

# Grisu

(MAPP 15375)

**A suspension concentrate formulation  
containing 500 gms per litre iprodione**

**A fungicide for control of *Botrytis* and *Alternaria* in strawberry (outdoor and protected), tomato (protected), brussels sprout, cauliflower, salad onion, lettuce (protected and outdoor), raspberry (outdoor), brassica for seed production and ornamentals and control of *Sclerotinia* and *Alternaria* in Oilseed rape.**



## Harmful

Harmful, Limited evidence of a carcinogenic effect



## Dangerous for the Environment

Toxic to aquatic organisms.  
May cause long term adverse effects in the aquatic environment.

Safety Data Sheet available for the professional user on request  
To avoid risks to man and the environment, comply with the instructions for use.  
Wear suitable protective clothing and gloves  
The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

**Quantity: 1 Litre**

**Batch Number**

**IMPORTANT INFORMATION  
FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL  
FUNGICIDE, AS DIRECTED BELOW:**

Crops	Maximum individual dose l/ha	Maximum number of treatments per crop	Latest time of application
Oilseed Rape	1.5	1	56 days before harvest
Tomato (protected)	1.0	4	3 days before harvest
Strawberry (outdoor)	1.5	4	3 days before harvest
strawberry (protected)	1.5	3	1 day before harvest
Brussels sprout and cauliflower	1.0	3	14 days before harvest
Salad onions	1.0	4	7 days before harvest
Lettuce (protected)	0.05 per 100 litres water*	3	14 days before harvest
Lettuce (outdoor)	0.05 per 100 litres water*	3	21 days before harvest
Raspberry (outdoor)	1.5 per 1000 litres water	4	7 days before harvest
Brassica seed production crops**	1.0	3	14 days before harvest
Ornamental pot plants	0.1 per 100 litres water	5	Not applicable

**Other specific restriction:**

The following minimum intervals between applications must be observed:

Strawberry (outdoor and protected) 10 days: Tomato (protected) 7 days:

Raspberry: 15 days: Salad onion: 17 days: Lettuce: 14 days

Use on raspberry must only be applied via broadcast air-assisted sprayers with the relevant buffer zone as detailed in the Environmental protection section.

\* Lettuce (outdoor and protected): Do not exceed a volume of 1000 litres per hectare.

Brussels Sprout, cauliflower, Brassica seed production crops: 21 days

\*\* Crops intended for sowing: cabbage, cauliflower, broccoli/calabrese, mustard, fodder rape, turnip, swede, kohlrabi, stubble turnip and Chinese cabbage. Treated crop must not be used for human or animal consumption.

**READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE.  
FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.**

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## DIRECTIONS FOR USE

**IMPORTANT:** This information is approved as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

Avoid spraying within 5m of the field boundary to reduce effects on non-target insects and other arthropods.

## Disease Control

Grisu is a protectant and contact fungicide for the control of *Botrytis cinerea* and *Alternaria* in protected tomatoes, strawberries brussels sprout, cauliflower, salad onion, lettuce (protected and outdoor), raspberry (outdoor), brassica for seed production and ornamentals, and *Alternaria* and *Sclerotinia* in oilseed rape

## Notes & Warnings:

Consult processors before using on crops intended for processing.

Avoid spray drift onto neighbouring crops, especially oats.

## Resistance Management:

Strains of several diseases including *Botrytis cinerea* resistant to dicarboximide fungicides are known in various crops in the UK. Where strains of fungi resistant to dicarboximide fungicides (such as iprodione) occur, Grisu may not be effective. In order to minimise the risk of resistance development, use Grisu in accordance with FRAC resistance management advice for dicarboximide fungicides.

Grisu contains a dicarboximide fungicide.

To reduce the risk of resistant strains adversely affecting control:

- Avoid the use of consecutive applications of dicarboximide fungicides whether applied alone or in tank mix.
- Restrict applications to those times when *Botrytis* infection pressure is high
- Maintain regular prolonged times when dicarboximides are not used.

Where resistance is suspected, use Grisu in mixture with other fungicides from a different mode of action effective against the same diseases.

## **CROPS**

### **Protected Tomatoes**

#### **Time and rate of Application**

For the control of *Botrytis cinerea*, apply Grisu at 1.0 litre/ha in protected crops. *Botrytis cinerea* treatments will also provide control of *Alternaria* if present.

Commence application of Grisu at the start of flowering on the second truss and repeat at 14 day intervals or when conditions favour the spread of *Botrytis*.

A maximum of 4 applications may be made observing a minimum spray interval of 7 days for *Botrytis* and 10 days for *Alternaria*.

Apply in 600-1000 litres of water per hectare, use of higher water volumes will assist coverage.

### **Outdoor and Protected Strawberries Time and rate of Application**

For the control of *Botrytis cinerea* apply Grisu at 1.5 litres/ha in outdoor or protected crops. *Botrytis cinerea* treatments will also provide control of *Alternaria* if present.

Use of higher water volumes will assist coverage in dense crops.

Apply in 600-1000 litres of water per hectare ensuring good blossom coverage. The use of directed nozzles can assist good coverage.

Make a first application of 1.5 l/ha at the white bud stage and repeat at 10-14 day intervals during the flowering period, up to a maximum of four applications in outdoor crops and 3 applications in glasshouse crops.

### **Winter and spring oilseed rape.**

#### **Time and rate of Application**

Apply Grisu at 1.0 -1.5 l/ha in 200 - 600 litres per hectare of water as a fine spray (BCPC category), except where drift is a hazard when a medium spray should be used. Use of higher water volumes will assist coverage in dense crops.

#### **Dark leaf spot and pod spot: *Alternaria spp***

##### **Protectant applications**

For best results apply Grisu at 1.0/ha as a protectant spray between mid flower, i.e when 20 pods that are 2.5cm in length have formed on the main raceme, and the end of flowering.

### **Grey mould: *Botrytis cinerea***

Applying Grisu as a protectant spray at mid flower for the control of *Alternaria* spp., application will also control grey mould. Later applications at the end of flowering are unlikely to give satisfactory control.

### ***Sclerotinia*:**

To achieve moderate control, Apply Grisu at 1.5 l/ha between full flowering and when 30% of pods have reached the final size (BBCH 65 to BBCH 73).

### **Brussel sprouts and cauliflower**

#### **Time and rate of Application**

For the control of *Alternaria brassicae* and *A. brassicicola*.

Apply at a rate of 1.0l Grisu in 200 to 600 litres of water per hectare as a programme of sprays starting at the onset of disease on the leaves.

A total of 3 applications may be made.

A minimum spray interval of 21 days must be observed.

### **Lettuce (Protected and Outdoor)**

#### **Time and rate of Application**

For the control of *Botrytis cinerea*, apply Grisu at a rate of 0.05 L per 100 litres of water. Do not exceed a volume of 1000 litres per hectare (equivalent to a maximum of 0.5 L/ha).

As a guide for protected lettuce, newly planted lettuce with three leaves require 5 litres of spray to 22,000 plants. At a later stage of growth, e.g. up to six to eight leaves, 5 litres should treat about 5000 plants. The final spray, before cutting, will require 5 litres of spray to approximately 1100 plants. For outdoor and protected lettuce a maximum of 3 applications may be made. A minimum spray interval of 14 days must be observed between treatments.

### **Raspberries**

#### **Time and rate of Application**

For the control of *Botrytis cinerea*, apply Grisu at 1.5 litres in 1000 litres of water per hectare. A minimum of three sprays over the flowering period is recommended, beginning at early flowering and repeating every two weeks.

Use on raspberry must only be applied via broadcast air-assisted sprayers.

A maximum of 4 sprays may be made per year.

A minimum spray interval of 15 days must be observed between treatments.

## Ornamental Pot Plants

### Time and rate of Application

For the control of *Botrytis cinerea*, apply Grisulone at a rate of 0.1L per 100 litres of water. Apply at the onset of disease, then repeat at 21 day intervals as necessary. Apply to the point of run off, ensuring good coverage of the plants. Good tolerance to Grisulone has been shown by the following pot plant species: *Aralia sieboldii* *Azalea* spp. *Begonia rex* (cv *Fireglow*) *Chrysanthemum* (all year round cultivars) *Cineraria* (*Senecio* sp.) *Croton* (*Codiaeum* sp. cv *Bravo*) *Cyclamen* spp. *Dracaena* sp. (cv *Redege*) *Ficus robusta* *Fuchsia* spp. *Hedera minor* *Hedera major* *Impatiens parviflora* *Kalanchoe* spp. *Neanthe bella* *Pelargonium* sp. *Philodendron scandens* *Pilea cadierei* (cv *Nana*) *Poinsettia* (*Euphorbia pulcherrima*) *Senecio macroglossus variegatus* *Sinningia* spp. (*Gloxinia*)

Tolerance of other species should be checked before making large scale applications.

## Brassica Seed Production Crops (crops intended for sowing): cabbage, cauliflower, broccoli, mustard, fodder rape, turnip, swede, kohlrabi, stubble turnip and Chinese cabbage (not oilseed rape)

### Time and rate of Application

For the control of *Alternaria brassicae* and *A. brassicicola*, spray at the end of flowering at a rate of 1.0L Grisulone in 600 to 1000 litres of water per hectare. A total of 3 applications may be made. A minimum spray interval of 21 days must be observed between treatments. Treated crop must not be used for human or animal consumption.

Note: Applying Grisulone as a protectant spray at mid flower for the control of *Alternaria* spp, will also control grey mould. Later applications at the end of flowering are unlikely to give satisfactory control.

## Salad onions

### Time and rate of Application

For the control of *Botrytis squamosa* and collar rot (*Botrytis cinerea*).

Apply at a rate of 1.0 L Grisulone in 300 to 600 litres of water per hectare as a programme of sprays. For over wintered salad onion crops commence spraying at the crook stage and repeat at monthly intervals. For spring and summer sown salad onions commence spraying at the crook stage and repeat at 17 day intervals.

A total of 4 applications may be made.

## **MIXING AND SPRAYING**

Apply as a FINE-MEDIUM spray, as defined by BCPC. Half fill the tank with clean water and start agitation. Shake the product container before use. Add the required amount of Grisu to the spray tank while re-circulating. Add the remainder of the water and continue agitation until spraying is complete. Use immediately after mixing, do not retain or store diluted product for long periods or overnight. On emptying the product container, rinse container thoroughly by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of container safely.

## **CLEANING SPRAY EQUIPMENT**

Following use of Grisu spray equipment should be thoroughly cleaned. There are no specific requirements for cleaning following use of Grisu. Growers should consult manufacturer's guidance for procedures for their specific equipment, and use a combination of triple rinsing and agitation with clean water.

Equipment washings should be disposed of safely following the Code of Practice for Using Plant Protection Products and relevant Environmental Agency guidance.

## **PRECAUTIONS**

### **Operator protection**

Keep out of reach of children.

Avoid contact with skin and eyes.

Do not breathe spray

Wear suitable protective clothing and gloves

If swallowed, seek medical advice immediately and show this container or label.

Use only in well-ventilated areas.

If you feel unwell, seek medical advice immediately (show the label where possible).

## **Environmental protection**

Use appropriate containment to avoid environmental contamination.

To protect aquatic organisms respect an unsprayed buffer zone to surface water bodies in line with LERAP requirements.

DO NOT ALLOW DIRECT SPRAY from broadcast air-assisted sprayers to fall within 15 m of the top of the bank of a static or flowing water body, unless Local Environmental Risk Assessment of Pesticides (LERAP) permits a narrower buffer zone or within 5 m of the top of a ditch which is dry at the time of application. Aim spray away from water.

DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 m of the top of the bank of a static or flowing water body, unless Local Environmental Risk Assessment of Pesticides (LERAP) permits a narrower buffer zone or within 1 m of the top of a ditch which is dry at the time of application.

DO NOT ALLOW DIRECT SPRAY from hand-held sprayers to fall within 1 m of the top of the bank of a static or flowing water body. Aim spray away from water.

This product qualifies for inclusion within the Local Environmental Risk Assessment for Pesticides (LERAP) scheme. Before each spraying operation from a horizontal boom sprayer or broadcast air-assisted sprayer, either a LERAP must be carried out in accordance with published guidance or the statutory buffer zone must be maintained.

The results of the LERAP must be recorded and kept available for three years.

RISK TO NON-TARGET INSECTS OR OTHER ARTHROPODS. See Directions for Use.

## **Storage and disposal**

Keep away from food, drink and animal feeding stuffs.

Keep in original container, tightly closed, in a safe place.

Wash out container thoroughly, empty washings into the spray tank and dispose of safely.

Do not re-use container for any purpose.