

FUNGICIDE



SERENADE[®] ASO

A suspension concentrate containing 13.96g/l *Bacillus subtilis* strain QST 713 (a minimum of 1.042×10^{12} cfu/l)

A fungicide for the reduction of fruit damage caused by grey mould
(*Botrytis cinerea*)
on protected strawberry crops.

Product registration number: **MAPP 14318**

PCS No 3847

First CRD approved foliar applied biocontrol agent for plant disease.

Zero day harvest interval.

Ideal for use with biological pest control agents.

No chemical residue.

Usable alone and in programmes with conventional fungicides for improved disease control and disease resistance management.

fargro[®]

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ALWAYS READ THE LABEL. USE PESTICIDES SAFELY

SERENADE® ASO

- Zero day harvest interval and no chemical residue give potential for extended shelf life.
- Resistance is unlikely owing to the complex multi mode of action:
 - the bacteria colonise the plant surface competing with the disease.
 - complex metabolites are produced damaging pathogen spores and mycelial membranes.
 - the bacteria are inducers of “systemic acquired resistance” (SAR). (resistance to pathogens on the whole plant is induced - even on untreated parts of the plant).
- Found to be harmless to all commonly used biological control agents and pollinators.
- Compatible with a wide range of chemical pesticides.
 - use alone, in mixture, or in a programme.
 - there is evidence of synergy with chemical fungicides.
 - use for improved control and to manage disease resistance.
- Contains a unique naturally occurring strain of bacteria discovered in 1997.
- Serenade approvals exist in 30 countries where it is effective against a wide range of fungal and bacterial diseases including *Colletotrichum* and powdery mildew.

The following text is taken from the approved product label:

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.

SERENADE ASO is a biofungicide containing *Bacillus subtilis* QST 713, naturally occurring bacteria that are not genetically modified, for the reduction of fruit damage caused by grey mould (*Botrytis cinerea*) in protected strawberry crops. It may be applied as a foliar spray alone or in alternating spray programmes with other registered crop protection products. Alternating with fungicides of different modes of action, along with the use of cultural control methods, is advisable for resistance management.

RESTRICTIONS AND WARNINGS

CONSULT PROCESSOR BEFORE USING ON CROPS FOR PROCESSING

Do not apply using irrigation equipment.

DISEASE CONTROL

SERENADE ASO is for the reduction of fruit damage caused by grey mould (*Botrytis cinerea*) on protected strawberry crops. For maximum effectiveness, SERENADE ASO should be applied prior to or in the early stages of disease development. When disease pressure is high, use SERENADE ASO in rotation with suitable approved chemicals.

CROP RECOMMENDATIONS

SERENADE ASO is for use on protected strawberry crops.

Application rates

Application rates of SERENADE ASO should be 10 l/ha, applied up to every 7 days or in rotation with a suitable approved chemical.

MIXING AND SPRAYING

Before use ensure that all spray equipment is clean. Add half the volume of water required, and start agitating. Agitate product container well and add the required amount of SERENADE ASO, continue filling spray tank with the required volume of water. Keep agitating until spraying com-

pleted. All application equipment must be thoroughly cleaned with water prior to storage or use on another crop.

SERENADE ASO should be applied in sufficient water to ensure good crop cover, with a minimum of 400 l/ha.

Storage

SERENADE ASO is a biological product and so should be treated with some care. It can be stored at room temperature for two years, storage at higher temperatures may reduce its shelf life.

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) AND SUITABLE PROTECTIVE GLOVES when handling the concentrate.

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

Environmental Protection

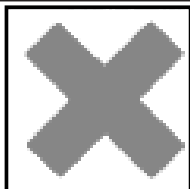
DO NOT CONTAMINATE WATER with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads. Use appropriate containment to avoid environmental contamination. This material and its container must be disposed of in a safe way.

Storage and Disposal

WASH OUT CONTAINER THOROUGHLY and dispose of safely.

PROTECT FROM FROST Do not store below 4°C.

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



SERENADE® ASO

MAY CAUSE SENSITISATION BY SKIN CONTACT

IRRITANT

Avoid contact with skin.

In case of contact with eyes, rinse immediately with plenty of water and seek medical attention.

Wear suitable protective gloves.

WHEN USING DO NOT EAT, DRINK OR SMOKE.

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY with plenty of clean water.

WASH HANDS / EXPOSED SKIN before eating or drinking.

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

KEEP OUT OF REACH OF CHILDREN.

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

MAPP 14318 PCS 3847

IMPORTANT INFORMATION

FOR USE ONLY AS A HORTICULTURAL FUNGICIDE

Crop: Strawberry (protected).

Maximum individual dose: 10.0 litres product per hectare.

Maximum number of treatments : 20 per crop.

Latest time of application: 0 days before harvest.

Other specific restrictions: Nil.

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

This product is approved under the Plant Protection Regulations 2005. (UK)

Pack Sizes:

10 litres outer of 2

4 litres outer of 4

Marketed in the UK by Fargro Ltd.

Approval Holder:

Agraquest Inc.

171 rue Pierre Valdo,

69005 Lyon

France.

SERENADE ASO can be used in organic agriculture according to Regulation EEC No. 2092/91 and complies with the criteria of Regulation NOP (National Organic Programme for IMO Switzerland.

Serenade® is a registered trade mark of Agraquest Inc.

Bacillus subtilis strain QST713 is patented.

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Safety data sheet available on request.

Emergency telephone number for Serenade ASO (CHEMTREC) 00 1 703 527 3887