



syngenta

Reg. No. **L5617** Act No. 36 of 1947 **N-AR 0880** (Namibia) **W130599** (Botswana)

A water dispersible granular herbicide for selective post-emergence control of nutsedge and certain broadleaf weeds in grain sorghum, maize, sugarcane, avocados, citrus, mangoes, tobacco, wheat and lawns [kikuyu (*Pennisetum clandestinum*) and Cape Royal (*Cynodon dactylon*)].



Hazard statements:

May damage the unborn child. Very toxic to aquatic life with long-lasting effects.

Precautionary statements:

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. **Response:** If exposed or concerned, get medical advice/attention. Collect spillage. **Storage:** Store locked-up. **Disposal:** Dispose of contents/container to an approved waste disposal plant.

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GROUP 2 HERBICIDE

Active Ingredient:

halosulfuron (sulfonylurea)..... 750 g/kg



DANGER

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1. WARNINGS:

Hazard statements: May damage the unborn child. Very toxic to aquatic life with long-lasting effects.

- Handle with care.
- Harmful when swallowed.
- Store in a cool place.
- Store in the original, tightly closed container away from sunlight and damp conditions in a locked, well-ventilated dry place away from food and feed, seed and fertilisers and other agricultural remedies.
- Keep out of reach of children, uninformed persons and animals.
- Do not store in temperatures above 35°C.
- **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: Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. **Response:** If exposed or concerned, get medical advice/attention. Collect spillage. **Storage:** Store locked-up. **Disposal:** Dispose of contents/container to an approved waste disposal plant.

- Do not inhale the spray mist.
- Avoid skin and eye contact.
- Wash contaminated clothing after use.
- Wash with soap and water after use.
- Do not eat, drink, or smoke while mixing or applying the product or before washing hands and face.
- Avoid drift of spray onto other crops, grazing, rivers, dams and areas not under treatment.
- Clean applicator thoroughly after use and ensure that all traces of **SERVIAN** are removed. Refer to section 8: **SPRAY EQUIPMENT CLEAN-UP.**
- Prevent contamination of food, feed, drinking water and eating utensils.
- Destroy empty container in the prescribed manner and do not use it for any other purpose.

3. RELEVANT SUBSTANCES:

| Chemical name | |
|--------------------------------------------------------------------------|-----------------------|
| halosulfuron-methyl (ISO) | |
| Classification | Concentration (% w/w) |
| Repr. 1B; H360D Aquatic Acute 1; H400 Aquatic Chronic 1; H410 | ≥ 70 - < 90 |
| M-Factor (Acute aquatic toxicity): 1 (Chronic aquatic toxicity): 1 | |

4. RESISTANCE MANAGEMENT:

SERVIAN is a group code 2 herbicide. Any weed population may contain individuals naturally resistant to **SERVIAN** and other group code 2 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 **SERVIAN** or any other group code 2 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:

- Do not apply **SERVIAN** to crops that are stressed by severe weather conditions, drought, waterlogging, disease, or insect damage.
- Do not apply **SERVIAN** to inbred parent plants, experimental, or newly released cultivars without first consulting the manufacturer or seed supplier.
- Do not apply **SERVIAN** to crops not listed on this label, as severe damage may be suffered.
- Although **SERVIAN** is registered for use on maize, it should not be used on any of the sweetcorn, or supersweet corn cultivars.
- Do not use **SERVIAN** on soils where the pH (H₂O) is equal to or greater than 7 and/or soils containing free lime, as the residual activity may be extended and crop rotation options adversely affected.
- Yellowing of the funnel leaves and slight stunting of grain sorghum and maize plants may occur if cool, wet weather conditions prevail for some time after application. Plants will, however, recover as these symptoms are of a cosmetic nature and will have no effect on yield.
- SERVIAN** is not recommended for the control of purple nutsedge (*Cyperus rotundus*) in the dry conditions of the North West Province.
- SERVIAN** and combinations of **SERVIAN** with other herbicides must be applied directed between the rows in avocados, citrus and mangoes.
- SERVIAN** is recommended as a directed, inter-row application, after transplanting and establishment of tobacco. Leaves that are contacted may appear yellow and deformed. This will, however, have no effect on the rest of the plant. Prolonged periods of cool, wet weather can intensify the degree of yellowing and deformation of the contacted leaves.
- Do not use any other herbicide in tank mixture with **SERVIAN** on tobacco.
- Harvesting of tobacco leaves can commence seven (7) days after application of **SERVIAN**.
- The efficacy of **SERVIAN** may be influenced by the quality of application water. Ammonium sulphate, eg, VELOCITY-GLIFO (L7768) must be added at 1 ℓ/100 ℓ water in hard water (Ca²⁺ + Mg²⁺ > 150 dpm).

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 has been adjusted with lime. This applies even if triazines were used at crop rotation rates in previous years. Only maize should be planted directly after lime applications.
- Triazine sensitive crops include all broadleaf crops, e.g., different bean crops, sunflowers and all cereals, e.g., wheat.

- These warnings do not guarantee that no damage would be experienced to even the following maize crop, as large volumes of previously applied triazines might become 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 create conditions for increased efficacy and reduced selectivity. This increased pH may also increase certain herbicides' soil residual action, influencing the choice of follow-up crops, especially under irrigation.
- In situations where the soil pH had been adjusted, take care when applying sulphonylurea, triazolopyrimidine sulfonanilide and imidazolinone herbicides, which are all sensitive to soil pH fluctuations.

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

Minimum re-cropping intervals and crop rotation guidelines

Other crops may be very sensitive to low concentrations of **SERVIAN** in the soil. Therefore, careful consideration should be given to crop rotation plans prior to using **SERVIAN**.

The minimum recropping interval is the time between the last application of **SERVIAN** and the anticipated date of planting a subsequent crop.

To avoid injury to subsequent crops, the following recropping intervals should be observed:

| | |
|----------------------------------------------------|------------------------------------------------------------------------------------------|
| Avocado, citrus, mangoes, maize, sorghum and wheat | 1 month |
| Dry beans | 3 months |
| Potatoes | 6 months |
| Sunflower | 13 months |
| Sunflower parental lines | 24 months |
| All other crops | Replanting interval of at least 24 months must be observed, preceded by a test planting. |

The recropping interval where SORGOMIL GOLD 600 SC (L6221) or GESAPRIM SUPER (L3914) or GARDOMIL GOLD (L6246) is added to **SERVIAN** + 1 ℓ/ha GARDOPRIM 600 SC (L6223) is as follows:

| | |
|----------------------------------------------|------------------------------------------------------------------------------------------|
| Maize | 1 month |
| Grain sorghum, wheat, dry beans and potatoes | 9 months |
| Sunflower | 13 months |
| Sunflower parental lines | 24 months |
| All other crops | Replanting interval of at least 24 months must be observed, preceded by a test planting. |

On soils with 0 - 10% clay in the North West Province and

northwest Free State, as well as soils with a high lime content, the recommended GARDOMIL GOLD, GARDOPRIM 600 SC, GESAPRIM SUPER and SORGOMIL GOLD 600 SC rates could damage follow-up crops.

Important: The above-mentioned waiting periods are valid only if the correct dosage rate of **SERVIAN** was applied on soil with a pH (H₂O) of less than 7 and normal or above average rainfall fell during and following the season in which the application was made.

6. WEEDS THAT ARE CONTROLLED:

SERVIAN normally controls the following weed species at the dosage rates recommended below:

| SERVIAN 50 g | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Bidens pilosa</i> <i>Cleome monophylla</i> <i>Cyperus esculentus</i> <i>Cyperus rotundus</i> <i>Galinsoga parviflora</i> <i>Tagetes minuta</i> | black jack spindlepod yellow nutsedge purple nutsedge gallant soldier khaki weed |
| SERVIAN (50 g) + GARDOPRIM 600 SC (1 ℓ/ha), OR SERVIAN (50 g) + GESAPRIM SUPER (1 ℓ/ha), OR SERVIAN (50 g) + GARDOMIL GOLD (1,5 - 2,9 ℓ/ha) control the above-mentioned weeds as well as: | |
| * <i>Amaranthus hybridus</i> * <i>Datura ferox</i> * <i>Tribulus terrestris</i> * <i>Xanthium strumarium</i> | common pigweed large thorn apple devil's thorn ("dubbeltjie") cocklebur |
| SERVIAN + GARDOPRIM 600 SC (1 ℓ/ha) + SORGOMIL GOLD 600 SC (1 ℓ/ha), OR SERVIAN + GESAPRIM SUPER (1 ℓ/ha) + SORGOMIL GOLD 600 SC (1 ℓ/ha), OR SERVIAN + GARDOPRIM 600 SC (1 ℓ/ha) + GARDOMIL GOLD (1 ℓ/ha), OR SERVIAN + GESAPRIM SUPER (1 ℓ/ha) + GARDOMIL GOLD (1 ℓ/ha), OR SERVIAN + GARDOMIL GOLD (2.9 ℓ/ha) | |
| control the above-mentioned weeds as well as: | |
| <i>Crotalaria sphaerocarpa</i> <i>Ipomoea purpurea</i> | mealie Crotalaria common morning glory |
| * Factors such as high rainfall after application, cultivation, heavy soils and high weed pressure may detrimentally affect the residual control of dicot weeds with SERVIAN + GARDOPRIM 600 SC (1 ℓ/ha). Under these conditions it may be necessary to add 1 ℓ/ha SORGOMIL GOLD 600 SC or 1 ℓ/ha GESAPRIM SUPER or 1 ℓ/ha GARDOMIL GOLD. | |

SERVIAN does not control *Cyperus* spp. pre-emergence, hence poor control of late-germinating weeds can be expected. Under these conditions a second application may be necessary before the crop canopies.

SERVIAN has limited dicot activity and must, for this reason, be tank mixed with other dicot herbicides for a complete dicot spectrum.

SERVIAN has no activity on grasses. Grasses must therefore be controlled pre-emergence with DUAL GOLD (L5749), METAGAN GOLD (L5748), or FALCON GOLD (L5750). Consult the applicable labels for details.

7. DIRECTIONS FOR USE: Use only as indicated.

General

- **SERVIAN** rapidly inhibits growth of susceptible weeds. However, dying weeds may not be noticeable for 1 - 3 weeks after application, depending on growing conditions and weed susceptibility.
- Rainfall within six (6) hours after a **SERVIAN** application may reduce weed control.
- If **SERVIAN** applications are followed by a dry period and then a wet period later in the season, regrowth of nut-sedge may occur.

7.1 Compatibility

The compatibility of **SERVIAN** with other products may be influenced by the formulation of the products involved, as well as the quality of the water. Since the formulation of other products may change without Syngenta's knowledge and the quality of water may vary from farm to farm, a physical compatibility test should always be carried out prior to application.

SERVIAN is compatible with COMPLEMENT SUPER (L8169), BREAK-THRU (L5895), GARDOMIL GOLD (L6264), GARDOPRIM 600 SC (L6223), METAGAN GOLD (L5748), TOPIK (L4250), SORGOMIL GOLD 600 SC (L5897), TRALATE (L5100), GESAPRIM SUPER (L3914), SENCOR 480 SC (L3034), GESAPAX 500 SC (L2784), FALCON GOLD (L5750) and VELPAR 240 SL (L3696).

Do not apply **SERVIAN** in combination with **atrazine, paraquat, 2,4-D or bromoxynil.**

The application water in which **SERVIAN** is tank mixed should never have a pH of lower than 6. The solubility of **SERVIAN** increases more than 100 times at pH 7 versus pH 5. Do not add surfactants, acidifiers or buffers that reduce the pH below 6 when applying **SERVIAN**. The use of ammonium sulphate, e.g., VELOCITY-GLIFO (L7768), at rates ranging between 1% and 2% is recommended. VELOCITY-GLIFO contains only ammonium sulphate, which does not decrease the pH significantly.

SERVIAN should not be applied in mixtures with other herbicides, fungicides, insecticides, fertilisers or any other chemicals not recommended on this label.

7.2 Mixing Instructions

SERVIAN is a water dispersible granular formulation that mixes easily with water, provided the following mixing procedure is observed:

- Quarter to half-fill the spray tank with water.
- Add the required amount of ammonium sulphate (if required).
- Start agitation.
- Add the appropriate amount of surfactant.
- Add the required quantity of **SERVIAN** directly to the tank without prior creaming.
- Continue agitation while topping-up the tank with water and while spraying.
- Use **SERVIAN** spray preparations within 24 hours, as the effectiveness may be reduced due to product degradation.

- Thoroughly re-agitate before re-using.

7.3 Application Rates

Ground application

SERVIAN can be applied with any medium- or high-volume sprayer equipped with an efficient agitation mechanism and which is capable of adequate coverage and even distribution. Best results are obtained by applying a minimum spray volume of 200 - 400 ℓ/ha water.

TABLE 1: APPLICATION RATE OF SERVIAN

| Crop and weed target | Application rates product/ha |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Always add an adjuvant as registered to the SERVIAN spray mixture | |
| <i>Cyperus</i> spp. in AVOCADOS, CITRUS, GRAIN SORGHUM, LAWNS (kikukyu and <i>Cynodon</i>), MAIZE, MANGOES, SUGARCANE, TOBACCO and WHEAT | 50 g SERVIAN |
| <i>Cyperus</i> spp. plus dicot weeds in MAIZE only | 50 g SERVIAN plus <i>either</i> GARDOPRIM 600 SC (1 ℓ/ha) <i>or</i> GESAPRIM SUPER (1 ℓ/ha) <i>or</i> GARDOPRIM 600 SC (1 ℓ/ha) + SORGOMIL GOLD 600 SC (1 ℓ/ha) <i>or</i> GESAPRIM SUPER (1 ℓ/ha) + SORGOMIL GOLD 600 SC (1 ℓ/ha) <i>or</i> GARDOPRIM 600 SC (1 ℓ/ha) + GARDOMIL GOLD (1 ℓ/ha) <i>or</i> GESAPRIM SUPER (1 ℓ/ha) + GARDOMIL GOLD (1 ℓ/ha) <i>or</i> GARDOMIL GOLD (1.5 - 2.9 ℓ/ha) |

- Consult the GARDOPRIM 600 SC, SORGOMIL GOLD 600 SC, GESAPRIM SUPER and GARDOMIL GOLD labels for further details.
- Use the products in crops as registered on the labels of SORGOMIL GOLD, GESAPRIM SUPER and GARDOMIL GOLD.
- Add COMPLEMENT SUPER (100 ml/ha) or BREAK-THRU (0.05% v/v) to the spray mixture. Addition of other adjuvants to **SERVIAN** may result in 5 - 10% less control of *Cyperus* spp.
- Apply **SERVIAN** alone or in a mixture 3 - 5 weeks after planting of maize.
- Two (2) applications of **SERVIAN** may be necessary to control late-germinating nutsedge.
- For best results, apply **SERVIAN** on actively growing nutsedge under moist conditions 3 - 5 weeks after

planting (when most of the nutsedge plants have germinated but before flowering). New germination of nutsedge may occur if application was done too early. Inferior results will also be obtained with later applications when the nutsedge is in flower.

- Time of application is determined by the development stage of nutsedge plants. However, broadleaf weeds should not exceed the 4-leaf stage or 100 mm in height.
- If a cultivation is part of the normal practice, it must preferably be postponed until 2 - 7 days after application of **SERVIAN** or **SERVIAN** + GARDOPRIM 600 SC.
- Weeds growing under other weeds or the crop may not be controlled due to insufficient coverage. This must be considered in the timing of application.
- The degree and duration of control will depend on weed size, growing conditions at and following the period of application, soil pH (H₂O) and rainfall.
- Follow-up treatments may be necessary for the control of nutsedge in lawns.

8. SPRAY EQUIPMENT CLEAN-UP:

To avoid injury to other crops, thoroughly remove all traces of **SERVIAN** from the mixing and spray equipment immediately after spraying:

- Drain spray system completely. While agitating, thoroughly rinse spray tank with clean water and spray the rinsate through the nozzles. Drain system again.
- Refill spray tank with clean water to approximately 15 - 20% of the tank volume, thoroughly rinsing all inside tank surfaces.
- Add 1 ℓ sodium hypochlorite (5.2%) per 200 ℓ water while agitating. Rinse nozzles with rinsate for approximately one (1) minute. Let remaining rinsate circulate in the spraying system for a minimum of 5 - 10 minutes.
- Spray all rinsate through the nozzles and dispose of it in accordance with local regulations.
- To remove traces of the tank cleaner, flush the tank thoroughly with clean water, rinsing all inside tank surfaces. Spray the remaining rinsate through the nozzles and drain system.

9. PRODUCT AND CONTAINER DISPOSAL:

- Dispose of surplus product in an incinerator or on a landfill site approved for pesticides.
- Do not bury or burn container. Do not spray product onto any area under agricultural use.
- Dispose of containers in the prescribed manner.

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