



syngenta

Reg. No. **L8617** Act No. 36 of 1947 **N-AR 1441** (Namibia) **W130605** (Botswana)

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

**Hazard statements:**

Toxic to aquatic life with long-lasting effects. Read label before use.

**EMERGENCY TEL NO.:**

**+27 82 446 8946 (Griffon)**

**GROUP 40 FUNGICIDE**



**Precautionary statements:**

**Prevention:** Do not eat, drink, or smoke when using this product. Avoid release to the environment.

**Response:** Collect spillage. **Storage:** Store in a dry place. Protect from sunlight. Store in a well-ventilated place.

**UN 3082**

**Active Ingredient:**  
**mandipropamid (mandelamide).. 250 g/l**

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**WARNING**

Registration holder  
**Syngenta South Africa (Pty) Ltd**  
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Private Bag X 60  
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Tel.: +27 11 541 4000

**1. WARNINGS:**

**Hazard statements:** Toxic to aquatic life with long lasting effects. Read label before use.

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

<b>BRASSICA.....</b>	<b>1 day</b>
<b>BULB VEGETABLES.....</b>	<b>7 days</b>
<b>CUCURBITS.....</b>	<b>2 day</b>
<b>HOPS.....</b>	<b>7 days</b>
<b>LEAFY VEGETABLES.....</b>	<b>1 day</b>
<b>PEPPERS AND FRUITING VEGETABLES.....</b>	<b>1 day</b>
<b>POTATOES.....</b>	<b>3 days</b>
<b>TOBACCO.....</b>	<b>7 days</b>
<b>TOMATOES.....</b>	<b>3 days</b>

**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.
- Toxic to fish and harmful to other aquatic life.
- Avoid contact with skin or eyes since product may cause eye and skin irritation.
- Store away from food and feed.
- Keep out of reach of children, uninformed persons and animals.
- **In case of poisoning:** Call a doctor and present this label.
- **Re-entry:** Do not enter treated area within one (1) day after application 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 of dilution water, compatibility with other

substances not indicated on the label and the occurrence of resistance of the weed 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 animals 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:** **Prevention:** Do not eat, drink or smoke when using this product. Avoid release to the environment. **Response:** Collect spillage. **Storage:** Store in a dry place. Protect from sunlight. Store in a well-ventilated place.

- Do not eat, drink, or smoke while handling this product.
- Prevent contamination of food, feed, drinking water and eating utensils.
- Prevent contact with skin and eyes, as well as inhalation of spray.
- 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.
- While spraying, avoid contact with the spray as much as possible. Avoid spray drift onto other crops, grazing, rivers, dams, boreholes and areas not under treatment.
- Clean applicator thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers or dams.
- Destroy empty container in the prescribed manner and do not use for any other purpose.
- Change and wash your work clothes. Wash yourself.

## First Aid and Medical Treatment

Call a poison control centre or doctor for treatment advice.

- **Ingestion:** Have the person sip a glass of water if able to swallow. Do not induce vomiting. Do not give anything by mouth to an unconscious person.
- **Eye contact:** Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye.
- **Skin contact:** If on skin or clothing, take off contaminated clothing. Rinse skin immediately with plenty of water for 15 - 20 minutes.
- **Inhalation:** Move person to fresh air. If person is not breathing call an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.

**Note to doctor:** There is no specific antidote if this product is ingested. Treat symptomatically.

## 3. RELEVANT SUBSTANCES:

Chemical name	Classification	Concentration (%w/w)
Not applicable	Not applicable	Not applicable

## 4. RESISTANCE MANAGEMENT:

**REVUS** is a carboxylic acid amide (CAA) and is classified as a group code 40 fungicide. Any fungus population may contain individuals naturally resistant to **REVUS** and other group code 40 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 **REVUS** or any other group code 40 fungicides.

### To prevent fungicide resistance:

- Avoid exclusive repeated use of fungicides from the same fungicide group code. Alternate 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.

## General

- **REVUS** should always be applied preventatively as prescribed in the recommendations table.
- **REVUS** must be applied as a full-cover spray as recommended in the recommendations table.
- Do not reduce the dosage rates below that recommended on the label.
- Never use **REVUS** as a corrective treatment or after unsuccessful application of any product.
- For resistance management, no more than 50% of all fungicide treatments per season should be made with **REVUS** or other products containing fungicides from the same mode of action group.
- Blocks of two (2) applications of **REVUS** can be applied in alternation with blocks of 2 - 3 applications of products with different modes of action.

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. PRODUCT PROPERTIES:

A large proportion of **REVUS** is adsorbed into the wax layer of plant surfaces after application ensuring excellent rainfastness as soon as the spray deposit has dried. **REVUS** is highly active against spore germination and will also inhibit mycelial growth. Uptake into the leaf tissue ensures good translaminar activity.

**6. DIRECTIONS FOR USE:** Use only as indicated.

### 6.1 Compatibility

**REVUS** is compatible with most fungicides, insecticides and acaricides with the exception of products containing heavy metals. The compatibility of **REVUS** with other products may be influenced by the formulation of the products involved as well as the quality of the water. Since the formulation of other products may change without the knowledge of Syngenta and the quality of water may vary from farm to farm, a physical compatibility test should always be carried out prior to application.

### 6.2 Mixing Instructions

#### Replace cap after use.

- Half fill the spray tank with clean water.
- Add the required amount of **REVUS** to the spray tank and top up with water to the required volume while agitating continuously.
- If **REVUS** needs to be used in tank mix combinations, first mix small quantities of the chemicals separately with water.
- Add these mixtures together while agitating and check for any signs of incompatibility e.g., flocculation, etc. In this instance, full cognisance must be taken of all WARNINGS, PRECAUTIONS and DIRECTIONS FOR USE on that label.
- Continue agitation throughout application and do not allow the tank mixture to stand still for any period of time.

### 6.3 Application

Ensure that the applicator to be used is in a good working condition and correctly calibrated. Use the spray volumes as indicated to ensure good coverage. Ensure thorough agitation of the mixture in the tank during mixing and spraying.

#### 6.3.1 Ground application

**REVUS** may be applied with conventional high-volume spray equipment. Calibrate the apparatus before application to ensure that the correct dosage is applied. The distribution of the spray volume must be uniform throughout the target area. **REVUS** must be applied as a full-cover preventative spray for the control of late blight. Ensure good coverage of the whole plant (the stems and leaves) by using enough water and spraying equipment that is capable of maintaining high pressure. **REVUS** is rainfast within 15 minutes after the spray deposit has dried.

### 6.3.2 Aerial application

#### Avoid chemical drift at all times.

Aerial application of **REVUS** 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:

#### a) Application parameters

- **Volume:** A volume of 30 - 40 l water/ha is recommended unless specified differently in the recommendation tables. As **REVUS** 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.
- **Droplet coverage:** Droplet coverage of 25 - 35 droplets per cm<sup>2</sup> 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, with a high drift and evaporation potential) is restricted to a minimum.
- **Flying height:** The height of the spray boom should be maintained at 3 - 4 meters 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 **REVUS** must not be done under turbulent, unstable conditions during the heat of the day when rising thermals and downdraughts occur. It is important to note that the application of this product under temperature inversion conditions (spraying in or above the inversion layer) may lead to the following problems:
  - 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 to 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 pilot with precise identification of the fields to be sprayed, preferably by means of a map or GPS coordinates. Indicate adjacent environmentally sensitive areas or sensitive neighbouring crops, beehives or water sources that could be affected by the pesticide.

**Obtain assurance from the pilot that the above requirements will be met and that relevant data will be compiled in a logbook and kept for future reference.**

### 7. RECOMMENDATIONS:

For the best results, study the sections under 4 - 6 thoroughly.

#### BRASSICA

(Including broccoli, brussels sprouts, cabbage, cauliflower and kale)

Disease	Dosage
<b>Downy mildew</b> ( <i>Peronospora parasitica</i> )	<b>Ground application</b> 550 ml/ha
<b>Remarks</b> <ul style="list-style-type: none"><li>• Begin applications prior to disease development and continue on a 7 - 10-day interval.</li><li>• Make no more than two (2) consecutive <b>REVUS</b> applications before switching to another effective non-group code 40 fungicide.</li><li>• Use the shorter interval under high pressure or when conditions are conducive to disease development.</li><li>• <b>REVUS</b> may be tank mixed with another fungicide labeled for downy mildew control that has a different mode of action.</li><li>• Do not apply more than four (4) <b>REVUS</b> applications per crop cycle per season.</li><li>• The use of a suitable adjuvant or wetter is recommended.</li></ul>	
<b>Spray volume</b> <ul style="list-style-type: none"><li>• For best results, use sufficient water volume to provide thorough coverage.</li></ul>	

#### BULB VEGETABLES

(Including onions, garlic and leek)

Disease	Dosage
<b>Downy mildew</b> ( <i>Peronospora destructor</i> )	<b>Ground application</b> 550 ml/ha
<b>Remarks</b> <ul style="list-style-type: none"><li>• Begin applications prior to disease development and continue on a 7 - 10 day interval.</li><li>• Make no more than two (2) consecutive <b>REVUS</b></li></ul>	

## BULB VEGETABLES cont.

applications before switching to another effective non-group code 40 fungicide.

- Use the shorter interval under high pressure or when conditions are conducive to disease development.
- **REVUS** may be tank mixed with another fungicide labeled for downy mildew control that has a different mode of action.
- A silicone-based adjuvant must be added at the registered rate.
- For green onions and leaks, do not apply more than three (3) applications of **REVUS** per crop cycle per season.
- For dry-bulb onions and garlic, do not apply more than four (4) **REVUS** applications per crop cycle per season.

### Spray volume

- For best results, use sufficient water volume to provide thorough coverage.

## CUCURBITS

(Including cucumber, muskmelon, watermelon, pumpkin, squash and zucchini)

Disease	Dosage
<b>For suppression of Downy mildew</b> ( <i>Pseudoperonospora cubensis</i> )	<b>Ground and aerial application</b> 550 mℓ/ha
<b>For suppression of Phytophthora blight</b> ( <i>Phytophthora capsici</i> )	
<b>Remarks</b> <ul style="list-style-type: none"><li>• Do not apply more than four (4) applications of <b>REVUS</b> per crop cycle per season.</li></ul>	
<b>For suppression of downy mildew</b> <ul style="list-style-type: none"><li>• Begin applications prior to disease development and continue on a 7 - 10-day interval.</li><li>• Make no more than two (2) <b>REVUS</b> applications before switching to another effective non-group code 40 fungicide.</li><li>• Use the shorter interval under high pressure or when conditions are conducive to disease development.</li><li>• <b>REVUS</b> may be tank mixed with another fungicide labeled for downy mildew control that has a different mode of action.</li><li>• A suitable adjuvant must be added at recommended rates.</li></ul>	
<b>For suppression of phytophthora blight</b> <ul style="list-style-type: none"><li>• For best results, begin the disease management program with an initial treatment at planting or transplanting with a fungicide registered for this use.</li><li>• Apply <b>REVUS</b> as a foliar spray in a mixture with a copper based fungicide (at the recommended label rate) beginning at first sign of disease development or based on local recommendations.</li><li>• <b>REVUS</b> should be alternated with another registered fungicide on a 7 - 14-day interval.</li><li>• A suitable adjuvant must be added at recommended rates.</li></ul>	
<b>Spray volume</b> <ul style="list-style-type: none"><li>• For best results, use sufficient water volume to provide thorough coverage.</li><li>• For <i>phytophthora capsici</i> ground application, use a</li></ul>	

## CUCURBITS cont.

minimum of 200 ℓ water/ha.

- **Aerial application:** 30 - 40 ℓ water/ha.

## HOPS

Disease	Dosage
<b>Downy mildew</b> ( <i>Pseudoperonospora humuli</i> )	<b>Ground and aerial application</b> 550 mℓ/ha
<b>Remarks</b> <ul style="list-style-type: none"><li>• Begin applications prior to disease development and continue on a 7 - 10-day interval.</li><li>• Make no more than two (2) consecutive <b>REVUS</b> applications before switching to another effective non-group code 40 fungicide.</li><li>• Do not apply more than three (3) <b>REVUS</b> applications per crop cycle.</li><li>• Use the shorter interval under high pressure or when conditions are conducive to disease development.</li><li>• <b>REVUS</b> may be tank mixed with another fungicide registered for downy mildew that has a different mode of action.</li><li>• A suitable adjuvant must be added at recommended rates.</li></ul>	
<b>Spray volume</b> <ul style="list-style-type: none"><li>• For best results, use sufficient water volume to provide thorough coverage.</li><li>• <b>Aerial application:</b> 30 - 40 ℓ water/ha</li></ul>	

## LEAFY VEGETABLES

(Including amaranth, celery, fennel, lettuce, parsley, rhubarb, leaf and head spinach and swiss chard)

Disease	Dosage
<b>Downy mildew</b> ( <i>Bremia lactucae</i> ) ( <i>Plasmopora umbelliferarum</i> ) ( <i>Peronospora</i> spp.)	<b>Ground and aerial application</b> 550 mℓ/ha
<b>Remarks</b> <ul style="list-style-type: none"><li>• Begin applications prior to disease development and continue on a 7 - 10-day interval.</li><li>• Make no more than two (2) consecutive <b>REVUS</b> applications before switching to another effective non-group code 40 fungicide.</li><li>• Use the shorter interval under high pressure or when conditions are conducive to disease.</li><li>• <b>REVUS</b> may be tank mixed with another fungicide registered for downy mildew control that has a different mode of action.</li><li>• Do not apply more than four (4) applications of <b>REVUS</b> per crop cycle per season.</li><li>• A suitable adjuvant must be added at recommended rates.</li></ul>	
<b>Spray volume</b> <ul style="list-style-type: none"><li>• For best results, use sufficient water volume to provide thorough coverage.</li><li>• <b>Aerial application:</b> 30 - 40 ℓ water/ha.</li></ul>	

## PEPPERS AND FRUITING VEGETABLES

(Including peppers, bell pepper, non-bell pepper and sweet non-bell peppers)

## PEPPERS AND FRUITING VEGETABLES cont.

Disease	Dosage
<b>Downy mildew</b> <i>(Peronospora tabacina)</i> <b>For suppression of Phytophthora blight</b> <i>(Phytophthora capsici)</i>	<b>Ground application</b> 550 ml/ha
<b>Remarks</b> <ul style="list-style-type: none"> <li>Do not apply more than four (4) applications of <b>REVUS</b> per crop cycle per season.</li> </ul> <b>Downy mildew</b> <ul style="list-style-type: none"> <li>Begin applications prior to disease development and continue on a 7 - 10-day interval.</li> <li>Make no more than two (2) consecutive <b>REVUS</b> applications before switching to another effective non-group code 40 fungicide.</li> <li>Use the shorter interval under high pressure or when conditions are conducive to disease development.</li> <li><b>REVUS</b> may be tank mixed with another fungicide registered for downy mildew control that has a different mode of action.</li> <li>A suitable adjuvant must be added at recommended rates.</li> </ul> <b>For suppression of phytophthora blight</b> <ul style="list-style-type: none"> <li>For best results, begin the disease management program with an initial treatment at planting or transplanting with a fungicide registered for this use.</li> <li>Apply <b>REVUS</b> as a foliar spray in a mixture with a copper based fungicide (at the recommended label rate) beginning at first sign of disease development or based on local recommendations.</li> <li><b>REVUS</b> should be alternated with another registered fungicide on a 7 - 14-day interval, or use in a block program of two (2) applications of <b>REVUS</b> followed by another fungicide for additional applications.</li> <li>A suitable adjuvant must be added at recommended rates.</li> </ul>	
<b>Spray volume</b> <ul style="list-style-type: none"> <li>For best results, use sufficient water volume to provide thorough coverage.</li> <li>For <i>phytophthora capsici</i> ground application, use a minimum of 200 l water/ha.</li> </ul>	

## POTATOES

Disease	Dosage
<b>Late blight</b> <i>(Phytophthora infestans)</i>	<b>Ground application</b> 600 ml/ha
<b>Remarks</b> <ul style="list-style-type: none"> <li><b>REVUS</b> must be applied as a full-cover spray preventative spray.</li> <li>Apply as blocks of two (2) consecutive sprays 7 - 10-days apart.</li> <li>Under conditions favourable for disease development, intervals should not be longer than 7 days.</li> <li>Do not apply more than four (4) applications of <b>REVUS</b> per season.</li> </ul>	
<b>Spray volume</b> <ul style="list-style-type: none"> <li><b>Tractor application:</b> 250 - 800 l water/ha.</li> </ul>	

## TOBACCO

Disease	Dosage
<b>Blue mould</b> <i>(Peronospora tabacina)</i>	<b>Ground and aerial application</b> 550 ml/ha
<b>Remarks</b> <ul style="list-style-type: none"> <li>Begin applications prior to disease development and continue on a 7 - 10 day interval.</li> <li>Make no more than two (2) consecutive <b>REVUS</b> applications before switching to another effective non-group code 40 fungicide.</li> <li>Use the shorter interval under high pressure or when conditions are conducive to disease development.</li> <li><b>REVUS</b> may be tank mixed with another fungicide registered for downy mildew control that has a different mode of action.</li> <li>Do not apply more than four (4) <b>REVUS</b> applications per crop cycle per season.</li> <li>A suitable adjuvant must be added at recommended rates.</li> </ul>	
<b>Spray volume</b> <ul style="list-style-type: none"> <li>For best results, use sufficient water volume to provide thorough coverage.</li> <li><b>Aerial application:</b> Minimum 30 - 40 l water/ha</li> </ul>	

## TOMATOES

Disease	Dosage
<b>Late blight</b> <i>(Phytophthora infestans)</i>	<b>Ground application</b> 50 ml/100 l water
<b>Remarks</b> <ul style="list-style-type: none"> <li><b>REVUS</b> must be applied as a full cover preventative spray.</li> <li>Apply as blocks of two consecutive sprays 7 days apart when the weather favours the disease.</li> <li>Do not apply more than four (4) applications of <b>REVUS</b> per season.</li> </ul>	
<b>Spray volume</b> <ul style="list-style-type: none"> <li><b>Tractor application:</b> 300 - 1 000 l water/ha</li> </ul>	

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