered tradename of DUPONT DE NEMOURS INT SA. **BIODEW** is a registered tradename of PLAASKEM (PTY) LTD.

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