

 **BASF**

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Serifel®



MAPP 19236

A wettable powder containing 110 g/kg (5.5 x 10¹⁰ cfu/g) *Bacillus amyloquelaciens* strain MBI 600 for control of grey mould (*Botrytis* spp.) and/or *Sclerotinia* sp. in protected crops of strawberry, blackberry, raspberry, blueberry, loganberry, Rubus hybrid and crops of tomato, aubergine, pepper, chilli pepper, spinach, spinach beet, choy sum, oriental cabbages, rocket, lettuce, Lamb's lettuce and endive under permanent protection with full enclosure.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

SAFETY PRECAUTIONS

Operator protection

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND SUITABLE RESPIRATORY PROTECTIVE EQUIPMENT* when handling the product or applying the product.

*Disposable filtering facepiece respirator to at least EN149 FFP3 or equivalent.

However, engineering controls may replace personal protective equipment if a COSHH assessment shows that they provide an equal or higher standard of protection.

WHEN USING DO NOT EAT, DRINK OR SMOKE.

WASH HANDS AND EXPOSED SKIN BEFORE EATING OR DRINKING AND AFTER WORK.

Environmental protection

Do not contaminate water with the product or its container.

Do not clean application equipment near surface water.

Avoid contamination via drains from farmyards and roads.

Storage and disposal

EMPTY CONTAINER COMPLETELY and dispose of safely.

OPEN THE CONTAINER ONLY AS DIRECTED.

Do not re-use container for any purpose.

KEEP OUT OF REACH OF CHILDREN. KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

This label is compliant with the CPA Voluntary Initiative Guidance

0.5 kg

Supplied by: BASF plc, Agricultural Solutions
PO Box 4, Earl Road, Cheadle Hulme, CHEADLE,
Cheshire SK8 6QG, Tel: 0161 485 6222

Emergency Information: (24 hours freephone):
0049 180 2273112
Technical Enquiries: 0845 602 2553 (office hours)

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A wettable powder containing 110 g/kg (5.5 x 10¹⁰ cfu/g) *Bacillus amyloliquefaciens* strain MBI 600

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.

Contains *Bacillus amyloliquefaciens*. Micro-organisms may have the potential to provoke sensitising reactions.

To avoid risks to human health and the environment, comply with the instructions for use.

IMPORTANT INFORMATION

Crop	Situation	Max individual dose: (kg product/ ha)	Max total dose: (kg product/ ha)	Latest time of application
Strawberry	Protected	0.5	3	BBCH 89 end of fruiting before senescence sets in
Raspberry, blackberry, blueberry, loganberry and Rubus hybrid	Protected	0.5	3	None
Tomato, aubergine, pepper and chilli.	Permanent protection with full enclosure	0.5	3	BBCH 89
Choi sum, endive, Lamb's lettuce, lettuce, oriental cabbages, rocket, spinach, spinach beet	Permanent protection with full enclosure	0.5	3	BBCH 49

Other specific restrictions:

For crops to which 'permanent protection with full enclosure' applies:

- Treatment must only be made under 'permanent protection' situations which provide full enclosure (including continuous top and side barriers down to below ground level) and which are present and maintained over a number of years.
- Reasonable precautions must be taken to prevent access of birds, wild mammals and honey bees to treated crops.
- To minimise airborne environmental exposure, vents, doors and other openings must be closed during and after application until the applied product has fully settled.
- The use of this product in recirculating water systems in a greenhouse may result in dilute pesticide waste that requires disposal. All dilute pesticide waste must be disposed of safely and legally to protect humans, wildlife and the environment, especially groundwater and surface water. Pesticide disposal advice is detailed in the 'Code of Practice for Using Plant Protection Products (Section 5: Disposing of Pesticide Waste)'.

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.

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.

Restrictions/Warnings

Serifel is most effective when applied under conditions of low disease pressure, i.e. prior to or in the early stages of disease development. Under high disease pressure, it is recommended to use Serifel in rotation with chemical fungicides approved for use on the target crop and disease.

Serifel should not be used curatively.

Apply Serifel in sufficient water volume to ensure good crop cover.

Serifel is a biological fungicide with excellent crop safety. However, safety to all minor crops has not been fully assessed. Certain species and varieties may be more sensitive to treatment than others. Growers are advised to consider testing Serifel on a small area before wide-scale use on the following crops: blueberry, blackberry, raspberry, loganberry, endive, Lamb's lettuce, spinach, spinach beet, choy sum, oriental cabbages and rocket.

Serifel is compatible with the following species used in IPM programmes: the predatory mites *Amblyseius swirskii* and *Phytoseiulus persimilis*; the predatory bug *Nesidiocoris tenuis*, and the parasitoids *Diglyphus isaea* and *Eretmocerus eremicus*.

Levels of suppression can be variable and additional control measures may be required.

Consult processors before use on crops grown for processing

Disease control

Serifel is a protectant fungicide for the reduction of fruit damage caused by *Botrytis cinerea* (grey mould) in protected strawberries, raspberries, blackberries, blueberries, loganberries and Rubus hybrid; the moderate control of *Botrytis cinerea* in protected tomatoes, aubergines, pepper and chilli pepper and the moderate control of *Botrytis cinerea* and *Sclerotinia* spp. in protected lettuce and other leafy crops. See summary below:

Crops	<i>Botrytis cinerea</i>	<i>Sclerotinia</i> spp.
Strawberry, raspberry, blackberry, blueberry, loganberry, Rubus hybrid	R	-
Lettuce, spinach, choy sum, rocket, endive, Lamb's lettuce, oriental cabbages.	MC	MC
Tomato, aubergine, pepper, chilli pepper.	MC	-

MC = moderate control; R = reduction

Resistance Management

Serifel is a biological fungicide containing *Bacillus amyloliquefaciens* strain MBI600. Serifel should be used preventatively or in the early stages of disease development. Apply according to the recommendations for the target disease at the rate and timings indicated.

For resistance management, it is advisable to alternate Serifel with other methods of disease control. These may include chemical fungicides and cultural controls.

For further advice on resistance management contact your agronomist or specialist adviser or visit the FRAG-UK website.

Crop Specific Information

Strawberry, raspberry, blackberry, blueberry, loganberry and Rubus hybrid (all protected)

Target: <i>Botrytis cinerea</i>
Time of application: Apply Serifel preventatively or in the early stages of disease development. Up to six applications can be made. A minimum interval of 5 days must be observed between sprays.
Dose rate: 0.5 kg/ha
Water volume: 200-2000 l/ha

Lettuce, spinach, spinach beet, choy sum, Oriental cabbage, rocket, endive, Lamb's lettuce (all permanent protection with full enclosure)

Target: <i>Botrytis cinerea</i> and <i>Sclerotinia</i> spp.
Time of application: Apply Serifel preventatively or in the early stages of disease development. Up to six applications can be made. A minimum interval of 5 days must be observed between sprays.
Dose rate: 0.5 kg/ha
Water volume: 200-2000 l/ha

Tomatoes, aubergines, pepper and chilli pepper (all permanent protection with full enclosure)

Target: <i>Botrytis cinerea</i>
Time of application: Apply Serifel preventatively or in the early stages of disease development. Up to six applications can be made. A minimum interval of 5 days must be observed between sprays.
Dose rate: 0.5 kg/ha
Water volume: 200-3000 l/ha

Mixing and Application

Mixing

Never prepare more spray solution than is required.

Three quarters fill the tank with clean water and start the agitation. Add the required quantity of Serifel to the spray tank while re-circulating. Add the remainder of the water and continue agitation until spraying is complete.

On emptying the container, rinse container thoroughly by using an integrated pressure rinsing device or by manually rinsing three times. Add washings to tank at time of filling and dispose of container safely.

Application

Apply as a MEDIUM spray, as defined by BCPC.

Tank cleaning

Wash sprayer thoroughly immediately after use, using clean water and following the sprayer cleaning guidance provided by the equipment manufacturer.

Compatibility

For details of compatibilities contact your distributor, local BASF representative, the BASF Technical Services Hotline: 0845 602 2553 or visit our website on: www.agriCentre.basf.co.uk

Integrated Pest Management

Serifel is compatible with the following species used in IPM programmes: the predatory mites *Amblyseius swirskii* and *Phytoseiulus persimilis*; the predatory bug *Nesidiocoris tenuis*, and the parasitoids *Diglyphus isaea* and *Eretmocerus eremicus*.

The following does not form part of the authorised label text.

With many products there is a general risk of resistance developing to the active ingredients. For this reason a change in activity cannot be ruled out. It is generally impossible to predict with certainty how resistance may develop because there are so many crop and use connected ways of influencing this. We therefore have to exclude liability for damage or loss attributable to any such resistance that may develop. To help minimise any loss in activity the BASF recommended rate should in all events be adhered to.

Numerous, particularly regional or regionally attributable, factors can influence the activity of the product. Examples include weather and soil conditions, crop plant varieties, crop rotation, treatment times, application amounts, admixture with other products, appearance of organisms resistant to active ingredients and spraying techniques. Under particular conditions a change in activity or damage to plants cannot be ruled out. The manufacturer or supplier is therefore unable to accept any liability in such circumstances. All goods supplied by us are of high grade and we believe them to be suitable, but as we cannot exercise control over their mixing or use or the weather conditions during and after application, which may affect the performance of the material, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded and no responsibility will be accepted by us for any damage or injury whatsoever arising from their storage, handling, application or use; but nothing should be deemed to exclude or restrict any liability upon us which cannot be excluded or restricted under the provisions of the Unfair Contract Terms Act 1977 or any similar applicable law.

Section 6 of the Health and Safety at Work Act

Additional Product Safety Information

The product label provides information on a specific pesticidal use of the product; do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has "off-label" approval or is otherwise permitted under the Plant Protection Product Regulations (EC) No 1107/2009.

The information on this label is based on the best available information including data from test results.

Safety Data Sheet

To access the Safety Data Sheet for this product scan the QR code or use the weblink below:



bit.ly/Serifel_sds

Alternatively, contact your supplier.

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