






# SERVUS

Reg. no. L7271 Act/Wet 36 of/van 1947  
N-AR 0781

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

<b>GROUP</b>	<b>3A</b>	<b>INSECTICIDE</b>
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An emulsifiable concentrate contact and stomach insecticide for the control of insects in crops as indicated.	'n Emulgeerbare konsentraat kontak- en maaginsekododer vir die beheer van insekte in gewasse soos aangedui.
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     <p><b>DANGER</b></p>	<p><b>Hazard statements</b>            Flammable liquid and vapour.            Harmful if swallowed.            May be fatal if swallowed and enters airways (aspiration hazard).            Causes skin irritation.            Causes serious eye damage.            Harmful if inhaled.            May cause damage to organs through prolonged or repeated exposure. Hearing organs.            Very toxic to aquatic life with long lasting effects.</p> <p><b>Precautionary statements</b>            Avoid release to the environment.            Wear protective gloves/protective clothing/eye protection/face protection.</p>
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**ACTIVE INGREDIENT/AKTIEWE BESTANDDEEL**

deltamethrin (pyrethroid) ..... 25 g/L ..... deltametriën (piretroïed)

**NET VOLUME/NETTO VOLUME**

..... L

**REGISTRATION HOLDER/REGISTRASIEHOUER**

ADAMA South Africa (Pty) Ltd;  
 Reg. no. 1992/001741/07  
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**IN CASE OF POISONING, CALL THE FOLLOWING NUMBERS:**

Griffon Poison Information Centre:  
 +27 82 446 8946 or  
 Tygerberg Poison Information Centre:  
 +27 861 555 777

**EMERGENCY NUMBER:**

SPILL TECH: +27 86 100 6366 or +27 83 253 6618

UN no.: 1993

Batch number .....  
 Date of Manufacture .....  
 Expiry date .....

Lotnommer .....  
 Datum van Vervaardiging .....  
 Vervaldatum .....



GHS information

## WARNINGS

- Flammable liquid and vapour.
- Harmful if swallowed.
- May be fatal if swallowed and enters airways (aspiration hazard).
- Causes skin irritation.
- Causes serious eye damage.
- Harmful if inhaled.
- May cause damage to organs through prolonged or repeated exposure. Hearing organs.
- Very toxic to aquatic life with long lasting effects.

### Withholding periods (minimum number of days between last application and harvest or grazing):

<b>Apples, pears</b> .....	7 days
<b>Beans</b> .....	7 days
<b>Cotton (grazing)</b> .....	28 days
<b>Cruciferae</b> .....	3 days
<b>Grain sorghum</b> .....	28 days
<b>Grain sorghum (grazing)</b> .....	3 days
<b>Grapes</b> .....	28 days
<b>Lettuce</b> .....	3 days
<b>Lucerne (grazing)</b> .....	3 days
<b>Lupins (grazing)</b> .....	3 days
<b>Maize</b> .....	14 days
<b>Maize (grazing)</b> .....	3 days
<b>Mangoes</b> .....	28 days
<b>Onions</b> .....	2 days
<b>Paprika</b> .....	7 days
<b>Peas</b> .....	3 days
<b>Peaches, nectarines</b> .....	21 days
<b>Plums</b> .....	21 days
<b>Potatoes</b> .....	2 days
<b>Tomatoes</b> .....	2 days
<b>Wheat</b> .....	21 days
<b>Wheat (grazing)</b> .....	3 days

- Handle with care.
- Toxic to wild life.



- **Flammable:** Do not store or apply near open flames.
- Store in a cool, dry place away from food and feed.
- **Re-entry period:** Do not enter treated field within 1 day after application unless wearing protective clothing.
- In case of poisoning call a doctor and make this label available to him/her.
- **Aerial application:** Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not apply over water or adjacent areas that is not under treatment or allow the spray mist to drift over these areas.
- **Warning against resistance:** Resistance of American bollworm (*Helicoverpa armigera*) to synthetic pyrethroids has been confirmed.

**Cotton:** Synthetic pyrethroids must ONLY be applied to cotton during the period 1 January to 28 February.

**All other crops:** DO NOT apply more than two applications per growing season. If a pyrethroid gives poor performance DO NOT respray with any synthetic pyrethroid, even at a corrective dosage rate. Use a product from a different chemical group.

**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 pest 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, 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

- If medical advice is needed, have product container or label at hand.
- Keep out of reach of children.
- Obtain, read, and follow all safety instructions before use.
- Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
- Ground or bond container and receiving equipment and take precautionary measures against static discharge.
- Use explosion-proof electrical/ventilation/ lighting equipment and use only non-sparking tools.
- Avoid breathing dust/fumes/mist/vapours/spray.
- Wear protective gloves, protective clothing, eye protection and face protection.

- Wash hands, face, and any exposed skin thoroughly after handling.
- Use only outdoors or in a well-ventilated area.
- Avoid release to the environment.
- Do not eat, drink or smoke when using this product.
- In case of fire: Use the available fire-fighting equipment to extinguish the fire.
- IF SWALLOWED: Get medical help immediately. Rinse mouth. Do NOT induce vomiting.
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water under the safety shower.
- If skin irritation or rash occurs, get medical help.
- Take off contaminated clothing and wash it before re-use.
- IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Get medical help.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.
- Store locked up in a well-ventilated place and keep container tightly closed. Keep cool.
- Avoid release to the environment.
- Collect spillage.
- Dispose of contents/container to a licensed waste facility and in accordance with local and national regulatory requirements.

- Avoid contamination of food, feed, drinking water and eating utensils.
- Avoid contact with the eyes and skin.
- 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](http://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 spray drift onto other crops, grazing, rivers, dams and areas not under treatment.
- Clean applicator thoroughly after use. Dispose of wash water where it will not contaminate other crops, grazing, rivers or dams.
- If applied through a center pivot system, care should be taken that there is no back flow through the system that will contaminate the water source.

- Remove and wash work clothes. Wash yourself.

## RELEVANT SUBSTANCES

Chemical name	w/w %	CAS no.
Xylene	>60%	1330-20-7
Ethyl benzene	10 – 30%	100-41-4
Calcium dodecylbenzenesulphonate	<10%	26264-06-2
Deltamethrin	<10%	52918-63-5
2-Methylpropan-1-ol	<10%	78-83-1

## FIRST AID

Immediate medical attention is required. Acute exposure to SERVUS may require decontamination and life support for the victims. Provide this label and SDS to medical personnel for treatment. Emergency personnel should wear protective clothing appropriate to the type and degree of contamination.

Immediately remove contaminated clothing and remove the affected person from the contamination area. Keep the person warm, calm, and covered up. First Aid personnel should pay attention to their own safety. Take the container label or product name with you when seeking medical attention.

**Eye contact:** Immediately rinse/flush the eyes gently with water from the eye wash fountain for several minutes (at least 15 minutes), while holding the eyelids apart. Check for and remove contact lenses if easy to do so. Continue rinsing. Obtain immediate medical attention.

**Skin contact:** Remove all contaminated clothing and shoes. Rinse the skin immediately with plenty of water for 15 to 20 minutes under the safety shower. Immediately contact a poison control centre or medical practitioner for advice. Wash contaminated clothing before re-use.

**Inhalation:** Immediately remove the affected victim from exposure to an area with fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the product; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediately obtain medical attention.

**Ingestion:** Obtain immediate medical attention - call a poison control centre or medical practitioner immediately for treatment advice. If conscious, rinse mouth thoroughly with water. Never give anything by mouth to an unconscious or convulsing person. Do not induce vomiting. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomits.



## TOXICOLOGICAL INFORMATION

### Antidotes

No specific antidote. Treat symptomatically and supportively.

### Symptoms of human poisoning

None known for the product.

Xylene: Acute (short term) inhalation exposure to mixed xylenes in humans results in irritation of the eyes, nose, and throat, gastrointestinal effects, eye irritation, and neurological effects.

Chronic (long-term) inhalation exposure of humans to mixed xylenes results primarily in central nervous system (CNS) effects, such as headache, dizziness, fatigue, tremors, and incoordination; respiratory, cardiovascular, and kidney effects have also been reported.

## RESISTANCE WARNING

For the purpose of resistance management, **SERVUS** is classified as a group code 3 A insecticide. Any insect population may contain individuals naturally resistant to **SERVUS** and other group code 3 A insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by **SERVUS** or any other group code 3 A insecticide.

To delay insecticide resistance:

- Avoid exclusive repeated use of insecticides from the same insecticide group code. Alternate or tank-mix with products from different insecticide group codes.
- Integrate other control methods (chemical, cultural, biological) into insect control programmes.
- **Do not exceed three applications per season.**

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

## MODE OF ACTION

3A: Sodium channel modulators: Keep sodium channels open, causing hyperexcitation and, in some cases, nerve block. Sodium channels are involved in the propagation of action potentials along nerve axons.

## DIRECTIONS FOR USE

**Use only as indicated.**

NOTICE TO THE USER: This agricultural remedy is to be used only according to the directions of this label. It is an offense under the Act to use this product inconsistent with the directions on the label.

## COMPATIBILITY

The compatibility of **SERVUS** with other insecticides and fungicides are unknown. However, it is advisable to do a compatibility test prior to application.

## Water pH

The pH of the water used for spraying must be between 5 and 8. It is recommended that a suitable buffer solution is used to ensure that the water pH is between 5 and 8.

## APPLICATION

### Ground application

**SERVUS** can be applied by any medium or high volume spray apparatus provided it is equipped with an efficient agitation mechanism and is able to distribute the spray mixture evenly over the target area. The spray apparatus must be calibrated correctly prior to application.

### Aerial application

Aerial application may only be done by a registered aerial application operator using a registered and correctly calibrated aircraft according to the instructions of SANS Code 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. It is therefore essential that the following criteria be met:

### Equipment

- Use suitable atomising equipment (hydraulic nozzles or rotary atomisers) that will produce the desired droplet size and coverage of the target area and will ensure the minimum loss of product through drift.
- The operator must use a nozzle set-up that will produce a droplet spectrum with the lowest possible relative span.
- All nozzles and atomisers should be positioned within the inner 75% of the wingspan to prevent droplets from entering the wingtip vortices.

### Application parameters

- A minimum volume of 30 L spray mixture/ha is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy nor be held responsible for any adverse effects if this product is applied aurally at a lower volume rate than recommended.
- A droplet coverage of 30–40 droplets/cm<sup>2</sup> must be recovered at the target.
- A droplet spectrum with a VMD of 250–280 micron is recommended. Ensure that the production of fine droplets, with a VMD less than 150 micron, is restricted to a minimum.
- The height of the spray boom should be maintained at between 3 and 4 m above the target.
- Do not spray when the aircraft is in a climb, at the top of a turn or during a dive or when banking.



- Apply before the crop growth becomes too dense, which will interfere with overall plant coverage.

### **Meteorological conditions**

- The difference between the wet and dry bulb readings as determined by a whirling hygrometer, must not exceed 8 °C.
- Do not spray under turbulent, unstable conditions nor during the heat of the day when rising thermals and downdrafts occur.
- Do not spray under temperature inversion conditions (spraying in or above the inversion layer).
- Do not spray when the wind speed exceeds 15 km/h.

### **General**

- Ensure that fields are accurately marked and 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.

Prepared spray mixture must not be left in the spray tank for any length of time e.g. overnight.



## APPLICATION RATES

CROP AND PEST	DOSAGE	REMARKS
<b>All crops</b> Cutworms ( <i>Agrotis</i> spp.)	0.4–0.5 ml/100 m row	<p>Apply as a pre-emergent or early post-emergent application on MOIST soil. The seedbed must be in fine tilth and free of excessive clods and plant rests. In the case of crops which have already emerged, apply when 5% of plants show damage.</p> <p><b>Row application:</b> Apply in 3 L water/100 m row in a strip of 30 cm wide over the row on moist soil.</p>
	125–165 ml/ha	<p><b>Overall application:</b> Apply in 200–300 L water/ha on moist soil.</p>
	165 ml/ha	<p><b>Aerial application:</b> Apply in 30 L water/ha on moist soil.</p>
<b>Apples and pears</b> Codling moth ( <i>Cydia pomonella</i> )  American bollworm ( <i>Helicoverpa armigera</i> )  Banded fruit weevil ( <i>Phlyctinus callosus</i> )  Antestia bug ( <i>Antestiopsis orbitalis</i> )	<p><b>High volume:</b> 10 ml/100 L water (250 – 350 ml/ha)</p> <p><b>Low volume:</b> 250 – 350 ml/ha</p>	<p>Commence application at 75% petal drop. Apply at 2 500–3 500 L spray mixture/ha as a full cover spray. Repeat application at 14–18 day intervals.</p> <p>Apply as above, but use <math>\frac{1}{4}</math>–<math>\frac{1}{8}</math> of the water volume used for high volume application.</p> <p>Commence application at 75% petal drop and apply as a medium cover spray.</p> <p>Apply as above, but use <math>\frac{1}{4}</math>–<math>\frac{1}{8}</math> of the water volume used for high volume application.</p> <p>See warnings against resistance above.</p> <p>Commence application at 75% petal drop as a full cover spray at 2500–3500 L spray mixture/ha. Repeat 3 to 4 weeks later. If necessary a spray can be done in mid January.</p> <p>Ensure that the trunk and scaffolding branches are thoroughly wetted.</p> <p>Apply as a medium cover spray wetting leaves and flower clusters. Antestia will be controlled by sprays for Codling moth and Weevils.</p>
	<p><b>High volume:</b> 12 ml/100 L water (300 – 420 ml/ha)</p> <p><b>Low volume:</b> 300 – 420 ml/ha</p>	
	<p><b>High volume:</b> 25 ml/100 L water</p>	
	<p><b>High volume:</b> 12 ml/100 L water</p>	



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CROP ANS PEST	DOSAGE	REMARKS
<b>Beans and peas</b> American bollworm ( <i>Helicoverpa armigera</i> )	<b>Ground application:</b> 250 ml/ha <b>Aerial application:</b> 250 ml/ha	Scout fields at 7-day intervals from start of flowering using 25 plants/15 ha. Commence application when the first larvae is noticed or when 10% of the plants are infested with a mean of 1–2 larvae/plant. Apply in 200–500 L water/ha for ground application and in 30 L water/ha for aerial application. For optimum control the bollworm larvae should not be more than 10 mm in length at time of application. Repeat if necessary.  See warnings against resistance above.
<b>Cotton</b> American bollworm ( <i>Helicoverpa armigera</i> ) Red bollworm ( <i>Diparopsis castanea</i> ) Spiny bollworm ( <i>Earias spp.</i> ) Stainers ( <i>Dysdercus spp.</i> )	<b>Ground application:</b>  <b>Overall:</b> 250 ml/ha <b>Row application:</b> 2.5 ml/100 m row length  <b>Aerial application:</b> 300 ml/ha	<b>SERVUS</b> can only be applied to cotton 12 weeks after emergence. Scout 24 plants/15 ha and commence application for American bollworm when 12 eggs/24 plants or 5 larvae/24 plants are reached or exceeded during the weekly scouting inspections. For Red bollworm application should commence when egg count reaches 6/24 plants and Spiny bollworm when the number of larvae reach 4/24 plants.  Apply as a full cover spray and ensure thorough coverage of all plant parts. To achieve this it might be necessary to spray with drop arms and direct one nozzle in between the two rows, one nozzle directly over the top of each row and one nozzle on the outside of each of the two rows. For aerial application apply in 30 L water/ha.  See warnings against resistance above.
<b>Cruciferae</b> Diamond back moth ( <i>Plutella xylostella</i> )	<b>Ground application:</b> 20 ml/100 L water	Commencement of spraying depends on the final destination of the crop. If it is destined for the local market, application should commence if an average of  0.3 larvae/plant on 20 small plants and 0.2 larvae/plant on 20 larger plants are reached during scouting. If it is destined to be frozen it is recommended that plants are sprayed every 14 days. Apply at 500 L spray mixture/ha and ensure thorough coverage of the plants. The addition of a suitable wetter is recommended. In the case of bigger plants like Brussels sprouts, the use of drop arms is recommended. If necessary repeat application 14 days later.

CROP AND PEST	DOSAGE	REMARKS
<p><b>Grain sorghum</b></p> <p>American bollworm <i>(Helicoverpa armigera)</i></p>	<p><b>Ground application:</b> 2.5 ml/100 m row length (250 ml/ha)</p> <p><b>Aerial application:</b> 250 ml/ha</p>	<p>Commence application as soon as pest is noticed. Direct spray to the panicles of the plants and ensure full coverage of the panicles. For best results larvae should not exceed 10 mm in length.</p> <p>Apply in 3 L water/100 m row length in a strip of 50 cm wide over the row.</p> <p>Apply in 30 L water/ha.</p> <p>See warnings against resistance above.</p>
<p><b>Grapes</b></p> <p>American bollworm <i>(Helicoverpa armigera)</i></p> <p>Weevils <i>(Eremnus spp. and Phlyctinus callosus)</i></p>	<p><b>High volume:</b> 12 ml/100 L water</p> <p><b>High volume:</b> 25 ml/100 L water</p>	<p>Commence application when pest is noticed and apply as a medium cover spray. Ensure thorough coverage of leaves and bunches. Larvae should not exceed 10 mm in length. Repeat application if necessary.</p> <p>See warnings against resistance above.</p> <p>Apply first application mid October and repeat when necessary. Apply as a full cover spray and ensure thorough coverage of the trunk as well as other parts of the plant.</p>
<p><b>Lettuce</b></p> <p>American bollworm <i>(Helicoverpa armigera)</i></p> <p>Cutworm <i>(Agrotis spp.)</i></p>	<p><b>Ground application:</b> 250 ml/ha</p>	<p>Commence application as soon as pest is noticed and repeat if necessary.</p> <p>See warnings against resistance above.</p>
<p><b>Lucerne</b></p> <p>Lucerne caterpillar <i>(Colias electo)</i></p>	<p><b>Ground application:</b> 75 ml/ha</p>	<p>Commence application as soon as damage is noticed. Repeat application if necessary.</p>
<p><b>Lupins</b></p> <p>American bollworm <i>(Helicoverpa armigera)</i></p>	<p><b>Aerial application:</b> 200 ml/ha</p>	<p>Scout fields every 7 days as soon as flower buds are formed. Commence application as soon as larvae are noticed. For best results larvae should not exceed 10 mm in length. Repeat if necessary.</p>



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CROP ANS PEST	DOSAGE	REMARKS
		See warnings against resistance above.
<b>Maize</b> Chilo stalkborer ( <i>Chilo partellus</i> )  Stalkborer ( <i>Busseola fusca</i> )	<b>Ground application:</b> 2.5 ml/100 m row length  <b>Chemigation:</b> 250 ml/ha  <b>Ground application:</b> 2.0 ml/100 row length  <b>Aerial application:</b> 200 ml/ha	Apply in 3.0 L water/100 m row length. Application should commence as soon as 10 % of the plants show damage or as a preventive programme starting at 14 days after crop emergence. The spray must be directed into the funnels and onto the adjoining leaves. Repeat application at 14 day intervals up to tasseling.  Apply only through a center pivot that is fitted with a chemigation system. Commence application only when sufficient leaf surface is available i.e. from the 6-leaf stage onwards. Repeat application at 7- to 10-day intervals up to tasseling.  Apply directly into the plant funnel in 3 L water/100 m row length. Commence application as soon as eggs are found on 5% of the plants or 10% of the plants show the typical shot holes. For best control larvae should not exceed 5 mm in length. A second application might be necessary 14 days later.  Apply as above in 30 L water/ha.
<b>Maize and sweetcorn</b> American bollworm ( <i>Helicoverpa armigera</i> )	<b>Aerial application:</b> 250 ml/ha	Start scouting for eggs at beard appearance. Commence application as soon as eggs are present. Repeat application if necessary. Apply in 30 L water/ha.  See warnings against resistance above.
<b>Mangoes</b> Mango weevil ( <i>Stemochetus mangiferae</i> )	<b>High volume:</b> 40 ml/100 L water	Apply as a medium cover application. Commence application when fruitlets are about 10 mm in diameter and repeat application when fruitlets are 30–40 mm in diameter (4–5 weeks later). Scale numbers might increase after the use of <b>SERVUS</b> .
<b>Onions</b> Thrips ( <i>Thrips tabaci</i> )	<b>Ground application:</b>  <b>High volume:</b> 40 ml/100 L water	Depending on plant size apply at 250 – 500 L spray mixture / ha. Commence application as soon as pest is noticed. Repeat at 10 – 14 day intervals if necessary. The addition of a suitable wetter is recommended.



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CROP ANS PEST	DOSAGE	REMARKS
	<b>Low volume:</b> 100–200 ml/ha	Use the lower rate on small onions and higher rate on large plants. <b>Do not use in spring onions.</b>
<b>Paprika</b> American bollworm <i>(Helicoverpa armigera)</i>	<b>Ground application:</b> 250 ml/ha	Start scouting when the first flower buds appear. Commence application as soon as the first signs of bollworm is noticed. Ensure good coverage of flowers and fruit.  See warnings against resistance above.
<b>Stone fruit (Peaches, nectarines, plums)</b> Banded fruit weevil <i>(Phlyctinus callosus)</i> Mediterranean fruit fly <i>(Ceratitis capitata)</i> American bollworm <i>(Helicoverpa armigera)</i>	<b>High volume:</b> 25 ml/100 L water (625–875 ml/ha)  <b>High volume:</b> 12 ml/100 L water (300–420 ml/ha)  <b>Low volume:</b> 300–420 ml/ha	Apply as a full cover spray at 2 500–3500 L spray mixture/ha commencing when infestation is noticed (mid-November to end December) and repeat 3–4 weeks later. If required, a third application can be done in mid-January. <b>However, for the purpose of resistance management, do not exceed three applications per season.</b> Ensure thorough wetting of trunks and scaffold branches.  Apply at 2500–3500 L spray mixture/ha as a full cover spray commencing at 75 % petal drop. If necessary repeat 18–21 days later.  Apply as above in ¼–⅓ of the water volume used for high volume application.  See warnings against resistance above.
<b>Potatoes</b> Tuber moth <i>(Phthorimaea operculella)</i>	<b>Ground application:</b> 300 ml/ha	Apply in 250–500 L water/ha depending on plant size. Commence application at week 4 or earlier if an infestation should occur. Repeat every 10–14 days and alternate with other products with a different mode of action e.g. RIMON® 10 EC (Reg. No. L6285) and AZINPHOS 200 SC (Reg. No. L5588)  Ridge at least twice during the growing season.
<b>Tomatoes</b> American bollworm <i>(Helicoverpa armigera)</i>	<b>High volume:</b> 12.5 ml/100 L water	Commence application as soon as plants start flowering or at first signs of an infestation. Apply as a full cover spray. Use 2 L spray-mixture/10 cm plant height/100 m row. For optimum control larvae should not be bigger than 10 mm in length. Repeat application every 7–10 days if necessary.  See warnings against resistance above.

CROP ANS PEST	DOSAGE	REMARKS
<b>Wheat</b> American bollworm <i>(Helicoverpa armigera)</i>	<b>Aerial application:</b> 250 ml/ha	Commence application before 10% of the ears are infested. For optimum results the larvae should not exceed 10 mm in length. Repeat application if necessary. Apply in 30 L water/ha. See warnings against resistance above.

AZINPHOS 200 SC (Reg. no. L5588) is a trademark and RIMON® 10 EC (Reg. no. L6285) a registered trademark of a company of the ADAMA GROUP.

## WAARSKUWINGS

- Vlambare vloeistof en damp.
- Skadelik indien ingesluk.
- Mag dodelik wees indien ingesluk en in lugweg beland (aspirasiegevaar).
- Verorsaak velirritasie.
- Verorsaak ernstige oogskade.
- Skadelik indien ingeasem.
- Mag skade aan organe verorsaak deur langdurige of herhaalde blootstelling. Gehoororgane.
- Baie giftig vir waterlewende organismes met langdurige gevolge.

**Onthoudingsperiodes:** Minimum aantal dae tussen laaste toediening en oes of voer:

<b>Aartappels</b> .....	2 dae
<b>Appels en pere</b> .....	7 dae
<b>Blaarslaai</b> .....	3 dae
<b>Bone</b> .....	7 dae
<b>Druive</b> .....	28 dae
<b>Ertjies</b> .....	3 dae
<b>Graansorghum</b> .....	28 dae
<b>Graansorghum (beweiding)</b> .....	3 dae
<b>Katoen (beweiding)</b> .....	28 dae
<b>Koolgewasse</b> .....	3 dae
<b>Koring</b> .....	21 dae
<b>Koring (beweiding)</b> .....	3 dae
<b>Lupiene (beweiding)</b> .....	3 dae
<b>Lusern (beweiding)</b> .....	3 dae
<b>Mango's</b> .....	28 dae
<b>Mielies</b> .....	14 dae
<b>Mielies (beweiding)</b> .....	3 dae
<b>Paprika</b> .....	7 dae
<b>Perskes, Nektariens en Pruime</b> .....	21 dae
<b>Tamaties</b> .....	2 dae
<b>Uie</b> .....	2 dae

- Hanteer versigtig.
- Giftig vir die natuurlewe.
- **Vlambaar:** Moet nie stoor of toedien naby oop vlamme nie.
- Berg in 'n koel, droë plek weg van voedsel en voer.
- **Herbetredingsperiode:** Moet nie behandelde land binnegaan binne 1 dag na toediening nie tensy beskermende klere gedra word.
- In geval van vergiftiging ontbied 'n geneesheer en toon hierdie etiket aan hom/haar.
- **Lugtoediening:** Stel alle inwoners in die onmiddellike omgewing van die gebied wat bespuit gaan word in kennis en reik die nodige waarskuwings uit. Moet nie oor water of aanliggende gebiede wat nie behandel word toedien of toelaat dat die spuitnewel oor die gebiede dryf nie.
- **Waarskuwing teen bestandheid:** Weerstand van Amerikaanse bolwurm (*Helicoverpa armigera*) teen sintetiese piretroïedes is bevestig.

**Katoen:** Sintetiese piretroïedes MOET SLEGS gedurende die periode 1 Januarie tot 28 Februarie op katoen toegedien word.

**Alle ander gewasse:** MOENIE meer as twee toedienings per groeiseisoen toedien nie. As 'n piretroïedbespuiting swak beheer gee MOENIE met enige sintetiese piretroïed, selfs teen 'n korrektiewe dosis, herspuit nie. Gebruik 'n produk uit 'n ander chemiegroep.

**Alhoewel hierdie middel omvattend onder 'n groot verskeidenheid toestande getoets is, waarborg die registrasiehouer nie dat dit onder alle toestande doeltreffend sal wees nie aangesien die werking en effek daarvan beïnvloed kan word deur faktore soos abnormale grond, klimaats- en bergingstoestande, kwaliteit van verdunningswater, verenigbaarheid met ander stowwe wat nie op die etiket aangedui is nie en die voorkoms van weerstand van die plaag teen die betrokke middel sowel as die metode, tyd en akkuraatheid van toediening. Verder aanvaar die registrasiehouer nie verantwoordelikheid vir skade aan gewasse, plantegroei, die omgewing of vir nadelige effek op mens of dier of vir 'n gebrek aan prestasie van die betrokke middel as gevolg van die versuim van die gebruiker om etiketaanwysings na te kom of as gevolg van die ontstaan van toestande wat nie kragtens die registrasie voorsien kon word nie. Raadpleeg die verskaffer in geval van enige onsekerheid.**

## VOORSORGMAATREËLS

- Indien mediese advies benodig word, hou die produkhouer of -etiket byderhand.
- Hou buite bereik van kinders.
- Lees sorgvuldig en volg alle instruksies voor gebruik.
- Hou weg van hitte, warm oppervlakte, vonke, oop vlamme en ander ontstekingsbronne. Rook verbode.
- Aard en verbind houer en ontvangstoerusting en stel voorkomende maatreëls teen statiese ontladings in.
- Gebruik plofbestande elektriese/ventilasie-/beligting-/toerusting en gebruik vonkvrye



gereedskap.

- Vermy inaseming van poeier/walm/gas/stuifsel/dampe of spuitstof.
- Dra beskermende handskoene, beskermende klere, oogbeskerming, gesigbeskerming.
- Was hande, gesig en blootgestelde vel deeglik na hantering.
- Gebruik slegs buitenshuis of in 'n goed geventileerde area.
- Vermy vrystelling in die omgewing.
- Moet nie eet, drink of rook wanneer hierdie produk gebruik word nie.
- In geval van brand: Gebruik die beskikbare brandbestrydingstoerusting om te blus.
- INDIEN INGESLUK: Verkry onmiddellik mediese noodhulp en spoel mond. Moet NIE vomering induseer nie.
- INDIEN OP VEL (of hare): Trek onmiddellik alle besoedelde klere uit. Spoel aangetaste areas met water af [of stort].
- Indien velirritasie of uitslag ontstaan: Kry mediese hulp.
- Trek alle besoedelde klere uit en was dit voor hergebruik.
- INDIEN IN OË: Spoel versigtig met water vir etlike minute. Verwyder kontaklense indien aanwesig en maklik om te verwyder. Hou aan met spoel. Verkry mediese hulp.
- INDIEN INGEASEM: Neem slagoffer na vars lug en hou gemaklik vir asemhaling. Verkry mediese hulp.
- Berg agter slot en grendel in 'n goed geventileerde plek en hou houer dig toe. Hou koel.
- Maak stortsel bymekaar.
- Raak ontslae van inhoud/houer by 'n goedgekeurde afvalverwyderingsaanleg in ooreenstemming met plaaslike en nasionale regulasies.

- Vermy besoedeling van voedsel, voer, drinkwater en eetgerei.
- Vermy kontak met oë en vel.
- Keer die leë houer oor die spuit of mengtenk om en dreineer vir minstens 30 sekondes nadat die vloeï tot 'n gedrup verminder het. Spoel daarna die leë houer drie keer na mekaar met een kwart van die houervolume vars water en giet die spoelwater in die spuittenk of mengtenk oor Kap gate in die drie keer gespoelde houer waarna dit aan 'n goedgekeurde versamelaar of verwerker oorhandig moet word ([www.croplife.co.za](http://www.croplife.co.za)).
- Moet nie die houer begrawe, verbrand of aan enige ander partye skenk wat dit as houer vir voedsel of drinkgoed mag gebruik nie.

- Vermy dat die spuitnewel oorwaai na ander gewasse, weiding, riviere, damme en gebiede wat nie behandel moet word nie.
- Maak toediener deeglik skoon na gebruik. Gooi waswater waar dit nie ander gewasse, weiding, riviere of damme sal besoedel nie.
- Indien deur 'n spilpunt toegedien word verseker dat daar geen terugvloei deur die sisteem is wat die waterbron kan besoedel nie.
- Trek werksklere uit en was dit. Was uself.

## RELEVANTE STOWWE

Chemiese naam	w/w %	CAS nr.
Xileen	>60%	1330-20-7
Etielbenseen	10 – 30%	100-41-4
Kalsium dodesiel benseen sulfonaat	<10%	26264-06-2
Deltametrien	<10%	52918-63-5
2-Metielpropan-1-ol	<10%	78-83-1

## NOODHULPBEHANDELING

Onmiddellike mediese aandag word vereis. Akute blootstelling aan **SERVUS** mag dekontaminasie en lewensondersteuning vir die slagoffers vereis. Verskaf hierdie etiket en SDS aan mediese personeel vir behandeling. Noodpersoneel moet beskermende klere dra wat geskik is vir die soort en graad van kontaminasie.

Trek onmiddellik alle besoedelde klere uit en verwyder die slagoffer uit die besoedelde area. Hou die slagoffer warm, kalm en bedek. Noodhulppersoneel moet oplet na hulle eie veiligheid. Neem die produkhouer of produknaam saam wanneer mediese hulp verlang word.

**Oogkontak:** Spoel onmiddellik oë versigtig met groot hoeveelhede water by die oogspoelstasie vir ten minste 15 minute terwyl ooglede wyd oop gehou word. Verwyder kontaklense indien aanwesig, en indien maklik om te doen. Hou aan met spoel. Verkry onmiddellik mediese hulp.

**Velkontak:** Verwyder besoedelde klere en skoene. Spoel die vel onmiddellik met groot hoeveelhede water vir 15 tot 20 minute onder die veiligheidstort. Kontak onmiddellik 'n geneesheer of 'n gifstofbeheersentrum vir advies. Was besoedelde klere voor hergebruik.

**Inaseming:** Verwyder die slagoffer onmiddellik uit die area van blootstelling na vars lug. Indien asemhaling moeilik is, moet suurstof deur gekwalifiseerde personeel toegedien word. Indien asemhaling ophou, dien kunsmatige asemhaling toe. Moenie mond-tot-mond asemhaling toepas indien die slagoffer die produk ingesluk of ingeasem het nie; pas kunsmatige asemhaling toe met behulp van 'n mond-tot-mond respirator of ander toepaslike mediese asemhalingstoerusting. Verkry onmiddellik mediese hulp.

**Indien ingesluk:** Verkry onmiddellik mediese behandeling – kontak onmiddellik ‘n gifstofbeheersentrum of geneesheer vir behandelingsadvies. Indien by volle bewussyn, spoel mond deeglik uit met water. Moet nooit iets per mond aan ‘n bewustelose persoon of ‘n persoon met stuiptrekkings gee nie. Moet nie braking induseer nie. Indien spontane braking plaasvind, laat die slagoffer vooroor buig met die kop na onder om inaseming van braaksel te verhoed.

## TOKSIKOLOGIESE INLIGTING

### Teenmiddels

Geen teenmiddels bekend nie. Behandel simptome en ondersteunend.

### Simptome van menslike vergiftiging

Geen bekend vir die produk nie.

Xileen: Akute (korttermyn) inasemingsblootstelling aan gemengde xilene by mense lei tot irritasie van die oë, neus en keel, gastroïntestinale effekte, oogirritasie en neurologiese effekte.

Chroniese (langtermyn) inasemingsblootstelling van mense aan gemengde xilene lei hoofsaaklik tot sentrale senuweestelsel (SNS) effekte, soos hoofpyn, duiseligheid, moegheid, bewing en gebrekkige koördinasie; respiratoriese, kardiovaskulêre en nier-effekte is ook aangemeld.

## WEERSTANDSWAARSKUWING

Vir die doel van weerstandsbestuur is **SERVUS** geklassifiseer as ‘n groepkode 3A insekdoder. Enige populasie van ‘n spesifieke insek mag individue insluit wat ‘n natuurlike weerstand teen **SERVUS** of enige ander groepkode 3A insekdoders het. Indien hierdie insekdoders herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik die insekpopulasie oorheers. Hierdie weerstandbiedende insekte sal waarskynlik nie deur **SERVUS** of enige ander groepkode 3A insekdoder beheer word nie.

Om weerstand teen insekdoders te vertraag:

- Vermyn die eksklusiewe herhaaldelike gebruik van insekdoders met dieselfde groepkode. Wissel af met, of gebruik tenkmengsels van produkte in verskillende insekdodergroepcodes.
- Integreer ander beheermaatreëls (chemies, verbouing, biologies) in insekdoderprogramme.
- **Moenie drie toedienings per seisoen oorskry nie.**

Vir spesifieke inligting oor weerstandsbestuur kontak die registrasiehouer van hierdie produk.

## MEGANISME VAN WERKING

3A: Natriumkanal-moduleerder: Hou natriumkanale oop, wat hiperprikkelbaarheid en in sommige gevalle senuweeblok veroorsaak. Natriumkanale speel 'n rol in die voortsetting van aksiepotensiale langs die senuwee-aksons af.

## GEBRUIKSAANWYSINGS

### Gebruik slegs soos aangedui.

NOTA AAN DIE GEBRUIKER: Hierdie landboumiddel moet slegs gebruik word soos aangedui volgens die gebruiksaanwysings in hierdie etiket. Dit is 'n oortreding van die Wet om hierdie middel te gebruik op 'n wyse wat strydig is met die aanwysings op die etiket.

## VERENIGBAARHEID

Die verenigbaarheid van **SERVUS** met ander insek- en swamdoders is onbekend. Daar word dus aanbeveel dat 'n fisiese mengbaarheidstoets gedoen word voor bespuiting.

## Water pH

Die pH van die water wat vir bespuiting gebruik gaan word, moet tussen 5 en 8 wees. Daar word aanbeveel dat van 'n geskikte bufferoplossing gebruik gemaak word wat die spuitmengsel se pH tussen 5 en 8 sal stabiliseer.

## TOEDIENING

### Grondtoediening

**SERVUS** kan met enige medium- of hoëvolume spuitapparaat toegedien word, mits dit toegerus is met 'n doeltreffende roermeganisme en in staat is om die spuitmengsel eweredig oor die teikenoppervlak te versprei. Die spuitapparaat moet korrek gekalibreer word voor toediening.

### Lugtoediening

Lugtoediening mag slegs deur 'n geregistreerde lugbespuitingsoperateur met 'n geregistreerde en korrek gekalibreerde vliegtuig volgens instruksies van SABS Kode 10118 ("Aerial Application of Agricultural Remedies") gedoen word. Dit is belangrik om te verseker dat die spuitmengsel eweredig oor die teikenarea versprei word en dat die verlies aan spuitmengsel tydens toediening tot die minimum beperk word. Die volgende kriteria moet nagekom word:

### Toerusting

- Gebruik geskikte atomiseringsapparaat (hidroliese of roterende spuitkoppe) wat die vereiste druppelgrootte en bedekking van die teiken sal produseer, maar wat die minste verlies van produk deur wegdrywing sal verseker.
- Die operateur moet 'n spuitkop spuitstelsel gebruik wat 'n druppelspektrum met die kleinste moontlike relatiewe span sal produseer.
- Al die spuitkoppe en atomiseerders moet in die binneste 75% van die vlerkspan geplaas word om die beweging van druppels in die vlerkvorteks in te beperk.

### **Toedieningsvereistes**

- 'n Minimum volume van 30 L spuitmengsel/ha word aanbeveel. Aangesien hierdie produk nie teen 'n verlaagde spuitvolume getoets is nie, kan die registrasiehouer nie effektiwiteit waarborg of verantwoordelik gehou word vir enige nadelige effek indien hierdie produk teen 'n laer volume as hierbo aanbeveel, uit die lug toegedien word nie.
- 'n Druppelbedekking van 30–40 druppels/cm<sup>2</sup> moet op die teikenarea herwin word.
- 'n Druppelspektrum met 'n VMD van 250–280 mikron word aanbeveel. Verseker dat die produksie van fyn druppels, die wat kleiner as 150 mikron is, tot 'n minimum beperk word.
- Die hoogte van die spuitbalk moet tussen 3 en 4 m bo die teiken gehandhaaf word.
- Moet nie spuit wanneer die vliegtuig aan die bopunt van 'n draai is of tydens 'n duik of terwyl dit uitklim of draai nie.
- Dien toe voordat die gewas te ruig word aangesien die druppelbedekking op die plante verminder sal word.

### **Meteorologiese toestande**

- Die verskil tussen die nat- en droëbollesing, soos met 'n swaaihygrometer bepaal, moet nie 8 °C oorskry nie.
- Moenie toedien tydens turbulente en onstabiele weerstoestande of gedurende die hitte van die dag wanneer stygende en dalende konveksie windbeweging plaasvind nie.
- Moenie toedien onder temperatuur inversie toestande (deur bo of binne die inversielaag te spuit) nie.
- Moenie spuit indien die windspoed 15 km/h oorskry nie.

### **Algemeen**

- Verseker dat die lande akkuraat gemerk is en dat die spuitoperator presies weet watter lande gespuit moet word.
- Verkry versekering van die spuitoperator dat aan bogenoemde vereistes voldoen sal word.
- **Moenie meer as drie toedienings per seisoen maak nie.**

Aangemaakte spuitoplossing moenie onnodig oorstaan nie, veral nie oornag nie.

## TOEDIENINGSHOEVEELHEDE

GEWAS EN PLAAG	DOSIS	OPMERKINGS
<b>Aartappels</b> Aartappelmot ( <i>Phthorimaea operculella</i> )	<b>Grondtoediening:</b> 300 ml/ha	Afhangende van plantgrootte dien toe in 250–500 L water/ha. Begin toediening by week 4 of vroeër as 'n infestasië waargeneem word. Herhaal toediening elke 10–14 dae en wissel af met ander produkte wat 'n ander werkingswyse het, bv. RIMON® 10 EC (Reg. no. L6285) en AZINPHOS 200 SC (Reg. no. L5588). Erd ten minste twee keer op gedurende die groeiseisoen.
<b>Alle gewasse</b> Snywurms ( <i>Agrotis spp.</i> )	0.4–0.5 ml/100 m ry  125–165 ml/ha  165 ml/ha	Dien toe as 'n vooropkom of vroeë na-opkom toediening op KLAM grond. Die saadbed moet fyn en sonder kluite wees en geen oormatige plantreste moet voorkom nie. In gevalle waar die gewas reeds opgekom het, dien toe wanneer plante 5% skade toon.  <b>Rytoediening:</b> Dien toe in 3 L water/100 m rylengte in 'n 30 cm breë strook oor die ry op klam grond.  <b>Algehele toediening:</b> Dien toe in 200–300 L water/ha op klam grond.  <b>Lugtoediening:</b> Dien toe in 30 L water/ha op klam grond.
<b>Appels en pere</b> Kodlingmot ( <i>Cydia pomonella</i> )  Amerikaanse bolwurm ( <i>Helicoverpa armigera</i> )  Gebande vrugtekander ( <i>Phlyctinus callosus</i> )	<b>Hoëvolume:</b> 10 ml/100 L water (250–350 ml/ha)  <b>Laevolume:</b> 250–350 ml/ha  <b>Hoëvolume:</b> 12 ml/100 L water (300–420 ml/ha)  <b>Laevolume:</b> 300–420 ml/ha  <b>Hoëvolume:</b> 25 ml/100 L water	Begin met toediening by 75 % blomblaarval. Dien toe as 'n volle dektoediening teen 2500–3500 L spuitmengsel/ha. Herhaal toediening met 14- tot 18-dae tussenposes.  Dien toe soos hierbo, maar gebruik ¼–⅓ van die watervolume wat vir hoëvolume toedienings gebruik word.  Begin toediening by 75% blomblaarval as 'n medium dektoediening.  Dien toe soos hierbo maar gebruik ¼–⅓ van die watervolume wat vir hoëvolume toedienings gebruik word.  Sien waarskuwings teen weerstand bo.  Begin toediening by 75% blomblaarval as 'n volle dektoediening teen 2500–3500 L spuitmengsel/ha. Herhaal 3 tot 4 weke later. Indien nodig kan 'n bespuiting middel Januarie gedoen word. Verseker dat die stam en raamtakke deeglik benat word.



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GEWAS EN PLAAG	DOSIS	OPMERKINGS
Antestia ( <i>Antestiopsis orbitalis</i> )	<b>Hoëvolume:</b> 12 ml/100 L water	Dien toe as 'n medium deктоediening en verseker dat blare en blomtrosse benat word. Antestia sal ook beheer word deur die toedienings vir kodlingmot en kalanders.
<b>Bone en erte</b> Amerikaanse bolwurm ( <i>Helicoverpa armigera</i> )	<b>Grondtoediening:</b> 250 ml/ha  <b>Lugtoediening:</b> 250 ml/ha	Verken lande met 7 dae tussenposes vanaf die begin blomstadium en gebruik 25 plante/15 ha. Dien toe sodra die eerste larwes waargeneem word of wanneer 10% van die plante geïnfesteer is met 'n gemiddeld van 1 tot 2 larwes per plant. Dien toe in 200–500 L water/ha vir grondtoediening en 30 L water/ha vir lugtoediening.  Vir maksimum beheer moet die bolwurmlarwes nie groter as 10 mm in lengte wees nie.  Herhaal toediening indien nodig.  Sien waarskuwings teen weerstand bo.
<b>Druive</b> Amerikaanse bolwurm ( <i>Helicoverpa armigera</i> )  Kalanders ( <i>Eremnus spp.</i> en <i>Phlyctinus calossus</i> )	<b>Hoëvolume:</b> 12 ml/100 L water   <b>Hoëvolume:</b> 25 ml/100 L water	Begin toediening sodra plaag opgemerk word. Dien toe as 'n medium deктоediening. Verseker dat die blare en trosse deeglik benat word.  Die bolwurmlarwes moet nie 10 mm in lengte oorskry nie. Herhaal toediening indien nodig.  Sien waarskuwings teen weerstand bo.  Dien die eerste toediening toe in middel Oktober en herhaal indien nodig. Dien toe as 'n volle deктоediening en verseker deeglike bedekking van die stam sowel as ander plantdele.
<b>Graansorghum</b> Amerikaanse bolwurm ( <i>Helicoverpa armigera</i> )	  <b>Grondtoediening:</b> 2.5 ml/100 m rylengte (250 ml/ha) <b>Lugtoediening:</b> 250 ml/ha	Dien toe as 'n gerigte bespuiting op die are sodra die plaag opgemerk word. Maak seker dat alle dele van die aar goed benat word. Vir die beste resultate moet die larwes nie 10 mm in lengte oorskry nie.  Dien toe in 3 L water/100 m rylengte in 'n 50 cm breë strook oor die ry.  Dien toe in 30 L water/ha.  Sien waarskuwings teen weerstand bo.





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GEWAS EN PLAAG	DOSIS	OPMERKINGS
<b>Katoen</b> Amerikaanse bolwurm ( <i>Helicoverpa armigera</i> ) Rooibolwurm ( <i>Diparopsis castanea</i> ) Stekelbolwurm ( <i>Earias spp.</i> ) en Vlekbesies ( <i>Dysdercus spp.</i> )	<b>Grondtoediening:</b> <b>Algehele:</b> 250 ml/ha  <b>Rytoediening:</b> 2.5 ml/100 m rylengte  <b>Lugtoediening:</b> 300 ml/ha	<b>SERVUS</b> kan slegs op katoen 12 weke na opkom toegedien word. Verken 24 plante/15 ha en begin toediening vir Amerikaanse bolwurm sodra weeklikse verkenning 12 eiers/24 plante of 5 larwes/24 plante bereik of oorskry.  Vir rooibolwurm moet toediening begin sodra die eiertelling 6/24 plante en vir stekelbolwurm sodra 4 larwes/24 plante bereik is. Dien toe as 'n volle dektoediening en verseker dat alle plantdele deeglik benat word. Om dit te bereik, mag dit nodig wees om met valarms te spuit en rig een spuitpunt tussen die twee rye, een spuitpunt direk bo-oor elke ry en een spuitpunt aan die buitekante van elk van die twee rye.  Vir lugbespuiting dien toe in 30 L water/ha.  Sien waarskuwings teen weerstand bo.
<b>Koolgewasse</b> Ruitrugmot ( <i>Plutella xylostella</i> )	<b>Grondtoediening:</b> 20 ml/100 L water	Aanvang van toediening hang af van die bestemming van die gewas. Indien koolgewasse bestem is vir die lokale mark, moet bespuiting begin sodra 'n gemiddeld van 0.3 larwes/plant op 20 klein plantjies aangetref word of 0.2 larwes/plant op 20 groter plante gedurende verkenning. Indien dit bestem is om gevries te word, word aanbeveel dat plante elke 14 dae bespuit word. Dien toe teen 500 L spuitmengsel/ha en verseker goeie benatting van plante. Die gebruik van 'n geskikte benatter word aanbeveel. In die geval van groter plante soos byvoorbeeld Brusselse spruite, word die gebruik van valarms aanbeveel. Herhaal toediening 14 dae later indien nodig.
<b>Koring</b> Amerikaanse bolwurm ( <i>Helicoverpa armigera</i> )	<b>Lugtoediening:</b> 250 ml/ha	Begin toediening voor 10% van die are geïnfesteer is. Vir optimum beheer moet die larwes nie 10 mm in lengte oorskry nie. Herhaal toediening indien nodig. Dien toe in 30 L water/ha.  Sien waarskuwings teen weerstand bo.
<b>Lupiëne</b> Amerikaanse bolwurm ( <i>Helicoverpa armigera</i> )	<b>Lugtoediening:</b> 200 ml/ha	Verken lande elke 7 dae sodra blomknoppe gevorm is en dien toe sodra die eerste larwes opgemerk word. Vir beste resultate moet larwes nie groter as 10 mm in lengte wees nie. Herhaal toediening indien nodig.  Sien waarskuwings teen weerstand bo.





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GEWAS EN PLAAG	DOSIS	OPMERKINGS
<b>Lusern</b> Lusernruspe ( <i>Colias electo</i> )	<b>Grondtoediening:</b> 75 ml/ha	Begin toediening sodra skade waargeneem word. Herhaal toediening indien nodig.
<b>Mango's</b> Mangosnuitkewer ( <i>Stemochetus mangiferae</i> )	<b>Hoëvolume:</b> 40 ml/100 L water	Dien toe as 'n medium deктоediening sodra vruiggies 'n grootte van 10 mm in deursnee bereik. Herhaal toediening wanneer die vruiggies 30–40 mm in deursnee is (4 tot 5 weke na eerste bespuiting). Hierdie bespuitings mag aanleiding gee tot 'n toename in dopluisgetalle.
<b>Mielies</b> Chilo stronkboorder ( <i>Chilo partellus</i> )  Stronkboorder ( <i>Busseola fusca</i> )	<b>Grondtoediening:</b> 2.5 ml/100 m rylengte  <b>Spilpunttoediening:</b> 250 ml/ha  <b>Grondtoediening:</b> 2.0 ml/100 m rylengte  <b>Lugtoediening:</b> 200 ml/ha	Dien toe in 3 L water/100 m rylengte. Toediening kan geskied as 'n voorkomende behandeling 14 dae nadat plante opgekom het of as 'n korrektiewe behandeling sodra 10% van die plante skadesimptome toon. Toediening moet gerig word in die kelke in en na die omliggende blare van plante. Herhaal toediening met 14 dae tussenposes tot met pluimvorming.  Dien slegs toe deur 'n spilpunt wat toegerus is met 'n toedieningsstelsel. Begin toediening indien daar genoegsame blaaroppervlakte is m.a.w. vanaf die 6-blaarstadium tot in 'n meer gevorderde stadium. Herhaal toediening met 7- tot 10-dae tussenposes tot met pluimstoot.  Dien direk in die kelk toe in 3 L water/100 m rylengte. Begin met toediening sodra eiers op 5% van die plante gevind word of as 10% van die plante die tipiese haelskootletsels toon. Vir die beste beheer moet die larwes nie groter as 5 mm in lengte wees nie. 'n Tweede toediening mag nodig wees 14 dae later.  Dien toe soos hierbo in 30 L water/ha.
<b>Mielies en suikermielies</b> Amerikaanse bolwurm ( <i>Helicoverpa armigera</i> )	<b>Lugtoediening:</b> 250 ml/ha	Verken vir bolwurmeiers sodra die baard verskyn. Begin toediening sodra die eerste eiers opgemerk word. Herhaal toediening indien nodig. Dien toe in 30 L water / ha.  Sien waarskuwings teen weerstand bo.
<b>Paprika</b> Amerikaanse bolwurm ( <i>Helicoverpa</i> )	<b>Grondtoediening:</b> 250 ml/ha	Begin met verkenning sodra die eerste blomknoppe verskyn. Begin toediening sodra die eerste tekens van bolwurmlarwes waargeneem word. Verseker dat die blomme en vrugte goed bedek word.



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GEWAS EN PLAAG	DOSIS	OPMERKINGS
<i>armigera</i> )		Sien waarskuwings teen weerstand bo.
<b>Steenvrugte</b> <b>(Perskes, nektariens, pruime)</b>  Gebande vrugtekalander ( <i>Phlyctinus callosus</i> )  Mediterreense vrugtevlieg ( <i>Ceratitis capitata</i> )  Amerikaanse bolwurm ( <i>Helicoverpa armigera</i> )	<b>Hoëvolume:</b> 25 ml / 100 L water (625–875 ml/ha)  <b>Hoëvolume:</b> 12 ml/100 L water (300 – 420 ml/ha)  <b>Laevolume:</b> 300 – 420 ml/ha	Dien toe as 'n volle deктоediening teen 2500–3500 L spuitmengsel/ha sodra infestasiе waargeneem word (middel November tot einde Desember). Herhaal toediening 3 tot 4 weke later. <b>Vir die doel van weerstandsbestuur moet egter nie meer as drie toedienings per seisoen maak nie.</b> Indien nodig kan 'n derde bespuiting in middel Januarie toegedien word. Verseker 'n deeglike bedekking van die stamme en raamtakke.  Dien toe as 'n volle deктоediening teen 2500–3500 L spuitmengsel/ha by 75 % blomblaarval. Indien nodig, herhaal bespuiting 18 tot 21 dae later.  Dien toe soos hierbo in ¼–½ van die watervolume wat vir die hoëvolumebespuiting gebruik is.  Sien waarskuwings teen weerstand bo.
<b>Blaarslaai</b>  Amerikaanse bolwurm ( <i>Helicoverpa armigera</i> )  Snywurm ( <i>Agrotis spp.</i> )	<b>Grondtoediening:</b> 250 ml/ha	Begin toediening sodra plaag opgemerk word en herhaal indien nodig.  Sien waarskuwings teen weerstand bo.
<b>Tamaties</b>  Amerikaanse bolwurm ( <i>Helicoverpa armigera</i> )	<b>Hoëvolume:</b> 12.5 ml/100 L water	Begin toediening sodra plante begin blom of by eerste tekens van 'n infestasiе. Dien toe as 'n volle deктоediening. Gebruik 2 L spuitmengsel/ 10 cm planthoogte/100 m ry. Om optimale beheer te verkry moet die larwes nie groter as 10 mm in lengte wees nie. Indien nodig kan toediening elke 7 tot 10 dae herhaal word.  Sien waarskuwings teen weerstand bo.
<b>Uie</b>  Blaaspoottjie ( <i>Thrips tabaci</i> )	<b>Grondtoediening:</b> <b>Hoëvolume:</b> 40 ml/100 L water  <b>Laevolume:</b>	Afhangende van plantgrootte, dien toe teen 250–500 L spuitmengsel per ha. Begin toediening sodra die plaag waargeneem word. Herhaal met 10- tot 14-dae tussenposes indien nodig. Daar word aanbeveel dat 'n geskikte benatter gebruik word.  Dien die laer dosis toe op klein plantjies en



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GEWAS EN PLAAG	DOSIS	OPMERKINGS
	100–200 ml/ha	die hoër dosis op groot plante. <b>Moet nie in spruituie toedien nie.</b>

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