

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

Fungicide



# CERATO 250 EC

Reg. No. L 9336 Act No. 36 of 1947  
W1301636

5: 10/11/2025 – Nov2025

An emulsifiable concentrate contact and translaminar fungicide for the control of Black spot on citrus and Black shank on flue cured tobacco.

## ACTIVE INGREDIENT

pyraclostrobin (strobilurin) 250 g/l

GROUP

11

FUNGICIDE



**DANGER**

### Hazard Statements:

May be fatal if swallowed and enters airways.  
Causes skin irritation.  
Toxic if inhaled.  
Very toxic to aquatic life with long lasting effects.

### Precautionary Statements:

Avoid breathing mists, vapours or spray.  
Do NOT induce vomiting.  
Avoid release to the environment.



**villa**



UN Number: 2902

Registration holder: UNIVERSAL CROP PROTECTION (PTY) LTD.

Co. Reg. No. 1983/008184/07

65 Botes Road, Glen Marais, Kempton Park 1619

Tel. (011) 396 2233

Website: [www.villacrop.co.za](http://www.villacrop.co.za)

### IN CASE OF POISONING / 24 HR EMERGENCY NUMBERS:

Griffon Poison Information Centre (National): +27 82 446 8946

Poison Information Helpline (National): +27 861 555 777

24 Hr Transport / Spill emergency no: +27 86 044 4411

(Client: Villa Crop Protection)

REFER TO DETAILS AS PRINTED ON CONTAINER / BAG

DIRECTIONS FOR USE ENCLOSED  
Batch Number: \_\_\_\_\_  
Expiry Date: \_\_\_\_\_  
Date of Manufacture: \_\_\_\_\_

**CERATO 250 EC**

Reg. No. L 9336 Act No. 36 of 1947

W1301636

FRAC FUNGICIDE GROUP CODE: 11

**ACTIVE INGREDIENT:**

pyraclostrobin (strobilurin).....250 g/l

Registration holder:

**UNIVERSAL CROP PROTECTION (PTY) LTD.**

Co. Reg. No. 1992/002474/07

65 Botes Road, KEMPTON PARK, 1619

Tel. (011) 396 2233

**WARNINGS****Withholding periods:**

<b>Minimum number of days between the last application and harvest:</b>	
Citrus: Oranges, Grapefruit, Lemons, Limes, Tangelos, Pomelos and all Mandarin varieties unless otherwise stated	45 days
Maize	14 days
Maize (grazing)	60 days
Soybeans	39 days
Soybeans (grazing)	65 days
Tobacco	83 days
Tree nuts (Almonds)	28 days
Tree nuts (Pistachios)	14 days
Tree nuts (including Cashews, Chestnuts, Hazelnuts, Macadamias, Pecans, Walnuts)	45 days

**IN THE CASE OF CROPS INTENDED FOR EXPORT, CONFIRM WITHHOLDING PERIODS WITH THE RELEVANT EXPORT ORGANISATION. IF THIS PRODUCT IS USED ACCORDING TO THE RECOMMENDATIONS ON THIS LABEL, LOCAL MRL VALUES WILL NOT BE EXCEEDED. HOWEVER, VILLA CROP PROTECTION (PTY) LTD. CANNOT ACCEPT RESPONSIBILITY FOR EXPORTED CROPS EXCEEDING THE IMPORT TOLERANCES OF OTHER COUNTRIES.**

**Hazard statements:**

May be fatal if swallowed and enters airways.
Toxic if inhaled.
Causes skin irritation.
Very toxic to aquatic life with long lasting effects.

- Handle with care.
- 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 for 1 day after application unless wearing protective clothing.
- **In case of poisoning, call a doctor and make this label available to him / her.**

**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 disease 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, 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****Precautionary statements:**

Avoid breathing mists, vapours or spray.
Wash hands and face thoroughly after handling.
Use only outdoors or in well-ventilated area.

Avoid release to the environment.
Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
In case of inadequate ventilation wear respiratory protection.
IF SWALLOWED OR INHALED: Get emergency medical help immediately.
IF ON SKIN: Wash with plenty of water and non-abrasive soap.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Do NOT induce vomiting.
If skin irritation occurs: get medical help.
Take off contaminated clothing and wash it before reuse.
Collect spillage.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local regulations.

- Do not enter treated areas until the sprayed solution has dried.
- Wash contaminated clothing after use.
- 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 onto other crops, grazing, rivers, dams and areas not under treatment. Use of a spray drift retardant such as **Interlock®** (field crops) or **Masterlock®** (permanent crops) is recommended.
- Clean the applicator with a 1 % household ammonia solution before using for other pesticides. Let the solution stand for several hours, preferably overnight, in the spray equipment. Rinse at least twice. This applicator should not be used for applying chemicals other than pesticides.
- Thoroughly clean the spraying equipment directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- Containers and packages must be completely emptied before being disposed of. Shake out thoroughly into the applicator and destroy the empty container thereafter in the described manner.
- **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](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.
- In case of spillage or leakage, soak up with soil or other absorbent materials and dispose of at any approved waste disposal facility.
- **Never** re-use the empty container for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.

### **FIRST AID TREATMENT**

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure and **immediately consult a doctor**.

- **Inhalation:** If vapours or mists have been inhaled, immediately remove source of contamination if safe to do so or move victim to fresh air. The patient should be kept under observation. **Seek medical advice immediately.**
- **Skin contact:** Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Obtain medical attention if irritation persists.
- **Eye contact:** Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. If irritation persists, get medical attention.
- **Ingestion:** Have victim rinse mouth thoroughly with water. **Do not induce vomiting, due to the aromatic solvent. Seek medical advice immediately.** If the person is alert and respiration is not depressed, give large quantity of water to drink. Never give anything by mouth to an unconscious person.

### **NOTE TO PHYSICIAN**

Treat symptomatically and supportively. No specific antidote known

Relevant hazardous components	
Pyraclostrobin	250 g/ℓ
DL-1,2-Isopropylideneglycerol	< 60 g/ℓ
Heavy aromatic solvent, naphtha	< 600 g/ℓ
Liquid petroleum	< 150 g/ℓ

**NOTE:** The ingredients listed above contribute to the overall GHS classification, the remaining ingredients do not have to be listed according to the South African Regulations for Hazardous Chemical Agents 2021, Regulation 14(b).

**In case of poisoning, call the following number:** +27 82 446 8946 (Griffon Poison Information Centre) or +27 861 555 777 (Poison Information Helpline).

**In case of a chemical spill call the following 24 Hr Transport / Spill emergency number:** +27 86 044 4411 (Hazcall24 / Client: Villa Crop Protection).

### **RESISTANCE WARNING**

**CERATO 250 EC** is a group code 11 fungicide. Any fungus population may contain individuals naturally resistant to **CERATO 250 EC** and other group code 11 fungicides. The resistant individuals can eventually dominate the fungus population if these fungicides are used repeatedly and exclusively in programs. These resistant fungi may not be controlled by **CERATO 250 EC** or any other group code 11 fungicides.

To delay fungicide resistance:

- avoid exclusive repeated use of fungicides from the same fungicide group code. Alternate with products from different fungicide group codes,
- integrate other control methods (chemical, cultural, biological) into disease control programmes.

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

### **Mode of Action:**

**CERATO 250 EC** belongs to the strobilurin chemical group of fungicides, and the mode of action is described as “quinone outside inhibition (QoI)” thereby affecting mitochondrial electron transport. It has protective and curative activity (**up to 3 days**) and translaminar mobility. This fungicide also causes physiological effects like delayed senescence, greener leaves, better tolerance against biotic and abiotic stress as well as more efficient use of water and nitrogen.

### **USE RESTRICTIONS**

- **CERATO 250 EC** must not be used on old neglected citrus trees, as they are extremely prone to fungicidal resistance.
- Do not apply **CERATO 250 EC** on non-tolerant Black shank tobacco cultivars.
- **CERATO 250 EC** may only be applied on flue cured tobacco.

**DIRECTIONS FOR USE:** Use only as directed.

### **NOTICE TO USER:**

Read the entire label before application. This agricultural remedy is to be used only in accordance with the instructions on the label. It is an offence under the Act to use this agricultural remedy for any purpose in a manner contrary with the directions on the label.

### **Compatibility:**

- **CERATO 250 EC** is compatible with **Newzeb 455 SC, Newzeb 750 WDG, Newzeb 480 SC, Villa unizeb 800 WP, Copper oxychloride 850 WP, KOCIDE® 2000** (L 7805) (Copper hydroxide), **Dimethozeb 690 WP, Scope 250 EC, Link, MASTERLOCK®** (L 10496) and **INTERLOCK®** (L 10254 / N-AR 1856 / W 130875) and light to medium narrow range mineral oils.
- If tank mixtures with other products are made, first confirm compatibility by mixing small volumes of the products in the correct ratio with the appropriate quantity of water.
- Water quality and formulation properties of other products may influence compatibility.
- If the products are physically compatible, this does **NOT** imply that they will be biologically compatible (effective against the target pathogen), thus the registration holder will not take responsibility for ineffective control in these scenarios.

**Mixing instructions:**

- Half fill the spray tank with clean water and ensure agitation.
- If other products will be used in a tank mixture with **CERATO 250 EC**, the following mixing sequence, as applicable, must be used: buffer/acidifier; wettable powder or granules (**WP** or **WDG**); suspension concentrate (**SC**); emulsifiable concentrate (**EC**); wetter. Pre-mix each product separately with a small volume of water before adding it to the spray tank. Thereafter, fill the tank to the required volume with clean water while maintaining agitation, to ensure thorough mixing of the spray mixture, before application commences.
- Pre-mix the required amount of **Mancozeb** or **Copper** containing product, in at least 10 litres of water and add it to the spray tank.
- Pre-mix the required volume of **CERATO 250 EC** in at least 10 litres of water before adding to the spray tank.
- Citrus only: Finally add the mineral oil to the mixture. Fill the spray tank with water to the final volume required while maintaining agitation, to ensure thorough mixing of the spray mixture before spraying commences.
- Maintain agitation while spraying.
- Prepared spray mixture must not be left in the spray tank for any length of time, e.g. overnight.

**CROP RECOMMENDATIONS****Citrus:**

**CERATO 250 EC** must always be applied in a programme application with a **Mancozeb** or a **Copper** containing product in order to achieve a responsible resistance management programme. Accurate timing of treatments is essential to achieve efficient control.

- **CERATO 250 EC** treatments must be applied as a preventive treatment with limited curative abilities (up to 3 days).
- Apply a **Mancozeb** or a **Copper** containing product as a first treatment starting at fruit set (100 % petal drop), at the registered rate OR apply a **CERATO 250 EC** tank mixture (any of the **Mancozeb** formulations or **Kocide**) at the recommended rates at 80% fruit set/petal drop.
- Follow up with two (2) **CERATO 250 EC** applications, as recommended below. Complete the spray programme with a further treatment of at least one **Mancozeb** or **Copper** containing product application, as recommended.
- **DO NOT** apply more than three (3) strobilurin-containing/QoI fungicides, such as **CERATO 250 EC**, per crop per season. **CERATO 250 EC** should not be the last pre-harvest fungicide applied as part of a disease control programme.
- Refer to the respective **Mancozeb**, **Copper** containing products and narrow range mineral oil product labels for the respective recommendations and application rates.
- **Lemons for export crop and local oil production:** All bearing and out of season fruit, should be removed from the trees before starting the programme application. Do not deviate from the recommended spray programme starting at fruit set (100 % petal drop).

**Maize and Sweetcorn:**

- The risk of Arrested Ear Syndrome (Blunt Ear Syndrome) increases dramatically when any applications (crop protection products, fertilizers, foliar feeds, adjuvants, etc.) are made between the V10 – VT (10<sup>th</sup> leaf collar – cob tassel emergence) growth stages of maize plants. Applications between the V10-VT growth stages of the crop must be avoided as far as possible.
- **Broadcast Application (Ground & Aerial):**
  - Apply **CERATO 250 EC** as part of a spray programme with **Scope 250 EC** as follows (refer to **Scope 250 EC** label):
    - Northern leaf blight - apply the first application during the 8- to 10-leaf stage (growth stage 35) of the maize plants.
    - Grey leaf spot - commence with treatment before 3 % of the total leaf surface area exhibit disease symptoms, or if symptoms are observed on the bottom 3 to 5 leaves.
    - Rust – apply the first application preventatively at the 4 to 5 leaf stage.
  - A follow-up spray might not be required in the case of short season hybrids, when the first spray was applied after pollination, as it may be sufficient to control the disease.
  - Apply a maximum of two (2) strobilurin-containing applications per season.

- If multiple applications are required to control the disease, additional applications should be made using a registered fungicide from another chemical group, other than strobilurin (e.g., **Scope 250 EC**). The last application for the season should not contain a strobilurin.
- **Row Application:**
  - In situations where maize is planted at wider row spacing's than 1 meter, e.g., in the Free State and western parts of RSA, row application may be used.
  - For row applications, adjust dosage rates and spray volumes accordingly.
  - The sprayer must be equipped with a tandem fitting of two hollow cone nozzles, mounted on the boom, directed on to each row.

Apply in a sufficient volume of water to ensure good coverage of the plants

#### **Tobacco:**

- Apply **CERATO 250 EC** in a spray programme in order to optimise the fungicidal efficacy of the product and to ensure sustainable use of strobilurins. Apply the programme as follows:
  - first application of **CERATO 250 EC** at transplanting,
  - follow up four (4) weeks later with **Dimethozeb 690 WP**.
- Only apply **CERATO 250 EC** on flue cured tobacco.

#### **Application instructions:**

All spray operations 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.

#### **Aerial application (Maize and tree nuts only):**

Aerial application of **CERATO 250 EC** 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: 25 to 35 droplets per cm<sup>2</sup> must be recovered at the target area.
- Droplet size: A droplet spectrum with a VMD of 280 to 300 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 meters above the target. Do not spray when aircraft is diving, climbing 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.

**Post Spray Equipment Cleaning**

- It is essential to rinse the spray tank and all hoses with a 0.1 % solution of either calcium chloride or ammonium hydroxide or the recommended rate of **Protank® liquid cleaner** according to the product label.
- Allow this solution to stand in the spray equipment for 15 minutes; empty the spray equipment; repeat the rinsing with a 0.1 % solution of calcium chloride or ammonium hydroxide for 15 minutes; rinse all equipment with water.
- Nozzles and fitters must be cleaned individually.
- Rinse water and solution should be drained in a cesspool or drain where it will not contaminate any water source.

## APPLICATION RATES

<b>Crop / Disease</b>	<b>Dosage rate</b>	<b>Remarks</b>
<b>Citrus</b> Oranges, Grapefruit, Lemons, Limes, Tangelos, Pomelos and all Mandarin varieties unless otherwise stated  Black spot ( <i>Guignardia citricarpa</i> )	It is extremely important to remove out of season fruit before the spray programme, to effectively control Black spot. <b>CERATO 250 EC</b> should be applied as part of a preventative spray programme. <b>CERATO 250 EC</b> should not be the last pre-harvest fungicide applied as part of a disease control programme on citrus.	
	<u><b>Initial(1<sup>st</sup>) Application:</b></u> Refer to “ <b>CROP RECOMMENDATIONS</b> ” above.	
	200 g / 100 ℓ water <b>Villa Unizeb 800 WP</b>  <b>OR</b> 200 g / 100 ℓ water <b>Villa Unizeb 750 WDG</b>  <b>OR</b> 350 ml / 100 ℓ water <b>Multizeb 455 SC</b>  <b>OR</b> 330 ml / 100 ℓ water <b>Unizeb 480 SC</b>	<b><u>CBS Programme with 2 CERATO 250 EC Applications:</u></b>  Start programme with an initial <b>Mancozeb</b> application at fruit set (100 % petal drop) at the rates mentioned to the left.  <b>OR</b> <b><u>CBS Programme with 3 CERATO 250 EC Applications:</u></b>  Apply a <b>CERATO 250 EC</b> tank mixture (any of the <b>Mancozeb</b> formulations or <b>Kocide</b> ) at the recommended rates as listed in the dosage rate column under the 2 <sup>nd</sup> & 3 <sup>rd</sup> applications, as a preventive treatment at 80% fruit set/petal drop.
	<u><b>2<sup>nd</sup> &amp; 3<sup>rd</sup> Applications within the CBS Programme</b></u>	
	10 ml <b>CERATO 250 EC</b>  <b>PLUS</b>  300 ml light to medium narrow range mineral oil / 100 ℓ water  <b>PLUS</b>  150 g / 100 ℓ water <b>Villa Unizeb 800 WP</b>  <b>OR</b> 150 g / 100 ℓ water <b>Villa Unizeb 750 WDG</b>  <b>OR</b> 260 ml / 100 ℓ water <b>Multizeb 455 SC</b>  <b>OR</b> 250 ml / 100 ℓ water <b>Unizeb 480 SC</b>  <b>OR</b> 150 g / 100 ℓ water <b>Kocide® 2000</b>	<b><u>CBS Programme with 2 CERATO 250 EC Applications:</u></b>  Apply <b>CERATO 250 EC</b> tank mixture 21 to 25 days after the first <b>Mancozeb</b> application as a preventive treatment.  Ensure good coverage of all fruit with a medium to full cover spray.  Apply a second <b>CERATO 250 EC</b> tank mixture application 6 weeks later.  <b>OR</b> <b><u>CBS Programme with 3 CERATO 250 EC Applications:</u></b>  If a <b>CERATO 250 EC</b> tank mixture was applied as the initial application, then this interval can be extended to 6 weeks.  Ensure good coverage of all fruit with a medium to full cover spray.  Apply a third <b>CERATO 250 EC</b> tank mixture application 6 weeks later.



<b>Crop / Disease</b>	<b>Dosage rate</b>	<b>Remarks</b>
<b>(Continued)</b>	<b>4<sup>TH</sup> Application within the CBS Programme</b>	
<b>Citrus</b> Oranges, Grapefruit, Lemons, Limes, Tangelos, Pomelos and all Mandarin varieties unless otherwise stated  Black spot ( <i>Guignardia citricarpa</i> )	200 g / 100 ℓ water <b>Villa Unizeb 800 WP</b>	<b>CBS Programme with 2 CERATO 250 EC Applications:</b>  Apply <b>Mancozeb</b> six (6) weeks after the second <b>CERATO 250 EC</b> tank mixture application.  Repeat with a <b>Mancozeb</b> treatment 21 to 24 days later if an infection period occurs in February.
	<b>OR</b> 200 g / 100 ℓ water <b>Villa Unizeb 750 WDG</b>	<b>OR</b>
	<b>OR</b> 350 ml / 100 ℓ water <b>Multizeb 455 SC</b>	<b>CBS Programme with 3 CERATO 250 EC Applications:</b>  Apply <b>Mancozeb</b> six (6) weeks after the THIRD (3 <sup>RD</sup> ) <b>CERATO 250 EC</b> tank mixture application.
	<b>OR</b> 330 ml / 100 ℓ water <b>Unizeb 480 SC</b>	Repeat with a <b>Mancozeb</b> treatment 21 to 24 days later if an infection period occurs in February.
<b>REMARKS</b> <b>Copper oxychloride 850 WP product application as an alternative to Mancozeb or Kocide® 2000 in a CERATO 250 EC spray programme on citrus.</b> <ul style="list-style-type: none"> <li>As an alternative to <b>Mancozeb</b> or <b>Kocide® 2000</b> (solo or in combination with <b>CERATO 250 EC</b> and mineral oil), <b>Copper oxychloride 850 WP</b> can be included in the programme application.</li> <li>The <b>Copper oxychloride 850 WP</b> applications should be applied according to the registered rates (Refer to the necessary label recommendations).</li> <li>In order to avoid/reduce the occurrence of <b>Copper</b> rind stippling and any lesion accentuation on fruit, <b>Copper oxychloride 850 WP</b> should be applied at least 60 days apart. Reduce the number of <b>Copper oxychloride 850 WP</b> applications to a maximum of 2 to 3 applications per season.</li> </ul>		

Crop / Disease	Dosage rate	Remarks
<b>Maize and Sweetcorn</b>	<b>WARNING</b> <i>The risk of Arrested Ear Syndrome (Blunt Ear Syndrome) increases dramatically when any applications (crop protection products, fertilizers, foliar feeds, adjuvants, etc.) are made between the V10 – VT (10<sup>th</sup> leaf collar – cob tassel emergence) growth stages of maize plants. Applications between the V10-VT growth stages of the crop must be avoided as far as possible.</i>	
Grey leaf spot ( <i>Cercospora zeae-maydis</i> )	<b>Broadcast Application (Ground &amp; Aerial):</b> Apply <b>CERATO 250 EC</b> as part of a spray programme with <b>Scope 250 EC</b> as follows (refer to <b>Scope 250 EC</b> label): <ul style="list-style-type: none"> <li>Northern leaf blight - apply the first application during the 8- to 10-leaf stage (growth stage 35) of the maize plants.</li> <li>Grey leaf spot - commence with treatment before 3 % of the total leaf surface area exhibit disease symptoms, or if symptoms are observed on the bottom 3 to 5 leaves.</li> <li>Rust – apply the first application preventatively at the 4 to 5 leaf stage.</li> <li>A follow-up spray might not be required in the case of <u>short season hybrids</u>, when the first spray was applied after pollination, as it may be sufficient to control the disease.</li> <li>Apply a maximum of two (2) strobilurin-containing applications per season. If multiple applications are required to control the disease, additional applications should be made using a registered fungicide from another chemical group, other than strobilurin (e.g., <b>Scope 250 EC</b>). The last application for the season should not contain a strobilurin.</li> </ul>	
Northern leaf blight ( <i>Exserohilum turcicum</i> = <i>Helminthosporium turcicum</i> )		
Rust ( <i>Puccinia sorghi</i> )		
	400 to 600 ml / ha <b>CERATO 250 EC</b> (20 to 30 ml / 10 l water) <b>PLUS</b> 250 to 300 ml / ha <b>Scope 250 EC</b> (12.5 to 15 ml / 10 l water) <b>PLUS</b> <b>Link</b> at 50 ml / 100 l water <b>PLUS</b> <b>Interlock®</b> at 300 ml/ha	The first application must be applied strictly preventatively before any disease symptoms are noticed.  Apply the first application not later than three (3) weeks after germination (usually around the 4 to 5 leaf stage).  Repeat the application three (3) weeks later.
<b>Maize and Sweetcorn (cont.)</b>		
<b>Row Application:</b>		
<ul style="list-style-type: none"> <li>In situations where maize is planted at wider row spacing's than 1 meter, e.g., in the Free State and western parts of RSA, row application may be used.</li> <li>For row applications, adjust dosage rates and spray volumes accordingly.</li> <li>The sprayer must be equipped with a tandem fitting of two hollow cone nozzles, mounted on the boom, directed on to each row.</li> </ul>		
Apply in a sufficient volume of water to ensure good coverage of the plants.		

<b>Crop / Disease</b>	<b>Dosage rate</b>	<b>Remarks</b>
<b><u>Soybeans</u></b>  Ascochyta leaf spot <i>(Ascochyta spp.)</i>  Soybean rust <i>(Phakospora pachyrhizi)</i>	250 ml / ha <b>CERATO 250 EC</b> (15ml / 10 ℓ water)  <b>PLUS</b> 250 ml / ha <b>Scope 250 EC</b> (15 ml / 10 ℓ water)  <b>PLUS</b> <b>Link</b> at 50 ml / 100 ℓ water (5 ml / 10 ℓ water)  <b>PLUS</b> <b>Interlock®</b> at 300 ml / ha (20 ml / 10 ℓ water)	Apply the first application <b>strictly preventatively</b> before any symptoms are noticed. <b>DO NOT</b> apply the first application later than the onset/beginning of flowering. Repeat the application 3 to 4 weeks later. If weather conditions favour disease development (temperatures of 15 to 28 °C and high humidity) use the shorter interval. Apply as a full cover spray and ensure complete coverage of the plant with a water volume of 150 to 500 ℓ water / ha. To ensure adequate penetration of crop canopies for disease control, the addition of <b>Interlock®</b> is recommended.  If the disease appears during flowering or early pod-fill, more than one (1) spray may be necessary. Should disease appear late in the growing season, a single application will be sufficient. <b>DO NOT</b> apply more than two (2) applications of <b>CERATO 250 EC</b> or any other strobilurin-containing fungicide per crop per growing season regardless of disease targeted. For extended control, switch to approved fungicides with other modes of action.
<b><u>Tobacco</u></b> Black shank <i>(Phytophthora nicotianae)</i>	1.2 ℓ <b>CERATO 250 EC</b> / 15000 plants	Refer to the “ <b>CROP RECOMMENDATIONS</b> ” above.  <u>Application at transplanting:</u> <b>Apply before transplanting of tobacco.</b> Dilute 80 ml <b>CERATO 250 EC</b> in 100 litres water. Fill the planting hole with water and apply 100 ml of the mixture into the planting hole while still full of water.  <u>Application 4 weeks after transplant:</u> Follow the <b>CERATO 250 EC</b> treatment up 28 days later with <b>Dimethozeb 690 WP</b> as per relevant label instructions.

<b>Crop / Disease</b>	<b>Dosage rate</b>	<b>Remarks</b>
<b>Tree nuts</b> (Almonds, Cashews, Chestnuts, Hazelnuts, Macadamias, Pecans, Pistachios, Walnuts)  Downy spot ( <i>Mycosphaerella caryigena</i> ) Leaf rust ( <i>Tranzschelia discolor</i> ) Panicle and shoot blight ( <i>Botryosphaeria dothidea</i> ) Powdery mildew ( <i>Micosphaera penicillata</i> )	20 ml / 100 l water (2 ml / 10 l water) <b>CERATO 250 EC</b>  <b>PLUS</b>  13 ml / 100 l water (1.3 ml / 10 l water) <b>Scope 250 EC</b>	Refer to “Resistance Management and Directions for use” above.  Apply the <b>CERATO 250 EC</b> tank-mix preventively as part of a program application in a 14-day spray program. <b>DO NOT</b> apply more than four (4) applications of the recommended tank-mix per season on tree nuts other than Pecans. <b>DO NOT</b> apply more than three (3) applications of the tank-mix with <b>CERATO 250 EC</b> per season on Pecans.  All other applications must be made with different fungicide from unrelated chemical groups  Ensure <b>complete coverage</b> of the whole tree canopy with each application treatment.  <u>Aerial application:</u> Apply in 30 to 40 litres water per hectare.
Scab ( <i>Fusicladium effusum</i> / <i>Cladosporium caryigenum</i> )	<b>PLUS</b>  20 to 100 ml / 100 l water	Start applications for the control of <b>Scab</b> when the first leaves unfold.
Blossom blight ( <i>Cladosporium cladosporioides</i> ) ( <i>Monilinia spp.</i> )	(2 to 10 ml / 10 l water) <b>Masterlock®</b>	Start applications for the control of <b>Blossom blight</b> at flower tassel emergence.
Husk rot ( <i>Colletotrichum spp.</i> )		For the control of <b>Husk rot</b> , the first application must not be applied later than 100 % petal drop/fruit set.
Alternaria late blight ( <i>Alternaria spp.</i> ) Alternaria leaf spot ( <i>Alternaria alternata</i> )		Start applications in Late spring.

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

- **VILLA UNIZEB 800 WP** (L 8056 / N-AR 1091) (**Mancozeb**),
- **NEWZEB 750 WDG** (L 8811) = **VILLA UNIZEB 750 WDG** (L 8812) (**Mancozeb**),
- **NEWZEB 455 SC** (L 9175) = **MULTIZEB 455 SC** (L 9174) (**Mancozeb**),
- **NEWZEB 480 SC** (L 9178) = **UNIZEB 480 SC** (L 9179) (**Mancozeb**),
- **COPPER OXYCHLORIDE 850 WP** (L 5809) = **COPPER OXYCHLORIDE 850 WP** (L 6231 / N-AR 1879 / W 130952) (**copper oxychloride**),
- **DIMETHOZEB 690 WP** (L 7985) (**Dimethomorph + Mancozeb**),
- **D-ZOLE 250 EC** (L 7923) = **SCOPE 250 EC** (L 7942 / N-AR 1098 / W 1301370) (**Difenoconazole**),
- **LINK** (L 8675) = **DIRECT** (L 8680).

**LINK, D-ZOLE 250 EC, SCOPE 250 EC, NEWZEB 750 WDG, NEWZEB 455 SC, NEWZEB 480 SC, DIMETHOZEB 690 WP** and **COPPER OXYCHLORIDE 850 WP** are registered products of **UNIVERSAL CROP PROTECTION (PTY) LTD.**

**DIRECT, VILLA UNIZEB 800 WP, VILLA UNIZEB 750 WDG, MULTIZEB 455 SC, UNIZEB 480 SC,** and **COPPER OXYCHLORIDE 850 WP** are registered products of

**VILLA CROP PROTECTION (PTY) LTD.**

**KOCIDE® 2000** is a registered trademark of  
**KOCIDE LLC.**

**MASTERLOCK®, INTERLOCK® and PROTANK® LIQUID CLEANER** are registered trademarks of  
**WINFIELD SOLUTIONS REGISTRATION HOLDINGS (PTY) LTD**