

FUNGICIDE

SUBDUE®

A soluble liquid containing 465.2g/l (44.7% w/w) metalaxyl-M.

A systemic fungicide for the control of
Pythium spp. and *Phytophthora* spp.
in outdoor and protected
ornamental crops and flower bulbs

Product registration number: **MAPP 12503**

A systemic phenylamide fungicide for drench or growing media incorporation.

Protective and curative activity.

Usable on a wide range of ornamental crops growing in soil or in containers.

For use outdoors and under protection.



Fargro Ltd
Vinery Fields, Arundel Road,
Poling, Arundel,
West Sussex
BN18 9PY
Tel: +44 (0)1903 721591
Email: info@fargro.co.uk
www.fargro.co.uk

**USE PLANT PROTECTION PRODUCTS SAFELY.
ALWAYS READ THE LABEL AND PRODUCT INFORMATION BEFORE USE**

SUBDUE

- A systemic fungicide for control of *Pythium* and *Phytophthora* root rot diseases on ornamentals.
- Protective and curative activity.
- Use as part of a programmed approach to disease control based on good stock plant management, nursery hygiene, disinfection, effective irrigation and nutritional management and alternation with fungicides from other chemical groups.

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 carefully read in order to obtain safe and successful use of this product.

RESTRICTIONS

Strains of *Pythium* spp. and *Phytophthora* spp. may exist which are resistant to phenylamides. Where resistance is confirmed, disease control may be significantly reduced.

Apply SUBDUE under good growing conditions with adequate potting media moisture.

Avoid poor growing conditions which may give less reliable results.

SUBDUE should be used in an integrated pesticide management strategy, and where appropriate, alternated with products from different chemical groups.

Disinfect pots thoroughly prior to re-use.

Potting media from treated plants should not be re-used for subsequent crops.

Unnecessary exposure of non-target arthropods should be avoided.

CROP TOLERANCE

SUBDUE has been successfully used at the recommended doses on a range of species and cultivars without crop damage. However because of the large number of species and cultivars of ornamentals, the cultivar susceptibility should always be checked by treating a small number of plants in the first instance.

Application to *Hedera*, *Cordyline*, *Viburnum* and *Prunus* species is advised against.

RESISTANCE MANAGEMENT

Metalaxyl-M belongs to the phenylamide group. In order to minimise the risk of resistance to phenylamide compounds, application of SUBDUE should be made with due regard to the FRAG-UK guidelines.

The number of phenylamide applications should be limited to 1-2 consecutive applications depending on the crop.

Ideally SUBDUE should be used as a preventative treatment.

DISEASES CONTROLLED

SUBDUE is a systemic fungicide for the control of *Pythium* spp. and *Phytophthora* spp. in ornamentals.

CROP SPECIFIC INFORMATION

PROTECTED CONTAINERISED ORNAMENTAL CROPS

Potted plants, for the control of root rot caused by *Pythium* and *Phytophthora*.

Pre-potting, media treatment

Shortly before use of the potting media, spray the required amount of SUBDUE over the media and mix through as evenly as possible.

Dose: 12.5-18.75 ml per m³ potting media, to be sprayed in 5-10 litres water.

The dose depends on the organic matter content of the potting media. Use the highest dose for potting media containing >10% organic matter.

Drenching treatment after sticking cuttings, planting out or potting

Treatment can be carried out preventatively or curatively. Preferably apply the SUBDUE solution onto moist media. Irrigate overhead immediately after application so that the product can penetrate into the rooting zone and any residues of SUBDUE are washed from the leaves.

Preventative drench application

Dose: 6.25 - 9.4 ml in 100 litres water.

Drench volume should correspond to 10% of the pot volume. Use the highest dose for rot-sensitive crops.

Curative drench application

Dose: 9.4 - 12.5 ml in 100 litres water.

Drench volume should correspond to 10% of the pot volume. Use the highest dose if infection is severe.

PROTECTED SOIL-GROWN ORNAMENTAL CROPS

Chrysanthemum - in the culture of chrysanthemums, SUBDUE can be applied preventatively as well as curatively for the control of root rot caused by *Pythium*.

Preventative application - pre-planting

Spray SUBDUE over the soil shortly before planting and incorporate to a depth of 10 cm by means of a rotary cultivator.

Dose: 18.75 ml per 100 m² to be sprayed in 6 to 10 litres water.

Curative drench application

SUBDUE can be applied as a high volume spray, followed by overhead irrigation with sufficient water to allow the product to penetrate and contact the root systems.

Dose: 4 - 6.25 ml per 100 m². Use at least 30 litres water per 100 m² to wash the product into the root zone.

If necessary, repeat application after 2 to 3 weeks using the same rate.

Carnation, for the control of root rot (*Phytophthora* spp.)

Apply SUBDUE as soon as the first symptoms of infection become visible. SUBDUE can be applied as a high volume spray followed by overhead irrigation with sufficient water to allow the product to penetrate and contact the root systems.

Dose: 18.75 ml per 100 m². Irrigate with 6 - 10 litres water per 100 m² to wash the product into the root zone.

If necessary, repeat treatment after 3 weeks with 9.4 ml per 100 m².

OUTDOOR CONTAINERISED ORNAMENTAL CROPS

For the control of root rot (*Phytophthora cinnamomi*)

Preventative application - pre-potting media treatment

Shortly before use of the potting media the required amount of SUBDUE should be sprayed over the media and mixed through as evenly as possible.

Dose: 12.5 ml per m³ potting media in 5 - 10 litres water.

Preventative application - post-potting drench

If necessary, SUBDUE can be applied as a preventative drench during crop production. The potting media must be moist at the time of application.

Dose: 6.25 ml per 100 litres water.

Drench volume should correspond to 10% of the pot volume.

BULB CULTURE

Outdoor flower bulb crops of crocus, hyacinth and iris, for the control of root rot (*Pythium*).

Preventative application - pre-planting

Carry out furrow treatment during planting.

Dose: Crocus: 0.75 l/ha.

Hyacinth, iris: 1.0 l/ha.

If a heavy *Pythium* infection is expected, the dose levels should be increased by 0.25 litres per hectare.

Apply in a water volume of 3000 litres of water per hectare.

Indoor flower bulb crops of tulip, iris and lily for the control of root rot (*Pythium*).

Preventative application - pre-potting

Dose: 2.5 ml per m³ potting media in 5-10 litres water.

BIOLOGICAL COMPATIBILITY

Limited evidence suggests that metalaxyl-M is not harmful to soil dwelling predatory mites, entomopathogenic nematodes (*Steinernema feltiae*) and microbial amendments (*Bacillus subtilis* and *Trichoderma* spp.)

For further information, please contact Fargro Ltd.

MIXING AND SPRAYING

Application indoors should be made through a hydraulic nozzle applicator e.g. motorised sprayer with hand lance or boom lance.

For outdoor applications, suitable hydraulic nozzle sprayers should be used.

MIXING

Make sure the sprayer is set to give an even application at the correct volume.

Fill the spray tank with half the required volume of clean water and start agitation.

Add the required amount of SUBDUE and continue agitation whilst adding the rest of the water.

Agitate the mixture thoroughly before use and continue agitation during spraying.

Thoroughly wash all spraying equipment immediately after use.

SAFETY PRECAUTIONS

(a) 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 FACE PROTECTION (FACESHIELD) when handling the concentrate.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when handling contaminated surfaces.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when applying by hand-held equipment.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) when applying by vehicle-mounted equipment.

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

WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the inside of gloves.

TAKE OFF IMMEDIATELY all contaminated clothing.

IF YOU FEEL UNWELL, seek medical advice (show label where possible).

AFTER CONTACT WITH SKIN OR EYES, WASH IMMEDIATELY with plenty of water.

WASH HANDS AND EXPOSED SKIN before meals and after work.

(b) 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 yards and roads.

(c) Storage and disposal

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

DO NOT RE-USE CONTAINER for any purpose.

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 safely.

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

SUBDUE A soluble liquid containing 465.2 g/l (44.7% w/w) metalaxyl-M.

Signal Word: Warning
Hazard Harmful if swallowed.
Statements Causes serious eye irritation.
Harmful to aquatic life with long lasting effects.



Precautionary Statements Keep out of reach of children
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Collect spillage.
Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non hazardous waste.

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

MAPP 12503

IMPORTANT INFORMATION.

FOR USE ONLY AS A HORTICULTURAL FUNGICIDE.

For use on:

Crops/situations	Maximum individual dose	Maximum total dose	Maximum number of treatments
Ornamental plant production (outdoor)	Media treatment: 12.5 ml product/m ³	-	1
	Drench application: 1.25 L product/ha	-	1
Ornamental plant production (protected)	Media treatment: 18.75 ml product/m ³	-	1
	Drench application: 18.75 ml product/100 m ²	28.15 ml product/100 m ²	-

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.

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 'Extension of Use' approval or is otherwise permitted under the Plant Protection Product Regulations. The information on the label is based on the best available information including data from test results.

**PROTECT FROM FROST.
STORE IN A COOL, DRY PLACE.**

Pack Size: 250 ml Outer: 20 x 250ml

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Safety data sheet available on request.

Approval Holder:
Syngenta UK Limited
CPC4, Capital Park, Fulbourn,
Cambridge CB21 5XE
Tel: Cambridge (01223) 883400

Marketing Company:
Fargro Limited
Tel: (01903) 721591

In case of toxic or transport **emergency** on Subdue ring (01484) 538444 any time.

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