

Application rates and timing*

Crop	Rate**	Recommended timing	Remarks
Wine grapes Table grapes	35-70 g/ha 50-70 g/ha	From bud burst to pre-flowering and from fruit-set up to harvest	Applications before harvest are effective in reducing the number of chasmothecia
Solanaceous fruits (tomato, sweet/bell pepper, eggplant)	35-70 g/ha	At appearance of very first symptoms and close to harvest	AQ 10 ^{WG} can be used in tank mix or in programs with other fungicides (see compatibility chart)
Cucurbits with edible peel (cucumber, courgette)	35-70 g/ha	At appearance of very first symptoms and close to harvest	AQ 10 ^{WG} can be used in tank mix or in programs with other fungicides (see compatibility chart)
Cucurbits with inedible peel (melon, pumpkin, water melon)	35-70 g/ha	At appearance of very first symptoms and close to harvest	AQ 10 ^{WG} can be used in tank mix or in programs with other fungicides (see compatibility chart)
Strawberry	35-70 g/ha	At appearance of very first symptoms and close to harvest	Applications before harvest are effective in reducing the number of chasmothecia
Rose	35-70 g/ha	At appearance of very first symptoms	AQ 10 ^{WG} can be used in tank mix or in programs with other fungicides (see compatibility chart)

* AQ 10^{WG} is not registered for all uses in all Countries. Authorized uses may differ among Countries.

** Rates dependent on leaf canopy density and disease pressure.

Benefits and features of AQ10^{WG}

- Unique and genuine mode of action
- Valuable tool for resistance management
- Active at lower temperatures than sulfur
- Effective against overwintering structures (chasmothecia)
- Safe to beneficials, predatory mites included
- No phytotoxicity
- Excellent tool to be included in IPM strategies
- Allowed in Organic Farming
- No MRL restrictions
- No interference with winemaking processes and with microorganisms used in wine production
- Safe to humans and the environment

AQ10^{WG}

containing *Ampelomyces quisqualis* strain AQ10 as active substance
controls Powdery mildews naturally

For further information:

AREA TECNICA, BIOGARD Division • 47521 CESENA (FC) • Via Calcinaro 2085, int. 7
Tel +39 0547 630 336 • Fax +39 0547 632 685 • email: tecnicobiogard@cbceurope.it • www.biogard.it



CBC (Europe) S.r.l.

Registered Office and Logistics Centre

Via Zanica, 25 - 24050 Grassobbio (BG) - Tel. +39 035.335313 - Fax +39 035.335334 - infobiogard@cbceurope.it



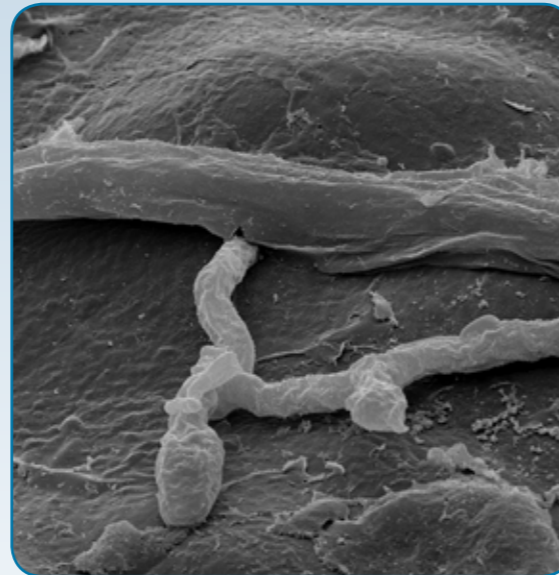
AQ10^{WG}

containing *Ampelomyces quisqualis* strain AQ10 as active substance
controls Powdery mildews naturally



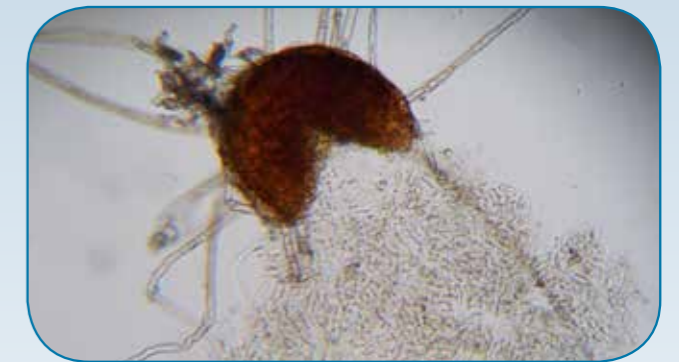
Mode of action

The spores of *Ampelomyces quisqualis*, contained in the formulated product, are applied to the crop as a spray suspension in water. On the host plant surface, the spores germinate and the hyphae of the mycoparasite then penetrate the hyphae of powdery mildews in their vicinity (see scanning electron microscope image to the right); if the spores are in direct contact with the powdery mildew hyphae, penetration may also occur directly from the spore. After penetration, the mycoparasite continues its growth inside the mycelium of the pathogen and produces its intracellular pycnidia in the mycelium of the host fungus. Parasitism by *A. quisqualis* leads to the collapse of hyphal strands and death of the pathogen after 5-8 days. New spores of *A. quisqualis* are then released from intracellular pycnidia.



Applications of AQ10^{WG} on wine and table grapes

AQ10^{WG}, when applied close to harvest, will result in a reduced formation of chasmothecia, the overwintering structures of powdery mildew, which are usually formed during this period. In addition, AQ10^{WG} will also parasitize already formed chasmothecia. Numerous field trials and scientific researches are evidence of the fact that reducing the number of overwintering structures constitutes the first step for controlling powdery mildew epidemics the following spring. AQ10^{WG} does not interfere with winemaking processes and with microorganisms used in wine production, and is therefore a valuable tool to be included in powdery mildew control programs close to harvest.

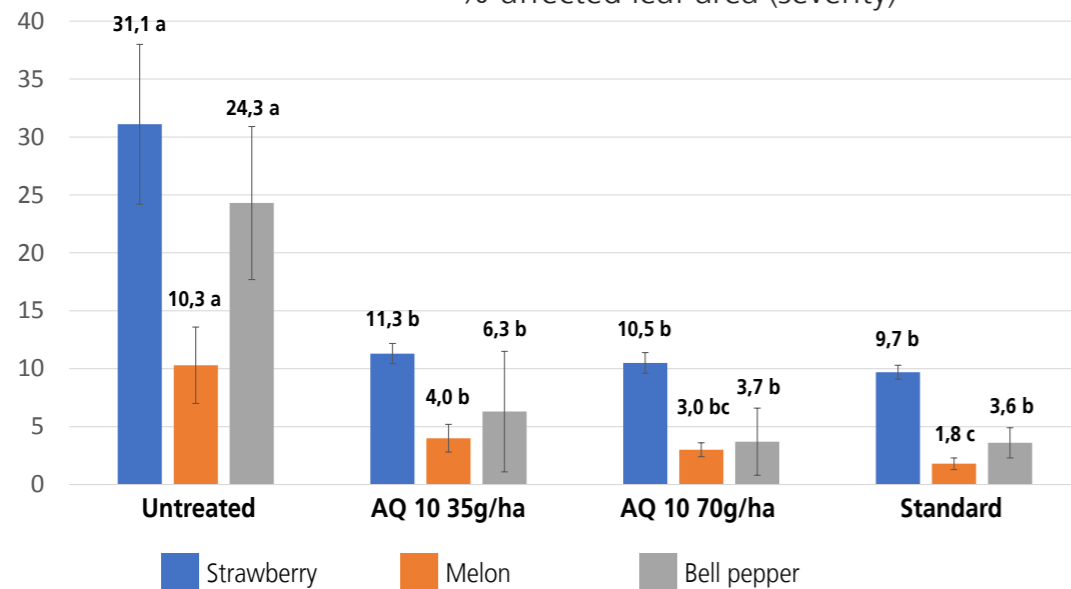


Parasitized powdery mildew chasmothecium with spores of *A. quisqualis*

Pre-harvest applications of AQ10^{WG}: the first step to control powdery mildew epidemics the following spring. AQ10^{WG} is the only fungicide that acts by parasitizing also overwintering chasmothecia

Efficacy of AQ10^{WG} against powdery mildew

% affected leaf area (severity)

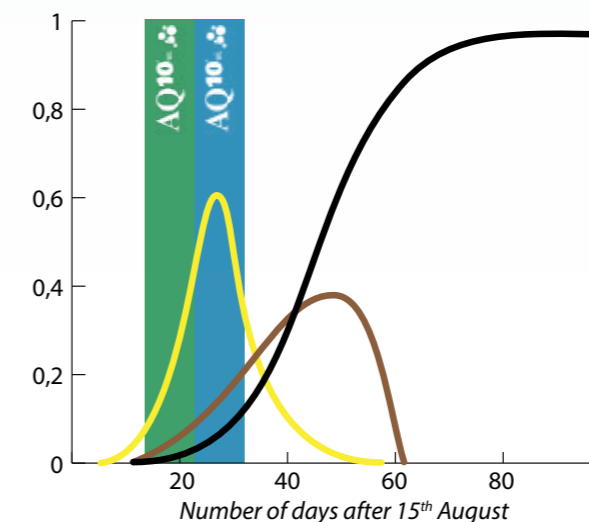


Results from trials conducted in Italy on protected strawberry, melon and bell pepper (assessment 7-10 days after last application).

N. applications per treatment: 6 at 7-day intervals on strawberry, 4 at 7-day intervals on melon, and 4 at 10-day intervals on bell pepper. Standard: sulfur at 2,1 kg a.s./ha on strawberry, bupirimate at 150 g a.s./ha on melon, sulfur at 1,4 kg a.s./ha on bell pepper.

Dynamics of chasmothecia formation

(Central-Northern Italy)



The formation of chasmothecia is initiated by a sudden drop in temperatures (of more than 6°C over a period of 2-4 days), which can easily occur following the first late-summer storms.

The correct timing for applications of AQ10^{WG} against overwintering chasmothecia is when most of them are still yellow in colour (see Figure to the left). Immature chasmothecia (yellow and brown) are susceptible to parasitization by *A. quisqualis*, while mature (black) chasmothecia are not.

AQ10^{WG}

Active substance:.....*Ampelomyces quisqualis* (strain AQ10) 58% w/w (contains a minimum of 5,0 x 10⁹ spores/g)

Formulation:.....water dispersible granule

CLP-classification:.....Not classified

PHI:.....0 days in most of the Countries

Shelf life in original

and sealed sachet:.....refrigerated (4-6°C) at least 2 years in a cool dry place and not exposed to direct sunlight (20-21°C) at least 1 year



Directions for use

- Ensure thorough and uniform coverage, including the underside of leaves; the addition of an adjuvant (spreader/sticker) is recommended to improve uniformity of distribution of spores on the vegetation.
- If possible, use entire sachet; open sachets, if not completely used, should be stored refrigerated (4-6°C).
- AQ10^{WG} is a microbial fungicide and may be affected by other plant protection products, especially fungicides; consult your distributor regarding compatibility of other products with AQ10^{WG}.
- To ensure adequate establishment of the fungal antagonist on the crop, applications should be repeated every 7-10 days with at least 2 successive applications.