



syngenta

Reg. No. L5968 Act No. 36 of 1947

GROUP 11 FUNGICIDE

Active Ingredient:
azoxystrobin (strobilurin)..... 250 g/l

UN 3082



WARNING

A suspension concentrate systemic and translaminar fungicide for the control of diseases in crops as listed.

Hazard statements:

Very toxic to aquatic life with long-lasting effects.

Precautionary statements:

Response: Collect spillage. **Disposal:** Dispose of contents/container to an approved waste disposal plant.

In case of poisoning, call the following number
EMERGENCY TEL NO.:
+27 82 446 8946 (Griffon)

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1. WARNINGS:

Hazard statements: Very toxic to aquatic life with long-lasting effects.

Withholding periods: Minimum number of days between last application and harvest.

AVOCADOES.....	28 days
BANANAS.....	1 day
BERRIES BUSHBERRY.....	1 day
BERRIES CANEBERRY.....	1 day
CITRUS (excluding lemons).....	77 days
CITRUS (lemons).....	14 days
CRANBERRY.....	3 days
MANGOES.....	21 days
STONE FRUIT.....	1 day
TREE NUTS.....	45 days
TROPICAL FRUIT.....	1 day

NOTE: Compliance with these withholding periods will ensure that residues do not exceed local maximum residue limits (MRL), but the import tolerances of other countries might possibly be exceeded. If the crop to be treated is intended for export, consult the relevant importer or exporting body regarding the use of this product, MRL's and recommended withholding periods.

- Harmful if swallowed or inhaled.
- Toxic to fish and very toxic to other aquatic life.
- Store away from food and feed.
- Keep out of reach of children, uninformed persons and animals.
- **Re-entry:** Do not enter treated area until spray deposit has dried unless wearing protective clothing.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions, quality with other substances not indicated on the label and the occurrence of resistance of the disease against the remedy concerned, as well as by the method,

time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation and the environment, or harm to people or 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, that could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

2. PRECAUTIONS:

Precautionary statements: Response: Collect spillage.
Disposal: Dispose of contents container to an approved waste disposal plant.

- Avoid contact with skin or eyes. Product may cause mild eye and slight skin irritation.
- Do not eat, drink, or smoke while handling this product.
- Prevent contamination of food, feed, drinking water and eating utensils.
- Wear rubber gloves and a face shield when handling the concentrate. If you get it in your eyes, flush it out at once. If you get it on your skin, wash it off at once. If you spill it on your clothes, change and wash it.
- Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container three (3) times with a volume of water equal to a minimum of 10% of that of the container. Add the rinsate to the contents of the spray tank before destroying the container in the prescribed manner.
- Do not use the empty container for any other purpose.
- While spraying, avoid contact with the spray as much as you can. Avoid spray drift onto other crops, grazing rivers, or dams.
- Clean applicator thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers or dams.
- Change and wash your work clothes. Wash yourself.

3. RELEVANT SUBSTANCES:

Chemical name
azoxystrobin (ISO)

Chemical name	
azoxystrobin (ISO) cont.	
Cas no.	Concentration (% w/w)
131860-33-8	≥ 20 - < 25
Chemical name	
Residues (petroleum), catalytic reformer fractionator, sulfonated, polymers with formaldehyde, sodium salts	
Cas no.	Concentration (% w/w)
68425-94-5	≥ 1 - < 10
Chemical name	
methanol	
Cas no.	Concentration (% w/w)
67-56-1	≥ 0,1 - < 1

4. RESISTANCE MANAGEMENT:

ORTIVA is a group code 11 fungicide. Any fungus population may contain individuals naturally resistant to **ORTIVA** 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 **ORTIVA** or any other group code 11 fungicides.

To delay fungicide resistance:

- Avoid exclusive repeated use of fungicides from the same fungicide group code. Alternate or tank mix with products from different fungicide group codes.
- Refer to individual product labels when alternating products or when using tank mixtures.
- Integrate other control methods (chemical, cultural, biological) into disease control programs.

4.1 General

- **ORTIVA** should always be applied preventatively as prescribed in the RECOMMENDATIONS table.
- **ORTIVA** must be applied as a full-cover spray.
- Do not reduce the dosage rates below that which are recommended on the label.
- Never use **ORTIVA** as a corrective or curative treatment or after the unsuccessful application of any product.

For specific information on resistance management contact the registration holder of this product (Syngenta South Africa) or visit the FRAC website at <http://www.frac.info/frac/index.html>.

5. DIRECTIONS FOR USE: Use only as indicated.

5.1 Compatibility

ORTIVA is compatible with mancozeb, copper oxychloride, mineral oils and buffers. When applying the **ORTIVA**, mancozeb or copper oxychloride and mineral oil tank mixture, do not mix with any other agricultural chemical.

5.2 Mixing Instructions

- Half-fill the spray tank with clean water.
- Water must be buffered as needed.

- For tank mixtures, mix the required amount of **ORTIVA** and mancozeb or copper oxychloride separately with a small quantity of water before adding it to the spray tank.
- Add the **ORTIVA** or individually mixed products separately to the spray tank.
- Top-up to the required water volume while agitating the spray tank continuously.
- Add the required amount of mineral oil to the spray tank if needed while maintaining agitation.
- Continue agitation throughout application and do not allow the tank mixture to stand still for any period of time.

5.3 Tree Preparation

Good coverage of the spray material is of utmost importance for optimum disease control. Adequate pruning of low hanging branches and windows in trees with dense foliage are important practices which will allow for good coverage. Penetration windows must ideally be pruned at 45 degree angles to spray lanes on both sides of the tree rows for improved spray penetration and optimum coverage.

5.4 Application

- Ensure that application equipment is fully operational and correctly calibrated before commencing with the spray program.
- Should it rain before the spray deposit has fully dried, it will be necessary to re-apply the treatment.
- Remove all out-of-season fruit before commencing with the spray program.
- Avoid the use of **ORTIVA** on trees with visible symptoms of *Phytophthora*-root rot, nematode infestation, virus infection or any other physiological stress as effective product performance may be reduced.

5.4.1 Ground application

Use water volumes that will ensure complete coverage of the trees:

- **Avocadoes:** 5 - 50 ℓ/tree depending on the size of the tree.
- **Citrus:** 20 - 50 ℓ/tree depending on the size of the tree.
- **Mangoes:** 5 - 15 ℓ/tree depending on the size of the tree.

5.4.2 Aerial application

Avoid chemical drift at all times.

Aerial application of **ORTIVA** may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS 10118 (Aerial Application of Agricultural Remedies). It is important to ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. Thorough coverage is essential for effective results. Use only in crops where aerial application is indicated. It is therefore essential that the following criteria are met:

- Application parameters:
 - **Volume:** A volume of 30 - 40 ℓ water/ha is recommended.

As **ORTIVA** has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy or be held responsible for any adverse effects if the product is applied aerially at a lower volume rate than recommended above.

- **Droplet coverage:** Droplet coverage of 25 - 35 droplets per cm² must be recovered at the target.
- **Droplet size:** A droplet spectrum with a VMD of 280 - 300 microns is recommended. Ensure that the production of fine droplets (less than 150 microns - high drift and evaporation potential) is restricted to a minimum.
- **Flying height:** The height of the spray boom should be maintained at 3 - 4 metres above the target. Do not spray when aircraft is in a climb, at the top or during a dive, or when banking.

b) Equipment:

- Use suitable atomising equipment (hydraulic nozzles or rotary atomisers) that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product either through endodrift (within target field) or exodrift (outside target field).
- The operator must use a setup that will produce a droplet spectrum with the lowest possible relative span.
- All nozzles/atomisers should be positioned within the inner 60 - 75% of the wingspan to prevent droplets from entering the wingtip vortices.

c) Meteorological conditions:

- 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/h or reduces to less than 5 km/h.
- Aerial application of **ORTIVA** must not be done under turbulent, unstable conditions during the heat of the day when rising thermals and downdraughts occur. Also note that the application of this product under temperature inversion conditions (spraying in or above the inversion layer) may lead to the following:
 - Reduced efficacy due to suspension and possible evaporation of small droplets in the air (inadequate coverage).
 - Damage to other sensitive crops and or non-target areas through the movement of the suspended spray cloud away from the target field.
- Under the following climatic conditions drift could occur more than 3 - 5 km:
 - Cloudy weather with relative humidity above 80% and low air movement of less than 5 km per hour. When such conditions prevail, aerial application should NOT be carried out where sensitive crops, crop seedlings or deciduous fruit trees e.g., apples in budding or early development stages are present within 5 km of the nearest spray path of the aircraft.

Ensure that the pilot knows which fields to spray. Supply the precise identification to the operator of the fields to be sprayed preferably by means of a map or GPS coordinates. Indicate to the operator adjacent environmental sensitive areas or sensitive neighbouring crops, beehives or water sources that could be affected by the pesticide.

Obtain 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.

6. RECOMMENDATIONS:

For the best results, study the sections under 4 and 5 thoroughly.

AVOCADOES

Disease	Dosage
Cercospora spot <i>(Pseudocercospora purpurea)</i> Dothiorella fruit rot <i>(Dothiorella aromatica)</i> Anthracnose <i>(Colletotrichum gloeosporioides)</i>	Ground application 30 ml ORTIVA plus 250 ml light narrow range mineral oil/100 l water
Remarks <ul style="list-style-type: none"> • Apply only as a high-volume spray. • Apply as a block of two (2) consecutive sprays 28 days apart. • Do not exceed two (2) applications per season. • For a complete control program, ORTIVA must be used in a program with copper oxychloride as per label recommendations. 	
Suggested spray program <ul style="list-style-type: none"> • Commence the spray program with an ORTIVA application when fruit are approximately pigeon-egg size. Follow-up with a second ORTIVA application 28 days later. Continue with copper oxychloride (300 g/100 l water) applications. • The recommended rate of copper oxychloride is based on a formulation containing 850 g copper oxychloride/kg. 	

BANANAS

Disease	Dosage
Yellow Sigatoka <i>(Mycosphaerella musicola)</i>	Ground or aerial application 400 - 600 ml/ha
Post-harvest application: Crown rot <i>(Colletotrichum musae)</i> <i>(Fusarium pallidoroseum)</i> <i>(Acremonium spp.)</i> <i>(Ceratomyces paradoxa)</i> <i>(Glomerella cingulata)</i> <i>(Penicillium spp.)</i>	80 - 150 ml/100 l water (200 - 400 ppm)
Remarks <ul style="list-style-type: none"> • Apply ORTIVA prior to disease development and repeat application at 10 - 14-day intervals. • Do not apply more than two (2) sequential applications of ORTIVA before alternating with a fungicide with a different mode of action. • Do not apply more than one-third of the total number of applications per season with ORTIVA or fungicides with a different mode of action. 	

BANANAS cont.**Post-harvest application**

- Apply **ORTIVA** as a single application of a 200 - 400 ppm solution to achieve good coverage.
- The application may be made as a spray, dip or may be painted onto the cut ends of the bananas.
- Application of 200 ppm is appropriate for short distance transportation. When a longer time for transportation is expected, use the 300 - 400 ppm rate.

ORTIVA rate	ORTIVA/100 ℓ spray solution
200 ppm	80 ml
300 ppm	110 ml
400 ppm	150 ml

- Do not make more than one (1) application to bananas as post-harvest treatment.
- **ORTIVA** may be degraded by exposure to direct sunlight. Do not store fruit in direct sunlight.

BERRIES (Bushberries)

(Includes blueberry, elderberry, gooseberry, huckleberry and all hybrids and cultivars of these)

Disease	Dosage
Botryosphaeria canker (<i>Botryosphaeria</i> spp.)	Ground or aerial application 440 - 1 100 ml/ha
Powdery mildew (<i>Sphaerotheca</i> spp.)	
Septoria blight (<i>Septoria</i> spp.)	
Alternaria fruit rot (<i>Alternaria</i> spp.)	
Anthraxnose (<i>Colletotrichum</i> spp.)	
Remarks	
<ul style="list-style-type: none"> • Apply ORTIVA prior to disease development and repeat application at 7 - 10-day intervals. • Do not apply more than three (3) applications of ORTIVA per season. • Do not apply more than two (2) sequential applications of ORTIVA before alternating with a fungicide with a different mode of action. • An adjuvant may be applied at the registered rate. 	

BERRIES (Caneberries)

(Includes blackberry, youngberry, red and black raspberry including all cultivars and hybrids of these)

Disease	Dosage
Botryosphaeria canker (<i>Botryosphaeria dothidea</i>)	Ground or aerial application 440 - 1 100 ml/ha
Anthraxnose (<i>Elsinoe veneta</i>)	
Powdery mildew (<i>Sphaerotheca</i> spp.)	
Colletotrichum rot (<i>Colletotrichum gloeosporioides</i>)	

BERRIES cont.**Remarks**

- Apply **ORTIVA** prior to onset of disease development and repeat application at 7 - 10-day intervals up to harvest.
- Do not apply more than four (4) applications of **ORTIVA** per season.
- Do not apply more than two (2) sequential applications of **ORTIVA** before alternating with a fungicide with a different mode of action.

Spray volume

- **Ground application:** Minimum of 100 ℓ water/ha.
- **Aerial application:** 30 - 40 ℓ water/ha.

CITRUS

Disease	Dosage
Citrus black spot (<i>Guignardia citricarpa</i>)	Ground application 20 ml ORTIVA plus 150 g mancozeb WP or 150 g copper oxychloride plus 300 ml light narrow range mineral oil/100 ℓ water

Remarks

- Apply only as a high volume spray.
- Commence the treatment program by applying mancozeb (200 g/100 ℓ water) as soon as possible after 100% petal drop.
- Follow-up after 21 days with the first application of **ORTIVA** (approximately mid to end October) and repeat with a second application of **ORTIVA** six (6) weeks later (approximately end of November to beginning of December).
- If conditions remain favourable for infection, a further 1 - 2 applications of mancozeb (200 g/100 ℓ water) should be made at 21 - 24-day intervals to provide protection during January and February.
- The recommended rate of copper oxychloride is based on a formulation containing 850 g copper oxychloride/kg.

LEMONS

- Remove all fruit before commencing with the application of **ORTIVA**.
- Apply mancozeb (200 g/100 ℓ) preventatively during September and October and follow with the **ORTIVA** tank mixture during October and December.
- Apply additional sprays of mancozeb during January and February.

CRANBERRY

Disease	Dosage
Lophodermium twig blight (<i>Lophodermium</i> spp.)	Aerial or ground application 440 - 1 100 ml/ha
Fruit rot (<i>Glomerella cingulata</i>)	

CRANBERRY cont.

Remarks

- Begin application at 5 - 10% bloom for fruit rot and twig blight.
- Continue applications on a 7 - 14-day schedule if conditions are favourable for disease development.
- Do not apply more than two (2) sequential applications of **ORTIVA** before alternating with a fungicide with a different mode of action.
- Do not apply more than four (4) applications of **ORTIVA** per season.
- Do not apply when weather conditions favours drift from treated areas to non-target aquatic habitats.
- Do not apply in field used for aquaculture of fish or crustacea.
- Do not apply to flooded crops.

MANGOES

Disease	Dosage
Anthraxnose (<i>Colletotrichum gloeosporioides</i>)	Ground application 40 ml ORTIVA /100 l water

Remarks

- Apply only as a high-volume spray.
- Commence the treatment program with an **ORTIVA** application at full flowering to fruit set (petal drop).
- Follow-up with a second application of **ORTIVA** no later than 21 days before harvest. These treatments will contribute to the control of stem-end rot (complex including *Dothiorella dominicana*, *Lasiodiplodia theobromae* and *Phomopsis mangiferae*), blossom blight and soft brown rot (*Botryosphaeria* spp.) and powdery mildew (*Oidium mangiferae*).
- For a complete powdery mildew control program, **ORTIVA** must be applied in a program with THIOVIT JET (L1061) and TILT (L6668) as per label recommendations.

STONE FRUIT

(Includes apricot, cherry, nectarine, peach, plum and prune)

Disease	Dosage
Brown rot blossom blight and fruit rot (<i>Monilinia laxa</i>) Scab (<i>Cladosporium carpophilum</i>) Alternaria pod and fruit rot (<i>Alternaria alternata</i>) Anthraxnose (<i>Colletotrichum gloeosporioides</i>) Leaf rust (<i>Tranzschelia discolor</i>) Powdery mildew (<i>Sphaerotheca pannosa</i>)	Aerial or ground application 880 - 1 100 ml/ha

Remarks

- **ORTIVA** may induce phytotoxic symptoms on pome

STONE FRUIT cont.

fruit when drift occurs, therefore care should be taken not to use **ORTIVA** in close proximity to pome fruit orchards.

- For brown rot blossom blight, begin application at early bloom and continue through petal fall.
- For brown rot on fruit, **ORTIVA** may be applied to fruit up to one (1) day prior to harvest.
- For scab, begin application at petal fall and continue at 7 - 14-day intervals.
- For all other diseases, begin application at the onset of disease as a protectant fungicide and continue application at 7 - 14-day intervals.
- For peaches only, 660 - 1 100 ml/ha **ORTIVA** may be used for scab control.
- Do not apply more than two (2) sequential applications **ORTIVA** before alternating with a fungicide with a different mode of action.
- Do not apply more than one-third of the total number of applications per season with **ORTIVA** or fungicides in the same resistance group.

TREE NUTS

(Includes cashew and macadamia)

Disease	Dosage
Alternaria leaf and fruit spot (<i>Alternaria alternata</i>) Anthraxnose (<i>Colletotrichum acutatum</i>) (<i>Glomerella cingulata</i>) Late Blight (<i>Alternaria alternata</i>) Scab (<i>Cladosporium carpophilum</i>) Septoria leaf spot (<i>Septoria pistaciarum</i>) Blossom blight (<i>Monilinia laxa</i>)	Aerial or ground application 880 ml/ha

Remarks

- Apply **ORTIVA** prior to disease development and repeat application at 7 – 21-day intervals.
- Do not apply more than two (2) sequential applications **ORTIVA** before alternating with a fungicide in a different resistance class.
- For blossom blight, begin application at early bloom and continue through petal fall.
- Do not apply more than four (4) applications of **ORTIVA** per season.
- An adjuvant may be added at specific rates.

TROPICAL FRUIT

(Includes guava, lychee, papaya, passion fruit, pawpaw and persimmon)

Disease	Dosage
Anthraxnose (<i>Colletotrichum</i> spp.) Rust	Aerial or ground application 440 - 1100 ml/ha

TROPICAL FRUIT cont.

Disease	Dosage
<p>(<i>Puccinia</i> spp.) Cercospora leaf spot (<i>Cercospora</i> spp.) Powdery mildew (<i>Erysiphe</i> spp.)</p>	<p>Aerial or ground application 440 - 1100 ml/ha</p>
<p>Soil-borne diseases: Seedling root rot or basal stem rot (<i>Rhizoctonia solani</i>)</p>	<p>4 - 8 ml/100 m row</p>
<p>Remarks</p> <ul style="list-style-type: none"> • Apply ORTIVA prior to disease development and repeat application at 10 - 14- day intervals. • Do not apply more than two (2) sequential applications ORTIVA before alternating with a fungicide with a different mode of action. Do not apply ORTIVA or fungicides in the same resistance group in more than one-third of the total number of applications per season. • An adjuvant may be added at the registered rate. 	

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