BEFORE USING THIS PRODUCT, READ THE LABEL CAREFULLY. KEEP OUT OF REACH OF CHILDREN AND ANIMALS.

Insecticide

LAMBDA 50EC

Reg. No. L 7787 Act No. 36 of 1947

5: 7/7/2022 – May2024

An emulsifiable concentrate contact and stomach insecticide for the control of insects on crops as listed.

ACTIVE INGREDIENT

lambda-cyhalothrin (pyrethroid) 50 g/ℓ

GROUP 3 INSECTICIDE

DANGER

Hazard Statements:

Harmful if swallowed.
May be fatal if swallowed and enters airways.
Harmful in contact with skin.
Causes mild skin irritation.
Causes serious eye damage.
Harmful if inhaled.
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
Do NOT induce vomiting.

ℓ

villa

UN Number: 3082

Registration holder: UNIVERSAL CROP PROTECTION (PTY) LTD.
Co. Reg. No. 1983/008184/07
P.O. Box 801, Kempton Park, 1620
Tel. (011) 396 2233
Website: www.villacrop.co.za

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

REFER TO DETAILS AS PRINTED ON CONTAINER / BAG

DIRECTIONS FOR USE ENCLOSED
Batch Number:
Date of Manufacture:

LAMBDA 50EC
Reg. No. L 7787 Act No. 36 of 1947
IRAC INSECTICIDE GROUP CODE: 3

ACTIVE INGREDIENT:
lambda-cyhalothrin (pyrethroid)……50 g/ℓ

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Tel. (011) 396 2233

WARNINGS

Withholding periods:

Allow the following number of days between last application and harvest of the crops listed below:	
Apples, Apricots, Nectarines, Pears, Plums and Table Peaches	14 days
Potatoes, Peas and Canning Peaches	3 days
Dry Beans, Maize and Sweetcorn	7 days
Green Beans	1 day
Cotton (grazing), Sorghum, Wheat, Soybeans (grazing) and Wine and Table Grapes	28 days
Lucerne (grazing)	8 days
Tomatoes, Cruciferae and Lupins (grazing)	2 days
Macadamias	82 days

NOTE

THE MAXIMUM RESIDUE LEVELS (MRL'S) WILL NOT BE EXCEEDED PROVIDED APPLICATIONS ARE APPLIED AS PRESCRIBED. WHEN PRODUCTION IS DESTINED FOR THE EXPORT MARKET, THE EXPORT AGENCY OF CONCERN MUST BE CONTACTED, PRIOR TO THE USE OF LAMBDA 50EC IN A SPRAY PROGRAMME.

Hazard statements:

Harmful if swallowed.
May be fatal if swallowed and enters airways.
Harmful in contact with skin.
Causes mild skin irritation.
Causes serious eye damage.
Harmful if inhaled.
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

- Handle with care.
- Use the product according to directions to limit the risk towards Bees, beneficial pest parasites, beneficial predators and fish.
- Do not apply when bees are most active. Do not direct spray towards beehives or allow spray drift in their vicinity. **Lambda-cyhalothrin** residues have no visible effect upon foraging Honeybees, provided the dosage rate of 300 mℓ per hectare is not exceeded.
- Do not spray over or allow drift to contaminate water bodies such as dams, ponds, rivers, streams or fish hatcheries.
- Do not allow spray to drift to citrus orchards under integrated biological control for Red scale.
- Allow a buffer strip of minimum 100 metres between a cotton field and a citrus orchard.
- Store under lock and key in a cool, dry place away from food, feeds, fertilizers and other agrochemicals.
- Keep out of reach of children, uninformed persons and animals.
- Re-entry: Do not enter treated area within one (1) day after treatment 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 spray over or allow drift to contaminate water or adjacent areas.

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. 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, 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

Precautionary statements:

Avoid breathing dust, fume, gas, mists, vapours or spray.
Wash hands and face thoroughly after handling. Do not touch eyes.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Avoid release into the environment.
Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
IF SWALLOWED: Get emergency medical help immediately.
IF ON SKIN: Wash with plenty water and non-abrasive soap.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
Get medical help.
Do NOT induce vomiting.
Take off contaminated clothing and wash it before reuse.
Collect spillage.
Store locked up.
Dispose of contents/container to suitable landfill in accordance with local regulations.

- **TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS**: Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler www.croplife.co.za. Do not bury, burn, or donate the container to any other parties that may use it as a container for food or beverages.
- **Never** re-use the empty container for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.

Relevant hazardous components	
Lambda-cyhalothrin	50 g/ℓ
Phenylsulphonate salt	< 60 g/ℓ
Heavy aromatic solvent	< 900 g/ℓ

SYMPTOMS OF HUMAN POISONING

No cases of poisoning have been described in the general population and none from occupational exposure. However, symptoms that may arise if the product is mishandled and overexposure occurs are nausea, vomiting, diarrhoea, abdominal pain, ataxia, unsteady gait, hyperexcitability, salivation, tremors, and incontinence. Larger doses may cause convulsions and loss of consciousness.

FIRST AID TREATMENT

- Skin: Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with cold water and non-abrasive soap. Do not rub the skin. Apply olive oil to affected areas for prompt relief. Get medical attention if irritation occurs and persists.

- Eyes: Flush eyes immediately with large amounts of gently flowing cold water, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15 to 20 minutes). **Immediately get medical attention.**
- Inhalation: If vapours or mists have been inhaled and irritation has developed, remove the source of contamination, or move victim to fresh air. If breathing difficulty or irritation occurs and persists, obtain medical attention.
- Ingestion: **Do not induce vomiting, due to aromatic solvent.** Never give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water. Obtain medical attention immediately. Treat respiratory difficulty with artificial respiration and oxygen. Qualified medical personnel must perform administration of oxygen. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus.

NOTE TO PHYSICIAN

There is no specific antidote available. This product contains materials that may cause severe pneumonitis if aspirated. In cases of ingestion, consider gastric lavage, however prevent aspiration. Observe patient for respiratory difficulty from aspiration pneumonitis. Treat symptomatically and supportively.

RESISTANCE WARNING

LAMBDA 50EC is a group code 3 insecticide. Any insect population may contain individuals naturally resistant to **LAMBDA 50EC** and other group code 3 insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by **LAMBDA 50EC** or any other group code 3 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.

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

Mode of action:

LAMBDA 50EC contains **Lambda-cyhalothrin** that is a pyrethroid insecticide and belongs to IRAC mode of action group 3. It acts on the nervous system of insects and disturbs the function of neurons by interaction with sodium channels. It is a non-systemic insecticide with contact and stomach action as well as repellent properties giving rapid knockdown and long residual activity.

RESISTANCE MANAGEMENT

- Resistance of African bollworm (*Helicoverpa armigera*) to synthetic pyrethroids has been confirmed. As part of a strategy to prevent development of widespread resistance, the following guidelines must be adhered to for the control of *Helicoverpa armigera*:

  COTTON: Synthetic pyrethroids must **only** be applied to cotton during the period 1st January to 1st March.

  ALL OTHER CROPS: Do not apply more than two applications per growing season.
- **For optimal control of susceptible bollworm populations, the larvae should not exceed 10 mm (1 cm) in length, at time of application.**
- If a pyrethroid spray gave ineffective control, do not re-spray with any synthetic pyrethroid, even at a corrective dosage rate. Use a product from a different chemical group.

USE RESTRICTIONS

- Cutworms tend to feed sub-surface when the soil surface is dry. Damage to seedlings is usually not visible until the plants start to wither. When planting in dry soil, or if the soil dries out shortly after plant, poor control of Cutworms can be expected, since the pest does not come into contact with the product applied to the soil surface. Follow-up application will not necessarily ensure control, unless the soil surface is moist.
- When **LAMBDA 50EC** is applied to densely growing crops, the efficacy of the spray mixture may be adversely affected.
- Do not apply on plants that are wet from dew or rain.

DIRECTIONS FOR USE: Use only as directed.

Compatibility:

- Do not mix **LAMBDA 50EC** with seaweed extracts.

- **LAMBDA 50EC** is compatible with **Advance 150 SC**, **Prime 50 EC** or **a Villa approved buffer + surfactant adjuvant**.
- The compatibility of **LAMBDA 50EC** with other products may be influenced by several factors. As factors influencing compatibility may vary, a physical compatibility test must always be performed before such tank mixture is sprayed.
- When **LAMBDA 50EC** is used in conjunction with any other agricultural remedy, adhere to all **WARNINGS, PRECAUTIONS** and **DIRECTIONS FOR USE** mentioned on that label.

Mixing instructions:
- Half fill the spray tank with clean water.
- Effectiveness of **LAMBDA 50EC** can be affected by very hard water (>1000 p.p.m. solutes) and/or water with a high or low pH value. The ideal pH is between 5 and 8.
- Use **Commodobuff** buffer at the registered rate to adjust the pH of the water if not in the ideal range.
- **Commodobuff** buffer must be mixed with the water prior to the addition of **LAMBDA 50EC.**
- For use in Cruciferae, **a Villa approved buffer + surfactant adjuvant**.can be used instead of **Commodobuff** as it buffers and supplies wetting and spreading properties.
- Take approximately 10 litres of this pH-corrected water from the mixing tank and thoroughly mix with the required volume **LAMBDA 50EC.**
- If any other product is to be mixed with **LAMBDA 50EC**, the required volume of this product must be pre-mixed in a similar way.
- Agitate the water in the spray tank and then add the product(s) to the tank in the following sequence (as applicable): **Commodobuff**, suspension concentrate, water-soluble concentrate, emulsifiable concentrate.
- Fill the spray tank with water to the required level while maintaining agitation, to ensure thorough mixing.
- Maintain agitation during application.
- Prepared spray mixtures must not be left in the spray tank for any length of time, e.g., overnight.

Application:
- All applications must be performed with suitable equipment that is in good working order and correctly calibrated, to give the desired coverage for that particular method of application.
- Ensure that thorough penetration and wetting is obtained.
- Monitor efficacy within 3 days after application. A further application may be necessary if unacceptable levels of control have been obtained.
- **Household applications**: Always apply the spray mixture as a full cover spray ensuring complete coverage of the target area, but not until the point of runoff.

Ground application:
- Use hollow cone nozzles that produce a medium to fine droplet spectrum with conventional high volume spray equipment.
- Calibrate the spraying equipment before application and ensure correct application.
- Ensure an even distribution of the spray mixture over the whole target area.

Aerial application:
Aerial application of **LAMBDA 50EC** may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS Code 10118 (Aerial Application of Agricultural Pesticides). Ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria be met:
- Volume: A spray mixture volume of 30 litres per hectare is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended above.
- Droplet coverage: 30 to 40 droplets per cm² must be recovered at the target area.
- Droplet size: A droplet spectrum with a VMD of 250 to 280 micron is recommended. Limit the production of fine droplets less than 150 micron (high drift and evaporation potential) to a minimum.
- Flying height: Maintain the height of the spray boom at 3 to 4 metres above the target. Do not spray when aircraft dives, is in a climb or when banking.
- Use suitable atomising equipment that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product. The spraying system must produce a droplet spectrum with the lowest possible Relative Span.

- Position all the atomisers within the inner 60 to 75 % of the wingspan to prevent droplets from entering the wingtip vortices.
- The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C.
- Stop spraying if the wind speed exceeds 15 km per hour.
- Stop spraying under turbulent, unstable and dry conditions during the heat of the day.
- Spraying under temperature inversion conditions (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80 % and above) may lead to the following:
  a) reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage),
  b) damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.
- Ensure that the aerial spray operator knows exactly which fields to spray.

Obtain an assurance from the aerial spray operator that the above requirements will be met and that relevant data will be compiled in a logbook and kept for future reference.

Pivot Chemigation:

- The system must have a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent contamination of the water source from back flow.
- The pesticide injection pipeline must have a functional automatic quick-closing check valve to prevent the flow of liquid back towards the injection pump.
- The pesticide injection line should also have a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn out of the supply tank when the irrigation system is either automatically or manually closed down.
- The system must have functioning interlocking controls to shut off the pesticide injector pump automatically when the water-pump motor stops.
- The irrigation line or water-pump must include a functional pressure switch, which will stop the water-pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind conditions favour drift beyond the area intended for treatment.
- **IMPORTANT**
  Use very clean water for pivot irrigation application. Water must be free of silt, clay and organic material, as pyrethroids tend to adhere to these particles and adversely affect the efficacy.

APPLICATION RATES

AGRICULTURAL AND HORTICULTURAL PEST CONTROL

Crop / Pest	*Dosage rate*	*Remarks*
All crops Cutworm	Apply **LAMBDA 50EC** as a preventative (pre-emergence) or corrective (post-emergence) treatment as follows: The soil must be well prepared, i.e. free of clods and excessive plant debris. In situations where reduced tillage is practised, Cutworm populations are usually high. The Cutworm population must therefore be monitored after the first application and a second application be applied if necessary. Apply as an overall, corrective spray at the recommended rate. **Apply ONLY if the top 3 cm of the soil is moist.**	
	0.23 mℓ / 100 m row **OR** 1mℓ / 10 ℓ water	Ground application: i) Row treatment: Apply at least 3 litres water in a 30 cm wide band over the row. Household / small scale applications: Apply over 10 m² (= 1 litre spray mixture per square metre).
	70 mℓ / ha	ii) Broadcast application: Apply in 300 litres water per hectare.
	70 mℓ / ha	Aerial application: Apply in 30 litres water per hectare.
Apples and Pears Banded fruit weevil (*Phlyctinus callosus*)	20 mℓ / 100 ℓ water (500 to 700 mℓ / ha) **OR** 2 mℓ / 10 ℓ water	Foliar application: Apply two high volume sprays. The first at 75 % petal drop and the second four weeks later. If necessary, a third spray can be applied four weeks after the second spray to prevent late season damage. A single spray or a programme of sprays for Weevil at this dosage will also suppress or even control low populations of Red spider mite (Red and Two spotted strains).
	20 mℓ / 100 ℓ water (200 mℓ / ha) **OR** 2 mℓ / 10 ℓ water	Stem treatment: Refer to the recommendations for stem treatment under **"Remarks"** for wine and table grapes below.
Codling moth	10 mℓ / 100 ℓ water (250 to 350 mℓ / ha)	Apply as a high volume spray. Apply first spray at 75 % petal drop and repeat at 14- to 18-day intervals.
Apples, Pears, Plums, Nectarines, Table and Canning Peaches, Apricots African bollworm	**Warning Against Resistance:** Refer to **"RESISTANCE MANAGEMENT"** above.	
	10 mℓ / 100 ℓ water (250 to 350 mℓ / ha) **OR** 1 mℓ / 10 ℓ water	Apply at the first signs of an infestation and repeat if necessary. Do not apply before 75 % petal drop.
Cruciferae (cole crops) African bollworm	**Warning Against Resistance:** Refer to **"RESISTANCE MANAGEMENT"** above.	
	8 mℓ / 100 ℓ water **OR** 1 mℓ / 10 ℓ water	Apply at the first signs of an infestation and repeat every 10 to 14 days. Apply in 500 to 1000 litres water per hectare. Add a suitable wetter and ensure good spray coverage.

Crop / Pest	*Dosage rate*	*Remarks*
Cotton African bollworm, Red bollworm, Spiny bollworm and Cotton stainer bug	**Important:** Refer to the note **"Use of synthetic pyrethroids in cotton"** below.	
	Warning Against Resistance: Refer to **"RESISTANCE MANAGEMENT"** above.	
	60 to 120 mℓ / ha	Broadcast application: Apply with boom and nozzle sprayer. Cotton must be treated with sufficient spray mixture for good coverage. Use the higher dosage rate for plants taller than 60 cm. Spray 100 litres spray mixture per hectare for plants smaller than 60 cm and 200 litres spray mixture per hectare for plants taller than 60 cm.
	0.6 to 1.2 mℓ / 100 m row	Tramline treatment: Use the higher dosage rate for plants taller than 60 cm. Spray 50 litres spray mixture per hectare on cotton less than 60 cm and 100 litres spray mixture per hectare on plants taller than 60 cm. Refer **"Tramlines"** note below.
	66 to 132 mℓ / ha	Aerial application: Apply 30 litres water per hectare. Use lower dosage for plants smaller than 60 cm and the higher dosage for plants taller than 60 cm.
African and Red bollworms	88 mℓ to 120 mℓ / ha in sunflower oil	ULV-application: Use the higher dosage rate for plants taller than 60 cm. Only use acknowledged ULV spray equipment. Apply a total spray mixture volume of 3 litres per hectare. Make the indicated **LAMBDA 50EC** dosage up with sunflower oil to a spray volume of 3 litres.
Groundnuts, Dry Beans, Green Beans, Lucerne, Maize & Sweetcorn African bollworm	**Warning Against Resistance:** Refer to **"RESISTANCE MANAGEMENT"** above.	
	100 mℓ / ha **OR** 2.5 mℓ / 10 ℓ water	Ground application: Apply 250 to 500 litres water per hectare depending on plant size. Scout fields at weekly intervals from time of flowering and commence spraying when infestation is noticed. For optimum control, larvae should be sprayed when they are not bigger than 1 cm. Scout fields weekly or 3 days after rain and repeat application if necessary.
	100 mℓ / ha	Aerial application: **(Groundnuts, Dry Beans and Green Beans only).** Apply 30 litres water per hectare.
Lucerne Lucerne caterpillar (*Colias electo)*	80 to 100 mℓ / ha	Ground application: Apply 250 to 500 litres water per hectare depending on plant size. Ensure thorough wetting of the crop. Use the lower dosage rate on lucerne that is not a dense stand. For optimum control, larvae should be sprayed when they are not bigger than 1 cm. Follow-up applications may be necessary, based on scouting, to determine re-infestations.
Lupins African bollworm	**Warning Against Resistance:** Refer to **"RESISTANCE MANAGEMENT"** above.	
	110 to 120 mℓ / ha	Ground application: Apply in at least 300 litres water per hectare. Application should be done at a count of 1 to 2 larvae per m^2 before the larvae penetrate pods. Apply the lower dosage rate to young plants and higher rate to strongly growing plants.
	120 mℓ / ha	Aerial application: Apply in 30 litres water per hectare.

Crop / Pest	*Dosage rate*	*Remarks*
Macadamias Stink bug *(Nezara viridula)*	10 mℓ / 100 ℓ water	High volume application: Time of application is based on Stinkbug numbers by means of the "tree shake" method. Start monitoring Stinkbug numbers two weeks after flowering. Apply as soon as an average of 1.8 Stinkbugs per tree is counted. **Two to three applications per season might be necessary**.
Maize Stemborer *Chilo partellus* (First and second generation)	1.2 mℓ / 100 m row **OR** 1.2 mℓ / 100 m row **PLUS** 7 mℓ / 100 m row **Prime 50 EC**	Ground application: Apply as soon as 10 % plants show damage and direct spray into the funnel area of the plants. If necessary, apply a follow-up treatment shortly before tasseling. A minimum of 3 litres spray mixture must be applied per 100 m row. In tank mixtures with **Prime 50 EC** add **a Villa approved buffer + surfactant adjuvant** at the recommended rate.
Stalkborer (*Busseola fusca*) (First and second generation)	1.2 mℓ / 100 m row (120 mℓ / ha) **OR** 1.2 mℓ / 100 m row **PLUS** 7 mℓ / 100 m row **Prime 50 EC**	Apply as soon as eggs are found on 5 % of the plants or 10 % plants show damage. A second application may be required 10 to 14 days later. Direct spray into plant funnel area. Use at least 3 litres water per 100 m row. In tank mixtures with **Prime 50 EC** add **a Villa approved buffer + surfactant adjuvant** at the recommended rate.
	120 mℓ / ha	Aerial application: Apply as above in 30 litres water per hectare.
Maize & Sweetcorn **Larvae of:** Maize stalk borer (*Busseola fusca*) Sorghum stem borer (*Chilo partellus*) African bollworm (*Helicoverpa armigera*)	Broadcast ground application: 120 mℓ / ha **PLUS** 300 mℓ / ha **Advance 150 SC** **PLUS** **a Villa approved buffer + surfactant adjuvant** at the recommended rate	Apply as a preventive or early corrective treatment. Apply a minimum of 450 litres spray mixture per hectare. Apply over the funnel of the plants and ensure thorough coverage of the foliage. To ensure optimum results, application must take place early in the morning when dew is present. The absence of rain within three (3) days of application or irrigation after application can lead to a decrease in control with **LAMBDA 50EC** plus **Advance 150 SC** spray mixtures. Water after application is essential to wash the spray mixture in the funnel. Under conditions of repeated infestation, apply **Advance 150 SC** plus **LAMBDA 50EC** in a 10 to 14-day spray programme. Use the shorter spray interval when the pest infestation pressure is high or when maize is growing fast.

Crop / Pest	*Dosage rate*	*Remarks*
Maize & Sweetcorn **Larvae of:** Maize stalk borer (*Busseola fusca*) Sorghum stem borer (*Chilo partellus*) African bollworm (*Helicoverpa armigera*)	Ground row application: 1.2 mℓ / 100 m plant row **PLUS** 30 mℓ /100 m plant row **Advance 150 SC** **PLUS** **a Villa approved buffer + surfactant adjuvant** at the recommended rate	Apply 3 litres spray mixture per 100 m plant row over the funnel of the plants and ensure thorough coverage of the foliage. To ensure optimum results, application must take place early in the morning when dew is present. The absence of rain within three (3) days of application or irrigation after application can lead to a decrease in control with **LAMBDA 50EC** plus **Advance 150 SC** spray mixtures. Water after application is essential to wash the spray mixture into the funnel. Under conditions of repeated infestation, apply **Advance 150 SC** plus **LAMBDA 50EC** in a 10 to 14-day spray programme. Use the shorter spray interval when the pest infestation pressure is high or when maize is growing fast.
	Application through pivot irrigation system: 120 mℓ / ha **PLUS** 300 mℓ / ha **Advance 150 SC** **PLUS** 5 ℓ / ha **mineral oil adjuvant**	**IMPORTANT** Refer to **"Application through irrigation systems"** above. Apply as a preventative or early corrective treatment. Under conditions of repeated infestation, apply **LAMBDA 50EC** plus **Advance 150 SC** in a 10 to 14 day spray programme. Use the shorter spray interval when the pest infestation pressure is high or when maize is growing fast.
Refer to "USE RESTRICTIONS", "DIRECTIONS FOR USE" (including "Crop information") and "APPLICATION INSTRUCTIONS" on the Advance 150 SC label.		
Peas African bollworm	**Warning Against Resistance:** Refer to **"RESISTANCE MANAGEMENT"** above.	
	100 mℓ / ha **OR** 5 mℓ / 10 ℓ water	Ground application: Apply in at least 200 litres water per hectare at flowering of the peas at an infestation level of 2 larvae per 20 plants. A follow-up application might be necessary if re-infestation occurs.
	120 mℓ / ha	Centre pivot application: Refer to the instructions for centre pivot application under **"DIRECTIONS FOR USE"** above. The pivot speed must be at 100 %. Apply as soon as the count of African bollworm eggs increase to a level of 6 eggs per 24 plants or at a larval count of 2 larvae per 24 plants.

Crop / Pest	*Dosage rate*	*Remarks*
Sweetcorn Pink stalkborer (*Sesamia calamistis*)	1 mℓ / 100 m row	Ground application: Apply directly into the funnel area of the plants 14 days after emergence of the crop. A follow-up application 10 to 14 days later must be applied and, if necessary, up to flowering to control re-infestations. A minimum of 3 litres spray mixture per 100 m row must be applied.
Sorghum Maize stalkborer (*Busseola fusca*)	1 mℓ / 100 m row	Ground application: Apply 3 litres water during the funnel stage when 5 % of the plants show shothole damage and borers have not yet migrated into the stalks. Direct application into funnel. *Chilo partellus* present at time of application will also be controlled.
	100 mℓ / ha	Aerial application: Apply 30 litres water per hectare.
Soybeans African bollworm	**Warning Against Resistance:** Refer to **"RESISTANCE MANAGEMENT"** above.	
	120 mℓ / ha	Ground application: Apply as soon as infestation is noticed and repeat if necessary. Apply in 200 to 300 litres water per hectare and ensure good coverage of the plants.
		Aerial application: Apply in at least 30 litres water per hectare.
Potatoes Potato tuber moth (larvae) and African bollworm	**Warning Against Resistance:** Refer to **"RESISTANCE MANAGEMENT"** above.	
	120 mℓ / ha **OR** 5 mℓ / 10 ℓ water	Ground application: Apply 250 to 500 litres water per hectare depending on plant size. Commence spraying when plants are one month old, or earlier if an infestation should occur. Repeat every 10 to 14 days and ridge at least twice during the growing season. Add **Pirimicarb** at the registered rate for the control of Aphids.
	132 mℓ / ha	Aerial application: Apply at least 30 litres water per hectare. Commence spraying as soon as plants are one month old, or earlier if an infestation should occur. Repeat application every 10 to 14 days and ridge at least twice during the growing season.
Plums, Nectarines, Table and Canning Peaches, Apricots Banded fruit weevil (*Phlyctinus callosus*)	20 mℓ / 100 ℓ water (500 to 700 mℓ / ha) **OR** 2 mℓ / 10 ℓ water	Foliar application: Apply at the first signs of feeding damage and repeat 3 to 4 weeks later if necessary. A single spray or a programme of sprays for Weevil at this dosage will also suppress or even control low populations of Red spider mite (Red and Two spotted strains).
	20 mℓ / 100 ℓ water (20 mℓ / ha) **OR** 2 mℓ / 10 ℓ water	Stem treatment: Refer to the recommendations for stem treatment under **"Remarks"** for wine and table grapes below.

Crop / Pest	*Dosage rate*	*Remarks*
Tomatoes African bollworm and Semi-looper	**Warning Against Resistance:** Refer to **"RESISTANCE MANAGEMENT"** above.	
	7.5 mℓ / 100 ℓ water **OR** 1 mℓ / 10 ℓ water	Commence spraying when plants start flowering or at first signs of an infestation. Apply as a full cover spray in 500 to 1000 litres water per hectare depending on plant size for tomatoes up to 1 metre in height. For taller plants a higher spray volume should be used, maintaining the same concentration. Repeat application at 7- to 10-day intervals or as dictated by inspection of the crop.
Wheat and Sorghum African bollworm	**Warning Against Resistance:** Refer to **"RESISTANCE MANAGEMENT"** above.	
	100 mℓ / ha	Apply as soon as an infestation is noticed and repeat if necessary. Ground application: Apply in 250 to 500 litres water per hectare and ensure thorough wetting of the crop. Aerial application: Apply at least 30 litres water per hectare.
Wine and Table Grapes Weevils (*Eremnus setulosus, Eremnus cerealis* and *Phlyctinus callosus*)	20 mℓ / 100 ℓ water (200 mℓ / ha) **OR** 2 mℓ / 10 ℓ water	Stem treatment: Monitor for Weevils from beginning October and continue throughout the growing season. Apply as a preventive stem treatment as soon as weevil activity is observed on the stem. Apply in 1000 litres spray mixture per hectare (at least ± 0.5 litres per plant) up to a height of 1 metre. In the case of low growing vines (trees), spray up to the first lateral branches. Wet the stem thoroughly and allow excess spray mixture to run onto the soil surrounding the stem. Repeat application 3 to 4 weeks later if necessary. If a dense canopy has already formed and can serve as a hiding place for Weevils, this will prevent them from migrating back to the stem during the day, apply the foliar application treatment below, but firstly ensure that an infestation is present in the foliage prior to application.
	20 mℓ / 100 ℓ water (200 mℓ / ha) **OR** 2 mℓ / 10 ℓ water	Foliar application: Apply as a high-volume preventive spray at 1000 litres spray mixture per hectare. The first spray must be applied as soon as damage is observed and, if further damage still occurs, a second spray must be applied 3 to 4 weeks later. The first occurrence of Weevils varies from area to area but can normally be expected from mid-October to mid-November.

COTTON – IMPORTANT NOTES

1. Use of synthetic pyrethroids in cotton:

- Synthetic pyrethroids must **ONLY** be applied to cotton during the period 1 January to 1 March for the control of African bollworm. Refer to **"RESISTANCE WARNING"** above. No sprays should be necessary for African bollworm control during the first eight weeks after plant emergence. Should Red bollworm be present, a chemical, which does not promote Red spider mite populations, should be sprayed. Thereafter (10 to 12 weeks later) recommendations as listed above can be followed.
- **LAMBDA 50EC** applications are based on regular weekly scouting and the correct interpretation of the results. When more than five African and/or two Red or Spiny bollworm larvae are found on 24 plants per 15 hectares during scouting, a spray has to be applied. The success of the treatment depends on coverage and penetration achieved by the spray application. Larvae already inside the bolls may not be controlled effectively. Allow four (4) days for the spray to achieve maximum effect, scout and repeat application if necessary.

2. **Tramline application:**
   Dosage recommendation is per single row (therefore 1 tramline = two rows). Mount at least five (5) suitable hollow cone nozzles over 'tramlines' so that one nozzle sprays directly over the top of each row, one in between and another on the outside of each of the two rows. For best coverage the two outside nozzles should be mounted on drop-arms pointing 45° upwards. A row spacing of 1-meter equals 10000 running meters per hectare.

The following products mentioned in this label may be replaced with equivalent products:

- **ADDITION 150 SC** (L 9146 / N-AR 1508 / W1301425) = **ADVANCE 150 SC** (L 9147 / W 130689),
- **COMMODOBUFF** (L 5390 / N-AR 1107) = **AQUABUFF** (L 5451 / W 130060) and
- **PRIME 50 EC** (L 8660 / N-AR 1230 / W1301424) = **BARITONE 50 EC** (L 8659 / W 130692).

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ADVANCE 150 SC and **BARITONE 50 EC** are registered products of **UNIVERSAL CROP PROTECTION (PTY) LTD.**