

BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY!

SHAKE THE BOTTLE WELL BEFORE USE.

Insecticide



ADVANCE 150 SC

Reg. No. L 9147 Act/Wet No. 36 of/van 1947
W 130689

4: 13/12/2017 – June 2018

A suspension concentrate stomach and contact insecticide for the control of various insect pests as listed.

'n Suspensie konsentraat maag en kontak insekdoder vir die beheer van verskeie plae soos gelys.

ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL

indoxacarb (oxadiazine) 150 g/l indoksakarb (oksadiasien)

IRAC INSECTICIDE GROUP CODE 22 IRAC INSEKDODER GROEPKODE



villa

Registration holder / Registrasiehouer:
Universal Crop Protection (Pty) Ltd.
Co. Reg. No. / Mpy. Reg. Nr. 1983/008184/07
PO Box / Posbus 801, Kempton Park, 1620
Tel: 011 396 2233
Website / Webblad: www.villacrop.co.za

UN Number: 3082



HARMFUL
SKADELIK

Willow Set & Print 011 394-4486



GEBRUIKSAANWYSYNGS INGESLUIT

VERWYS NA BESONDERHEDE
GEDRUK OP HOUER/SAK

Date formulated:
Formuleringsdatum:

REFER TO DETAILS PRINTED
ON CONTAINER/BAG

Batch number:
Lotnommer:

DIRECTIONS FOR USE ENCLOSED

ADVANCE 150 SC

Reg. No. L 9147 / W 130689 Act/Wet No. 36 of/van 1947

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indoxacarb (oxadiazine / indoksakarb (oksadiasien)..... 150 g/l

Registration holder / Registrasiehouer:

UNIVERSAL CROP PROTECTION (PTY) LTD.

Co. Reg. No. 1983/008184/07 Mpy. Reg. Nr.

PO Box / Posbus 801,

KEMPTON PARK, 1620, Tel. (011) 396 2233

**HARMFUL****SKADELIK****WARNINGS****Withholding periods:**

Minimum time between the last application and harvest:	
Apples	28 days
Blueberries and Raspberries	42 days
Cruciferae, Cucurbits and Green Beans	3 days
Dry Beans (grazing)	42 days
Hops & Oats	7 days
Lettuce	1 day
Peas	7 days
Stone Fruit (Peaches and Nectarines)	28 days
Soybeans	14 days
Soybeans (grazing)	42 days
Table Grapes	14 days
Wine Grapes	28 days
Canola	3 days
Maize and Sweetcorn (grazing)	42 days
Maize and Sweetcorn	7 days
Grain sorghum	42 days
Tobacco	42 days
Cotton	14 days
Tomatoes	1 day
Peppers	1 day
Wheat, Barley & Oats (grazing)	42 days

WITHHOLDING PERIODS ARE BASED ON GOOD AGRICULTURAL PRACTICE AND WHEN FOLLOWED LOCAL (SA) MRL'S WILL BE MET. FOR PRODUCE DESTINED FOR EXPORT, CONSULT YOUR EXPORT AGENT OR SUPPLIER FOR THE LATEST WITHHOLDING PERIODS RELEVANT TO YOUR EXPORT MARKET.

- Do not graze treated cotton.
- Handle with care.
- Harmful if ingested, inhaled or by contact.
- May irritate skin and eyes.
- Toxic to animals, bees, fish and other aquatic organisms.
- Store in a cool, dry place away from food, feeds, fertilizers and other agricultural remedies.
- Keep out of reach of children, animals and uninformed persons.
- Re-entry: Do not enter treated area within 1 day after treatment unless wearing protective clothing.
- **In case of poisoning call a physician and make this label available to him/her.**

Aerial application:

Notify all inhabitants of the immediate area to be sprayed and issue the necessary warnings. Do not spray over, or allow drift to contaminate water of 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, 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 to the remedy concerned, as well as by the method, time and accuracy of application. The registration holder further does not accept responsibility for damage to crops, vegetation, and 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 event of any uncertainty.

PRECAUTIONS

- Do not inhale the spray mist.
- Wear protective clothing - suitable overalls, rubber boots, gloves and a face mask when preparing the spray mixture and during application.
- Avoid contact with eyes and prolonged or repeated skin contact.
- Remove and wash contaminated clothing after use.
- Wash with soap and water after use or accidental skin contact.
- Do not eat, drink or smoke whilst mixing, applying the product or before washing hands and face or change of clothing.
- Avoid drift of spray on to other crops, grazing, rivers, dams and areas not under treatment.
- Thoroughly clean spraying equipment directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- **TRIPLE RINSE** empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container three times with a volume of water equal to a minimum of a third of the volume of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner.
- Destroy the empty container by perforation and flattening and dispose of it in a safe way.
- **Never** re-use the empty container for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.

RESISTANCE WARNING

ADVANCE 150 SC is a group code 22 insecticide. Any insect population may contain individuals naturally resistant to **ADVANCE 150 SC** and other group code 22 insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by **ADVANCE 150 SC** or any other group code 22 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 the maximum number of applications per season with **ADVANCE 150 SC** (refer to instructions under “**USE RESTRICTIONS**” on this label).
- Apply 2 to 3 treatments consecutively (so called “block application”) and then alternate **ADVANCE 150 SC** with compounds from different chemical classes.
- Monitor insect populations and apply **ADVANCE 150 SC** as per label instructions once locally determined economic thresholds have been reached. Multiple applications may be required to obtain effective control of an infestation.

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

USE RESTRICTIONS

- **Do not** exceed the maximum of three (3) **ADVANCE 150 SC** applications per season.
- **Do not** apply **ADVANCE 150 SC** on maize that is under drought stress. Larvae that have already tunnelled into the funnels will **not** be controlled with **ADVANCE 150 SC** spray mixtures.
- Maize stalk borer control: Apply before larvae migrate to the stems of the maize plants and larvae have not developed beyond second instar stage.
- **Do not** apply **ADVANCE 150 SC** on maize against Stalk borer and Sorghum stem borer while the tassels are encircled by the flag leaf.

DIRECTIONS FOR USE: Use only as directed.**General information & selectivity:**

- Follow the label recommendations precisely for application rates, spray intervals and the optimum timing to apply **ADVANCE 150 SC**.
- **ADVANCE 150 SC** has minimal effect on beneficial insects and mites, thus promoting natural pest control and decreasing the risk of resistance development.
- **ADVANCE 150 SC** is mainly a Lepidoptera (caterpillar type larvae of moths & butterflies) specific insecticide.
- **Bees:** If **ADVANCE 150 SC** is applied according to the dosage rates as instructed on this label, no serious adverse effects are expected in honeybees. However, do not apply **ADVANCE 150 SC** directly onto foraging bees. The spray deposit should be allowed to dry before bees are taken to the sprayed area.
- **Climatic conditions:** **ADVANCE 150 SC** is effective under hot climatic conditions. Once the spray mixture has dried on the target area, **ADVANCE 150 SC** will not wash off through rainfall or irrigation and these conditions will therefore not influence the normal residual activity of the product.

Mode of action:

- **ADVANCE 150 SC** acts by inhibition of sodium ion entry into nerve cells. This results in paralysis and death of the pest within 1 to 2 days. However, inhibition of the pest's feeding occurs within 2 to 8 hours.
- **ADVANCE 150 SC** acts as a larvacide through ingestion (stomach action), as well as cuticular absorption (contact action). **ADVANCE 150 SC** can be used against all larval instar (development) stages.

Crop information:**Maize stalk borer, *Busseola fusca*, larvae control:****Commercial maize:**

Apply preventively or when eggs are found on 5 % of the plants, or when 10 % of the plants are showing shot hole damage symptoms on the maize funnels, which are caused by small feeding larvae.

Sweetcorn:

Apply preventively, or when egg laying starts, or with the first signs of shot hole damage symptoms on the maize funnels.

Note that an application must be done before larvae migrate to the stem of the maize or sweetcorn plant and when larvae are smaller than the 2nd instar. Do not apply **ADVANCE 150 SC on plants against Maize stalk borer whilst the tassel are encircled by the flag leaf.**

Sorghum stem borer, *Chilo partellus*, larvae control:**Commercial maize:**

Apply preventively, or when eggs are found on 2.5 % of the plants, or when 5 % of the plants are showing shot hole damage symptoms on the maize funnels, which are caused by small feeding larvae.

Sweetcorn:

Apply preventively, or when egg laying starts or with the first signs of shot hole damage symptoms on the sweetcorn funnels.

Note that an application must be done before larvae migrate to the stem of the maize or sweetcorn plant and when larvae are smaller than the 2nd instar. Do not apply **ADVANCE 150 SC on plants against Maize stalk borer whilst the tassel are encircled by the flag leaf.**

African bollworm, *Helicoverpa armigera*, larvae control:**Maize funnel infestation:**

Apply as for Maize stalk borer.

Maize cob infestation:

Apply when the 1st larvae are noticed on the beard during cob formation. Larvae that are already inside the beard or have migrated into the cobs will not be controlled.

Compatibility:

- The compatibility of **ADVANCE 150 SC** with other products has not been determined extensively apart from those mentioned on this label.
- **ADVANCE 150 SC** is compatible with **Lambda 50EC**, organosilicon surfactants like **Break-Thru® S240**, **Villa 51**, **Charge** or **Aquabuff Plus**.

- The compatibility of **ADVANCE 150 SC** with other products may be influenced by several factors. As certain factors may vary from time to time, a physical compatibility test must always be performed before such a tank mixture is sprayed.
- When **ADVANCE 150 SC** is used in conjunction with any other agricultural remedy, adhere to all **WARNINGS, PRECAUTIONS** and **DIRECTIONS FOR USE** mentioned on the relevant labels.

Mixing instructions:

- Half fill the spray tank with water and add the required amount of **ADVANCE 150 SC** to the water, while agitating.
- Maintain agitation during mixing and application.
- The prepared spray mixture must not be left in the spray tank for any length of time, e.g. overnight.

Application instructions:

Always use suitable, correctly calibrated equipment, in good working order, to ensure thorough wetting of all parts of the plant.

Ground Application:

ADVANCE 150 SC can be applied with most generally used, purposed designed spraying equipment used in agriculture that meets above-mentioned requirements.

ADVANCE 150 SC has not been tested at low volume rates (<100 litres per hectare), therefore the registration holder cannot guarantee efficacy of use under such conditions.

Aerial application:

Aerial application of **ADVANCE 150 SC** 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 to 35 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: 35 to 45 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 atomizing 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 atomizers within the inner 60 to 75 % of the wingspan to prevent droplets from entering the wingtip vortices.
- The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C.
- Stop spraying if the wind speed exceeds 15 km per hour.
- Stop spraying under turbulent, unstable and dry conditions during the heat of the day.
- Spraying under temperature inversion conditions (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80 % and above) may lead to the following:
 - a) Reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage),
 - b) Damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.
- Ensure that the aerial spray operator knows exactly which fields to spray.

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

Application through Irrigation systems:

Ensure that the Pivot irrigation system complies with the following specifications, before application starts:

- The distribution coefficient of the pivot irrigation system must be >90 % and the Pivot should not apply more than 5 mm (50 000 litres) per hectare at maximum speed.
- Clean all the sieves of the pivot irrigation system before starting application. Calibrate the injection pump of the pivot irrigation system according to the time it takes for the pivot irrigation system to complete one full circle.
- Set the pivot irrigation system to maximum speed so that as little water as possible (not more than 5 mm) is applied per hectare.
- Mix the **ADVANCE 150 SC** and a mineral oil adjuvant. Stir the spray mixture continuously before and during application.
- Inject the **ADVANCE 150 SC** spray mixture in the main application line of the pivot irrigation system as soon as the pivot irrigation system reached maximum speed. Mark the position on the land when the spray mixture reaches the furthest end of the pivot irrigation system.
- Complete one full circle from the aforementioned point.

APPLICATION RATES

Crop / Pest	Dosage rate	Remarks
<u>Apples</u> <u>Larvae of:</u> African bollworm (<i>Helicoverpa armigera</i>)	50 ml / 100 ℓ water	<u>Foliar Application:</u> Apply as a full cover spray in 500 to 2000 litres water per hectare. Apply preventively or when eggs or larvae are present, but before larvae enter the fruit. A follow-up application may be necessary 10 to 14 days later depending on re-infestation of the pest. Thorough coverage is essential. Do not exceed two (2) ADVANCE 150 SC applications per season.
<u>Blueberries and Raspberries</u> <u>Larvae of:</u> African bollworm (<i>Helicoverpa armigera</i>)	40 ml / 100 ℓ water	Apply preventively as a foliar spray as soon as bollworm eggs or small larvae are present as confirmed by regular scouting of the crop. Apply as a full cover spray in 500 to 1200 litres water per hectare depending on plant size. If required, apply a follow-up treatment 10 to 14 days later (e.g. under conditions of continuous re-infestation). Ensure thorough and even coverage of the foliage. Caterpillars that are obscured by dense foliage may not be controlled effectively. Refer to “IMPORTANT NOTES” below.
<u>IMPORTANT NOTES WITH REGARDS TO BLUEBERRIES AND RASPBERRIES</u>		
<ul style="list-style-type: none"> • Do not exceed two (2) ADVANCE 150 SC applications per season. Should further applications be necessary, use a product with a different mode of action. • Where the fruit of these crops is destined for the export market, it is recommended to apply ADVANCE 150 SC only before flowering or post-harvest. Should control of the pest be required during the fruiting period, apply another registered pesticide. • The addition of a non-ionic adjuvant (e.g. Villa 51) to the spray mixture is recommended to improve coverage. 		

Crop / Pest	Dosage rate	Remarks
<p>Cotton</p> <p>Larvae of: African bollworm (<i>Helicoverpa armigera</i>)</p> <p>Red bollworm (<i>Diparopsis castanea</i>)</p> <p>Spiny bollworms (<i>Earias biplaga</i> & <i>E. insulana</i>)</p> <p>Nymphs of: Cotton leafhoppers (<i>Jacobiella fascialis</i> & <i>J. libyca</i>)</p>	<p>VERY IMPORTANT Refer to “USE RESTRICTIONS”, “DIRECTIONS FOR USE” (including “Crop information”) and “APPLICATION INSTRUCTIONS”.</p> <hr/> <p><u>Broadcast ground application:</u></p> <p>200 to 250 ml / ha ADVANCE 150 SC</p> <p>PLUS</p> <p>Aquabuff Plus</p> <hr/> <p><u>Aerial application:</u></p> <p>250 ml / ha ADVANCE 150 SC</p> <p>PLUS</p> <p>1 ℓ / 100 litres water (minimum 350 ml / ha) mineral oil adjuvant</p> <hr/> <ul style="list-style-type: none"> • If re-infestation occurs continuously, use ADVANCE 150 SC in a 7 to 14 day interval spray programme. • Do not exceed five (5) applications of ADVANCE 150 SC per season. Consider products with different modes of action to fill the seasonal spray programme. • ADVANCE 150 SC will control all larval instars of the African bollworm. • Most beneficial insects and mites are not affected by ADVANCE 150 SC. It is therefore recommended to use ADVANCE 150 SC early in the season of the spray programme. 	<p>Spray volumes are based on plants taller than 0.6 m. Apply in 200 to 400 litres spray mixture per hectare and ensure thorough foliage cover.</p> <p>Preventive treatment: Use the lower rate in a weekly preventive programme or when economic threshold values are reached. Refer “NOTES ON ECONOMIC THRESHOLD LEVELS” below.</p> <p>Corrective treatment: Use the higher application rate for corrective application when the economic threshold value is exceeded. Refer “NOTES ON ECONOMIC THRESHOLD LEVELS” below.</p> <hr/> <p>Apply a minimum of 35 litres spray mixture per hectare.</p>

NOTES ON ECONOMIC THRESHOLD LEVELS

- Bollworm species**
About 8 to 20 weeks after emergence, start scouting by inspecting 24 plants per 15 hectare and base spray decisions thereon.
- African bollworm**
Egg threshold: 12 per 24 plants
Larval threshold: 5 per 24 plants
- Red bollworm**
Egg threshold: 6 per 24 plants
Larval threshold: 2 per 24 plants
- Spiny bollworms**
Larval threshold: 2 per 24 plants
- Leafhoppers**
Start application when 2 Leafhopper adults/nymphs are present per leaf.

Crop / Pest	Dosage rate	Remarks
<p><u>Maize & Sweetcorn</u></p> <p>Larvae of: Maize stalk borer (<i>Busseola fusca</i>)</p> <p>Sorghum stem borer (<i>Chilo partellus</i>)</p> <p>African bollworm (<i>Helicoverpa armigera</i>)</p>	<p><u>VERY IMPORTANT</u> Refer to “USE RESTRICTIONS”, “DIRECTIONS FOR USE” (including “Crop information”) and “APPLICATION INSTRUCTIONS”.</p>	
	<p><u>Broadcast ground application:</u></p> <p>300 ml / ha ADVANCE 150 SC</p> <p>PLUS</p> <p>120 ml / ha Lambda 50EC</p> <p>PLUS</p> <p>Aquabuff Plus</p>	<p>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 3 days of application or irrigation after application can lead to a decrease in control with ADVANCE 150 SC plus Lambda 50EC spray mixtures. Water after application is essential to wash the spray mixture in the funnel.</p> <p>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.</p> <p><u>Aerial application:</u> As above in at least 30 litres water per hectare.</p>
	<p><u>Ground directed row application:</u></p> <p>3 ml / 100 m plant row ADVANCE 150 SC</p> <p>PLUS</p> <p>1.2 ml / 100 m plant row Lambda 50EC</p> <p>PLUS</p> <p>Aquabuff Plus</p>	<p>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 3-days of application or irrigation after application can lead to a decrease in control with ADVANCE 150 SC plus Lambda 50EC spray mixtures. Water after application is essential to wash the spray mixture into the funnel.</p> <p>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.</p>
	<p><u>Application through pivot irrigation system:</u></p> <p>300 ml / ha ADVANCE 150 SC</p> <p>PLUS</p> <p>120 ml / ha Lambda 50EC</p> <p>PLUS</p> <p>5 l / ha mineral oil adjuvant</p>	<p><u>IMPORTANT</u> Refer to “Application through irrigation systems” above.</p> <p>Apply as a preventative or early corrective treatment. 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.</p>

Crop / Pest	Dosage rate	Remarks
<p><u>Maize & Sweetcorn</u></p> <p>Cutworm (<i>Agrotis</i> spp.)</p>	3 ml / 100 m row	<p>Apply as a preventive (pre-emergence) application in at least 3 liters water per 100 m row length.</p> <p>Apply as a row treatment in a 30 cm wide band over the row just after planting. The soil to be treated must be well prepared – free of clods and excessive plant debris.</p> <p>Apply only if the top 3 cm of the soil is moist.</p>
<p><u>Canola</u></p> <p><u>Larvae of:</u> African bollworm (<i>Helicoverpa armigera</i>)</p>	<p>250 to 300 ml / ha</p> <p>PLUS</p> <p>an organosilicon surfactant (such as Charge)</p>	<p>Apply preventatively/correctively as required in 300 to 600 litres water per hectare and ensure thorough coverage. The use of hollow or full cone nozzles is recommended. Use the higher dosage rate when applied correctively. Use the lower rate for subsequent applications when applied in a regular programme.</p> <p>Apply a block application of 2 to 3 consecutive ADVANCE 150 SC applications, and then switch to products with other modes of action.</p> <p>The addition of an organosilicon surfactant (such as Charge) is recommended to improve coverage.</p> <p>ADVANCE 150 SC controls all larval instars on contact.</p> <p><u>Aerial application:</u> Apply in at least 30 litres water per hectare.</p>
<p><u>Larvae of:</u> Diamond back moth (<i>Plutella xylostella</i>)</p>	<p>250 ml / ha</p> <p>PLUS</p> <p>an organosilicon surfactant (such as Charge)</p>	<p>Start application as soon as an infestation is noticed on leaves and flowers.</p> <p><u>Ground application:</u> Apply in 250 liters water per hectare. Ensure good coverage. Single application.</p>
<p><u>Cruciferae</u> (<u>Cabbage, Broccoli, Cauliflower And Brussel Sprouts</u>)</p> <p><u>Larvae of:</u> African bollworm (<i>Helicoverpa armigera</i>)</p>	<p><u>Ground Application:</u> 300 ml /ha</p>	<p><u>Corrective Application:</u> Apply in 300 to 600 litres of water per hectare and ensure thorough coverage of the head, where the larvae feed. Make use of hollow or full cone nozzles to improve coverage within the structure of the crop.</p> <p>The alternation of ADVANCE 150 SC with products having a different mode of action is recommended.</p> <p>Apply a block application of 2 to 3 consecutive ADVANCE 150 SC applications, and then switch to products with different modes of action.</p> <p>Do not apply more than five (5) sprays of ADVANCE 150 SC per season.</p> <p>Most beneficial insects and predatory mites are unaffected by applications of ADVANCE 150 SC.</p> <p>The addition of an adjuvant at the registered rate is essential to improve coverage.</p>

Crop / Pest	Dosage rate	Remarks
<p><u>Cucurbits</u> (Pumpkins, Squash, Watermelons, Muskmelons, Baby Marrows, Patty Pans And Cucumbers)</p> <p><u>Larvae of:</u> African bollworm (<i>Helicoverpa armigera</i>)</p>	<p><u>Ground Application:</u> 250 ml /ha</p>	<p><u>Early Corrective Application:</u> Apply in 250 to 750 litres water per hectare depending on the specific cucurbit species and crop stage. Ensure thorough even coverage of the foliage. Apply preventively at flowering or when the first bollworm eggs or small larvae (less than 10 mm in length) are observed following regular scouting during flowering / fruitset stages. It is important to take into consideration that even slight bollworm feeding damage on the flowers of cucurbit crops may result in significant yield losses. A follow-up application 7 to 10 days later will normally be necessary if the first application is made at the early flowering stage or under conditions of continuous re-infestation.</p> <p>Larvae that have penetrated the fruits, or are obscured by dense foliage, during application may not be adequately controlled. It is therefore essential to ensure thorough coverage of the foliage. Do not exceed two (2) applications of ADVANCE 150 SC per season. Should a third application be needed, use a product with a different mode of action. The addition of a non-ionic adjuvant (e.g. Villa 51) to the spray mixture is recommended to improve coverage.</p>
<p><u>Drybeans</u></p> <p><u>Larvae of:</u> African bollworm (<i>Helicoverpa armigera</i>)</p>	<p>250 ml /ha</p>	<p><u>Corrective Ground Application:</u> Apply in 330 to 500 litres water per hectare and ensure thorough, even coverage of the foliage. <u>Aerial application:</u> Apply in at least 30 litres water per hectare. Ensure thorough, even coverage of the foliage.</p> <p>Apply at flowering or when the first bollworm eggs or small larvae (less than 10 mm in length) are observed following regular scouting during flowering and pod-set stages. A second application with an insecticide with a different mode of action could be necessary if the ADVANCE 150 SC application is made at the early flowering stage or under conditions of continuous re-infestation.</p> <p>Larvae that have penetrated the pods or are obscured by dense foliage during application may not be adequately controlled. It is therefore essential to ensure thorough coverage of the foliage. Do not exceed one (1) application of ADVANCE 150 SC per season in drybeans. The addition of a non-ionic adjuvant (e.g. Villa 51) to the spray mixture is recommended to improve coverage.</p>

Crop / Pest	Dosage rate	Remarks
<p><u>Green Beans</u></p> <p><u>Larvae of:</u> African bollworm (<i>Helicoverpa armigera</i>)</p>	250 ml /ha	<p><u>Ground Foliar Application:</u> Apply in 250 to 350 litres water per hectare and ensure thorough even coverage of the foliage. Apply preventively at flowering or when the first bollworm eggs or small larvae (less than 10 mm in length) are observed following regular scouting during flowering / fruitset stages. A follow-up application 7 to 10 days later will normally be necessary if the first application is made at the early flowering stage or under conditions of continuous re-infestation.</p> <p>Larvae that have penetrated the pods or are obscured by dense foliage during application may not be adequately controlled. It is therefore essential to ensure thorough coverage of the foliage. The addition of a non-ionic adjuvant (e.g. Villa 51) to the spray mixture is recommended to improve coverage. Do not exceed two (2) applications of ADVANCE 150 SC per season. Should a third application be needed, use a product with from a different IRAC mode of action.</p>
<p><u>Hops</u></p> <p><u>Larvae of:</u> African bollworm (<i>Helicoverpa armigera</i>)</p>	<u>Ground Application:</u> 30 ml / 100 l water	<p>Only for use by authorized members of the SA Hop Growers Association and for production of hops for use in South Africa only.</p> <p><u>Early Corrective Foliar Application:</u> Apply in 500 to 1000 litres of water per hectare depending on plant height and density. Good coverage of all foliage is essential. Apply when the first larvae are observed usually early in the season on young shoots, during flowering and after flowering when cones are formed. Regular scouting of hop fields is essential to determine the timing of the first and subsequent applications if necessary. Apply ADVANCE 150 SC at a spray interval of 10 to 14 days. Use the shorter interval early in the growth season when plants are growing actively or under high pest pressure. Do not exceed two (2) applications per season with ADVANCE 150 SC. The alternation of ADVANCE 150 SC with insecticides that have a different mode of action is recommended. Apply a block application of two (2) consecutive ADVANCE 150 SC applications, and then switch to products with different modes of action. The addition of a non-ionic adjuvant (e.g. Villa 51) to the spray mixture is recommended to improve coverage.</p>
<p><u>Lettuce</u></p> <p><u>Larvae of:</u> African bollworm (<i>Helicoverpa armigera</i>)</p>	250 ml / ha	<p><u>Ground Application:</u> Commence with treatment in the initial phase of the crop (before the formation of the head), when the first larvae smaller than 10 mm are found in the crop. Apply in 500 to 600 litres of water per hectare depending on plant size. Do not exceed two (2) applications per season 7-days apart. The alternation of ADVANCE 150 SC with insecticides with a different mode of action is recommended. The addition of a suitable registered adjuvant, at the registered rate, is recommended to enhance efficacy.</p>

Crop / Pest	Dosage rate	Remarks
<p>Peas (Green peas, Including “Mange Tout”)</p> <p>Larvae of: African bollworm (<i>Helicoverpa armigera</i>)</p>	<p><u>Ground Application:</u> 250 ml / ha</p> <p><u>Aerial Application:</u> 300 ml / ha</p>	<p><u>Ground application:</u> Apply 250 to 350 litres spray mixture per hectare and ensure thorough even coverage of the foliage.</p> <p><u>Aerial application:</u> Apply in at least 30 litres water per hectare. Ensure thorough, even coverage of the foliage.</p> <p>Apply at flowering or when the first bollworm eggs or small larvae (less than 10 mm in length) are observed following regular scouting during flowering / fruitset stages. A follow-up application 7 to 10 days later will normally be necessary if the first application is made at the early flowering stage or under conditions of continuous re-infestation.</p> <p>Larvae that have penetrated the pods or are obscured by dense foliage during application may not be adequately controlled. It is therefore essential to ensure thorough coverage of the foliage.</p> <p>Do not exceed two (2) applications of ADVANCE 150 SC per season. Should a third application be needed, switch to a product from a different IRAC mode of action group.</p> <p>The addition of a non-ionic adjuvant (e.g. Villa 51) to the spray mixture is recommended to improve coverage.</p>
<p>Peppers</p> <p>Larvae of: African bollworm (<i>Helicoverpa armigera</i>)</p>	<p>30 ml / 100 l water (3 ml / 10 l water)</p> <p>PLUS</p> <p>20 ml / 100 l water (2 ml / 10 l water)</p> <p>Charge</p>	<p>Regular scouting of pepper fields is essential to determine the timing of the first and subsequent application if necessary.</p> <p>Apply in 500 to 1500 litres spray mixture per hectare and ensure good coverage of all foliage. In the case of trellised peppers, both sides of the pepper row must be sprayed.</p> <p>Apply a second treatment 7-days later if necessary.</p> <p>Do not exceed two (2) applications of ADVANCE 150 SC per season.</p> <p>The addition of an organosilicon surfactant (such as Charge) is recommended to improve coverage.</p>

Crop / Pest	Dosage rate	Remarks
<p><u>Soybeans</u></p> <p><u>Larvae of:</u> African bollworm (<i>Helicoverpa armigera</i>)</p>	<p><u>Ground Application:</u> 250 ml / ha</p> <p><u>Aerial Application:</u> 300 ml / ha</p>	<p><u>Ground application:</u> Apply in 300 to 700 litres water per hectare in soybeans. Ensure thorough, even coverage of the foliage.</p> <p><u>Aerial application:</u> Apply in at least 30 litres water per hectare. Ensure thorough, even coverage of the foliage.</p> <p>Apply as a corrective foliar application at flowering or when the first bollworm eggs or small larvae (less than 10 mm in length) are observed following regular scouting during flowering and pod-set stages. A follow-up application 7 to 10 days later will normally be necessary if the first application is made at the early flowering stage or under conditions of continuous re-infestation.</p> <p>Larvae that have penetrated the pods or are obscured by dense foliage during application may not be adequately controlled. It is therefore essential to ensure thorough coverage of the foliage.</p> <p>Do not exceed two (2) applications of ADVANCE 150 SC per season. Should a third application be needed, use an insecticide with a different mode of action.</p> <p>Most beneficial insects and predatory mites are unaffected by applications of ADVANCE 150 SC.</p> <p>The addition of a suitable registered adjuvant, at the registered rate, is recommended to enhance efficacy.</p>
<p><u>Stone Fruit</u> (Peaches and Nectarines)</p> <p><u>Larvae of:</u> African bollworm (<i>Helicoverpa armigera</i>)</p>	<p>30 ml / 100 l water</p>	<p><u>Foliar Application:</u> Apply as a full cover spray 500 to 2000 litres water per hectare and ensure thorough coverage.</p> <p>Apply preventively or when eggs or larvae are present, but before larvae enter the fruit.</p> <p>If required, apply a follow-up treatment 10 to 14 days later depending on infestation pressure of the pest.</p> <p>Do not exceed two (2) applications in total per season.</p>
<p><u>Table and Wine Grapes</u></p> <p><u>Larvae of:</u> African bollworm (<i>Helicoverpa armigera</i>)</p>	<p>30 ml / 100 l water</p>	<p>Apply preventively, or as soon as eggs or larvae are present, but before larvae enter the fruit.</p> <p>Apply as a full cover spray 1000 to 1500 litres water per hectare and ensure thorough, even coverage of the plant structure.</p> <p>If required, apply a follow-up treatment 10 to 14 days later depending on infestation pressure of the pest.</p> <p>Refer to “IMPORTANT NOTES” below.</p>
<p><u>IMPORTANT NOTES WITH REGARDS TO TABLE AND WINE GRAPES</u></p> <ul style="list-style-type: none"> • Do not exceed two (2) ADVANCE 150 SC applications in total per season on crop. Should any further control of the pest be required use a product from a different IRAC mode of action group. • BEE SAFETY: According to the standards of Good Agricultural Practices, ADVANCE 150 SC should not be applied if honey bees are active. 		

Crop / Pest	Dosage rate	Remarks
<p>Tomatoes</p> <p>Larvae of: African bollworm (<i>Helicoverpa armigera</i>)</p>	<p>30 ml / 100 l water (3 ml / 10 l water)</p> <p>PLUS</p> <p>50 ml / 100 l water (5 ml / 10 l water)</p> <p>Villa 51</p>	<p>Apply when the first larvae are observed – normally around the fruit-set stage of the crop. Apply at 500 to 1500 litres of spray mixture per hectare and ensure good coverage of all foliage. In the case of trellised tomatoes, apply to both sides of the tomato row. A suitable registered adjuvant such as Villa 51 can be added to improve efficacy. ADVANCE 150 SC will control larvae of all stages of development. Refer to “IMPORTANT NOTES” below.</p>
<p>IMPORTANT NOTES</p> <ul style="list-style-type: none"> Regular scouting of tomato fields is important to establish the timing of the first treatment and subsequent applications if required. ADVANCE 150 SC can be applied in an 8 to 14-day interval spray programme under conditions of continuous re-infestation of African bollworm. Do not exceed (3) treatments per season with ADVANCE 150 SC. The alternation of ADVANCE 150 SC with insecticides that have a different mode of action is recommended. Apply a block application of two (2) consecutive ADVANCE 150 SC applications, and then switch to products with different modes of action. 		
<p>Wheat, Barley & Oats</p> <p>Larvae of: African bollworm (<i>Helicoverpa armigera</i>)</p>	<p><u>Ground Application:</u> 250 ml / ha</p> <p>OR</p> <p><u>Aerial Application:</u> 300 ml / ha</p> <p>PLUS</p> <p>a registered surfactant</p>	<p><u>Ground application:</u> Apply in 250 to 300 litres water per hectare. Ensure thorough, even coverage of the foliage.</p> <p><u>Aerial application:</u> Apply in at least 30 litres water per hectare. Ensure thorough, even coverage of the foliage. Apply when the first bollworm eggs or small larvae (less than 10 mm in length) are observed following regular scouting. A follow-up application 7 to 10 days later will normally be necessary if the first application is made at the early flowering stage or under conditions of continuous re-infestation. Larvae that are obscured by dense foliage during application may not be adequately controlled. It is therefore essential to ensure thorough coverage of the foliage and wheat ears. The addition of a suitable registered adjuvant, at the registered rate, is recommended to enhance efficacy.</p>

Crop / Pest	Dosage rate	Remarks
<p><u>Tobacco</u></p> <p><u>Larvae of:</u> Potato tuber moth (<i>Phthorimaea operculella</i>)</p>	<p><u>Broadcast ground application:</u></p> <p>70 ml / 100 l water (175 to 210 ml /ha) ADVANCE 150 SC</p> <p>PLUS</p> <p>an organosilicon surfactant (such as Charge)</p>	<p>Apply after transplanting during the establishment phase of tobacco in the field as a preventative spray programme. Apply in 250 to 300 litres per hectare spray mixture at 7 to 10 day intervals with the first treatment 2 to 3 days after transplanting. Use the shorter interval under conditions of heavy infestation pressure.</p> <p>Direct the first and second applications as band applications, over the top of the plants, ensuring thorough coverage of the foliage, especially the lower third of the plants where Potato tuber moth larval infestations tend to be most severe.</p> <p>It is advised that the third and fourth application be directed from both sides. Use a boom fitted with drop arms with nozzles arranged to spray towards each in order to improve coverage. Increase the spray volume as the plants grow in size.</p> <p>Apply a block application of 2 to 3 consecutive ADVANCE 150 SC applications, and then switch to products with other modes of action. Most beneficial insects and predatory mites are unaffected by applications of ADVANCE 150 SC.</p> <p>The addition of an organosilicon surfactant (such as Charge) is recommended to improve coverage.</p>
<p><u>Larvae of:</u> African bollworm (<i>Helicoverpa armigera</i>)</p>	<p><u>Ground application:</u></p> <p>250 ml/ha</p> <p>PLUS</p> <p>Villa 51</p>	<p><u>Field Treatment:</u></p> <p>After transplanting into the field during the establishment and growing phases of tobacco.</p> <p>Apply ADVANCE 150 SC as a foliar application in 300 to 400 litres water per hectare. Increase the spray volume as plant size and density increases.</p> <p>Apply ADVANCE 150 SC early when bollworm eggs or small larvae are observed during regular scouting.</p> <p>Follow-up with a second ADVANCE 150 SC application at a spray interval of 10 to 14-days if necessary under conditions of continuous re-infestation.</p> <p>Use the shorter interval under conditions of heavy infestation pressure.</p> <p>Do not exceed two (2) applications per season. The alternation of ADVANCE 150 SC with insecticides that have a different mode of action is recommended. Apply a block application of two (2) consecutive ADVANCE 150 SC applications, and then switch to products with different modes of action. Most beneficial insects and predatory mites are unaffected by applications of ADVANCE 150 SC.</p> <p>The addition of a non-ionic adjuvant (e.g. Villa 51) to the spray mixture is recommended to improve coverage.</p>

Crop / Pest	Dosage rate	Remarks
<u>Veld, Grazing, Cotton, Maize & Grain sorghum</u> Fall Army worm <i>(Spodoptera frugiperda)</i>	200 to 250 ml / ha	Ground application: Apply in 200 to 400 litres water as soon as pest is observed and repeat as necessary. Ensure thorough coverage of the target area. Do not exceed two (2) consecutive applications of ADVANCE 150 SC per season.

Consult the **Lambda 50EC** and **Charge** and mineral oil adjuvant labels for **WARNINGS, PRECAUTIONS** and **DIRECTIONS FOR USE**.

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

- **CHARGE** (L 9100) = **TECHNIWET SUPER** (L 9239) = **BREAK-THRU® S240** (L 6764),
- **LAMBDA 50EC** (L 7787 / W 130687) = **JUDO 50 EC** (L 7785 / N-AR 1104) = **LAMBDA-CYTHRIN 50 EC** (L 8343) (Lambda-cyhalothrin),
- **VILLA 51** (L 8050 / W 130454 / N-AR 1090) = **WEN 51** (L 8315) and
- **AQUABUFF PLUS** (L 9210) = **TECHNIBUFF SUPER** (L 9209).

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