

AQ10[®]WG 

A biofungicide for the control of
powdery mildew on protected crops



fargro[®]



A preventative treatment for powdery mildew

AQ 10 is a biofungicide available for controlling powdery mildew on a wide range of protected crops: from aubergine to courgette, summer squash, cucumber, melon, pepper, chilli, strawberry, tomato, winter squash and pumpkin. It can also be used on named herbs, ornamental plant production and named leafy vegetables/salads using Extensions of Authorisation for Minor Use (EAMU).

AQ 10 contains a naturally occurring fungus (*Ampelomyces quisqualis*) that specifically targets powdery mildew.

AQ 10 leaves no chemical residue and crops can be harvested after one day. It also has no impact on beneficial insects and mites, and bees used for pollination, and has been certified for use by organic growers.

AQ 10 works effectively as part of an integrated pest management (IPM) programme. Applying AQ 10 is part of a preventative strategy reducing the risk of the disease spreading and is also an effective disease resistance management tool for growers looking to reduce their use of conventional pesticides.

Why use AQ 10?

- Biological control of powdery mildew
- One day harvest interval
- No chemical residue
- Can be used in organic systems
- No phytotoxicity *



* AQ 10 has been used on a wide range of crops under a range of conditions and no phytotoxicity has been observed. But it's always advisable to treat a small area first.



**A common but
devastating disease**

Powdery mildew attacks a wide range of plants, including edibles and ornamentals.

The white powdery deposits visible on leaves, stems and flowers – sometimes fruit – don't just look unsightly and make crops unsaleable, but they can also damage a plant and, in severe situations, cause it to die. This is because the white powder prevents the plant from photosynthesising effectively, weakening it over time.

Powdery mildew can be present all year round, lying dormant in the colder, winter months. However, but it's most prevalent during the warmer months of the year, when plants are under water stress. Unlike other fungi, the microscopic spores that the mildew releases have an unusually high water content, so they can infect plants during drier weather conditions – and spread quickly.



How does AQ 10 work?

AQ 10 contains the fungus *Ampelomyces quisqualis* which is a hyperparasite of a wide range of powdery mildew fungi. The fungus invades the host mycelium, destroying the powdery mildew cytoplasm leading to the death of the mildew colony.

AQ 10 works most effectively at the early stages of infection, before the powdery mildew has become established. It's why the biofungicide is best applied as part of a preventative strategy, and used in combination with other methods of control.

Another benefit of AQ 10 observed by growers is much better control of powdery mildew in crops the year following treatment with the biofungicide. This is likely due to a natural population of the fungus persisting at the site of last year's treated crops.

Did you know?

The first drawing of a powdery mildew infected with the natural fungus present in AQ 10 was produced more than 150 years ago, in 1861.



Apply AQ 10 on a wide range of crops

AQ 10 is approved for use on protected crops of aubergine, courgette and summer squash, cucumber, melon, pepper and chilli, strawberry, tomato, winter squash and pumpkin.

Powdery mildew can also be a problem for many ornamental plants - such as roses and *Phlox paniculata* - and can have a significant financial impact leaving products unsaleable. AQ 10 provides growers with an effective biological control and can be used on a range of other named crops when the EAMUs are used.

EAMU 2022 1967 covers protected crops of:

- Blueberry, gooseberry, bilberry, cranberry, elderberry, mulberry, rose hips, blackcurrant and redcurrant
- Watermelon
- Ornamental plant production and forest nursery
- Named herbs
- Protected propagating material of: table and wine grapes, apple, crab apple, pear, quince

EAMU 2022 0659 covers protected crops of:

- Baby leaf, chicory (witloof), cress, endive, lamb's lettuce, land cress, lettuce, purslane, red mustard, rocket, spinach, spinach beet, watercress

In addition, AQ 10 has been approved for use in organic production by the Organic Farmers and Growers certification body. This gives organic growers a powerful preventative treatment to use alongside cultural techniques.

How to apply AQ 10

AQ 10 is a granular formulation, which benefits from pre-mixing with water for up to an hour to activate the spores before spraying the crop – see also the label and any appropriate Extension of Authorisation (EAMU).

The amount of AQ 10 you should apply depends on the height of your crops – see *the table below*. Use sufficient water and apply at high pressure with a fine spray to ensure good coverage of the plant, including the underside of leaves. Applications should be repeated every 7-10 days, with at least two successive applications at the start of treatment. A maximum of 12 treatments can be applied.

Application recommendations

AQ 10 can be applied by conventional spray equipment which is most commonly used. It may also be applied using Ultra Low Volume (ULV) equipment, as this has several benefits.

- The spray system can be programmed to operate in late evening, when humidity is at its highest, increasing the effectiveness of AQ 10.
- The nozzle size can be adjusted – we recommend no smaller than 0.5mm – to ensure greater dispersal of the treatment on the plant.
- The spraying can take place without the need for an operator to be present.

PROTECTED CROP	APPLICATION RATE	
	PLANT HEIGHT/GROWING SYSTEM	RATE (g/ha)
Aubergine, Cucumber, Pepper and Chilli, Tomato	Up to 50cm	35
	50-125cm	53
	Above 125cm	70
Courgette & Summer Squash, Melon, Pumpkin and Winter squash	Crops not grown vertically	70
	Up to 50cm	35
	50-125cm	53
	Above 125cm	70
Strawberry	All growing systems	70

For more guidance, see the technical notes at www.fargro.co.uk

Getting the best results



Mixing

Follow label instructions as explained on the previous page.

Time of Application

For best results apply when temperature is between 12°C - 30°C, when humidity levels are rising in early morning or late evening.

Adjuvants

The use of an adjuvant may improve efficacy. Consult the technical notes for more information.

Tank Mixing

For a full list of possible tank mixes or compatibilities consult the technical notes.

For additional guidance consult the technical notes at www.fargro.co.uk

Mixing AQ 10

Application

Apply AQ 10 preventatively to crops that are prone to powdery mildew to control the disease and prevent the onset of symptoms.

Apply weekly – starting from the very first sign of mildew or when conditions are conducive to the disease developing.



Mixing AQ 10

- To activate the spores in AQ 10 half-fill the spray tank with water, then add the required quantity of AQ 10 granules and stir.
- Leave for a minimum of 30 minutes to pre-soak, without agitation.
- After the pre-soaking, continuously agitate the suspension whilst adding water to achieve the final target volume.
- Use the entire content of mixture the same day of mixing.
- The viability of the spores may decline if left in water for more than 12 hours.

Making AQ 10 part of your IPM programme

Powdery mildew is a common problem for growers, and certain crops – such as strawberries and cucumbers – are particularly susceptible to the disease.

A successful integrated pest management (IPM) programme includes both biological and inorganic treatments to control the disease. As AQ 10 contains a parasitic fungus, it's best applied preventatively: at the onset of the disease or when conditions are conducive to powdery mildew developing. Growers can then reserve their use of conventional pesticides for managing the fungus where it's become established.

In fact, tests have shown that using a combination of AQ 10 with compatible chemical fungicides can deliver a better outcome than if the two were used in isolation. This approach has the added benefit of reducing your reliance on inorganic pesticides and reduces the risk of resistant powdery mildew species developing.



Top Tip

AQ 10 can be used preventatively in the autumn to minimise the spread of spores over winter.

IPM Programme for control of powdery mildew

Make AQ 10 an essential part of your IPM programme

Biofungicide

Regular applications of AQ 10 for the control of powdery mildew.



Monitoring

Crop walking weekly. Base control on level of disease observed.



Hygiene

Maintain excellent hygiene levels throughout the year.



Environmental Control

Apply timely and appropriate irrigation. Control airflow and manage plant spacing.



Integrated Pest Management Programme

For advice on including AQ 10 in your IPM programme call our technical team on **01903 256 856**

MAPP No : 19968

Active Ingredient : 58% w/w *Ampelomyces quisqualis* strain AQ10

Formulation Type : Water Dispersible Granule

Application Method : Foliar spray

Application Rate : 35 to 70 g/ha

Crops : Protected crops of: aubergine, courgette and summer squash, cucumber, melon, pepper and chilli, strawberry, tomato, winter squash and pumpkin.

Control : Powdery mildews

Pack Size : 30g sachet

Harvest Interval : 1 day

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USE PLANT PROTECTION PRODUCTS SAFELY. ALWAYS READ THE LABEL AND PRODUCT INFORMATION BEFORE USE. FURTHER PRODUCT INFORMATION INCLUDING WARNING PHRASES AND SYMBOLS ARE INCLUDED IN THE PRODUCT LABEL. THE INFORMATION PRESENTED HERE SHOULD NOT BE USED TO GUIDE THE USAGE OF THIS PRODUCT. PLEASE REFER TO THE PRODUCT LABEL AND TECHNICAL NOTES AVAILABLE FROM FARGRO.

EA MU (EXTENSION OF AUTHORISATION FOR MINOR USE). THESE PROVIDE USE OF PRODUCT IN RESPECT OF CROPS AND SITUATIONS, OTHER THAN THOSE INCLUDED ON THE PRODUCT LABEL. NO EFFICACY OR PHYTOTOXICITY DATA HAVE BEEN ASSESSED AND AS SUCH THE 'EXTENSION OF USE', IS AT ALL TIMES DONE AT THE USER'S CHOOSING, AND THE COMMERCIAL RISK IS ENTIRELY THEIRS.

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By Appointment
To Her Majesty The Queen
Horticultural Sundriesmen