



Annual Biocontrol Industry  
Meeting Lucerne

intrachem  
italia

AQ10™  
Biofungicide



# BIOFUNGICIDE FOR THE CONTROL OF POWDERY MILDEWS



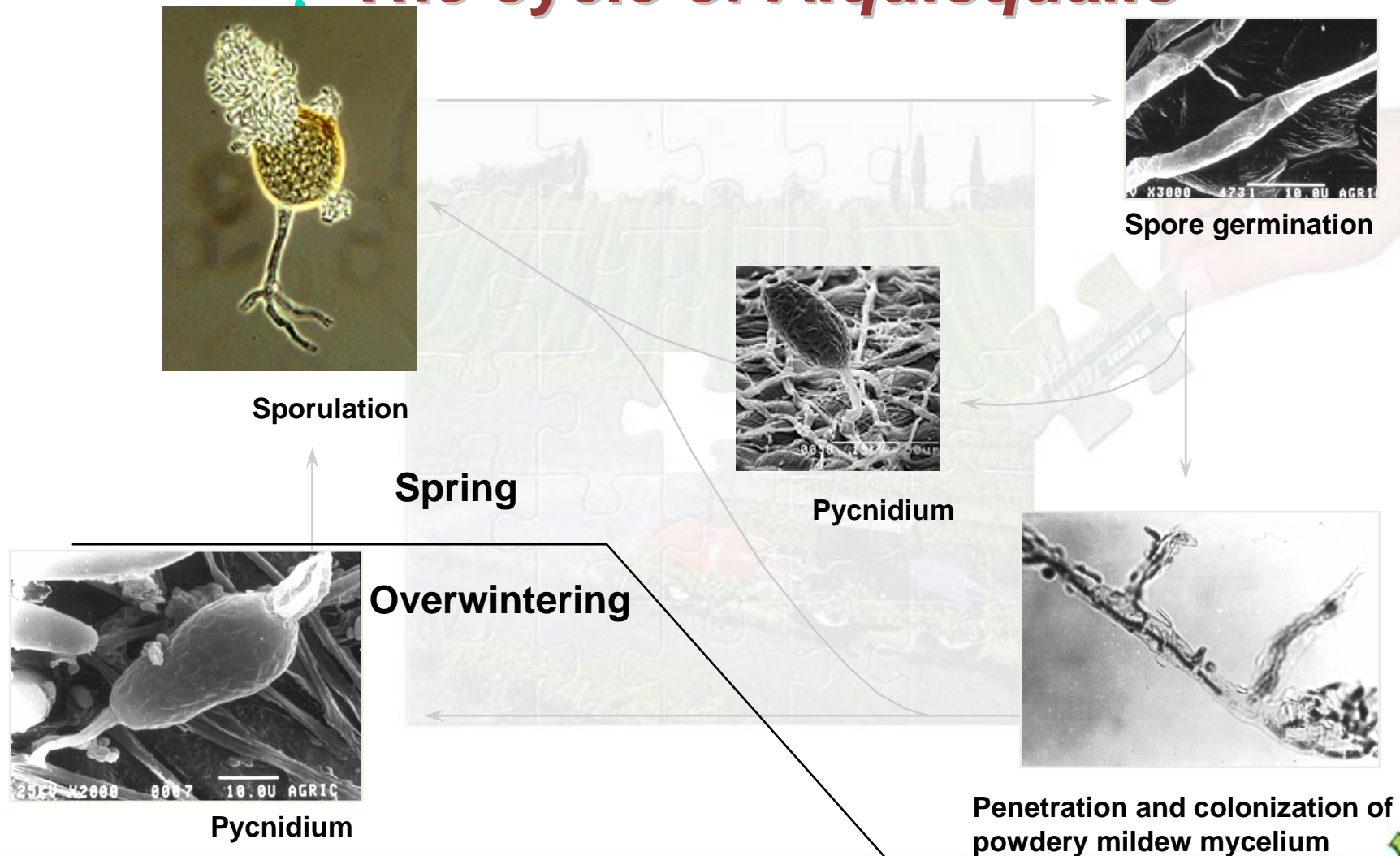
# AQ10™ Biofungicide

- 🛡️ **Is the first biofungicide specifically developed for powdery mildew control**
- 🛡️ ***Ampelomyces quisqualis*-based**
- 🛡️ **The microorganism is a deuteromycete fungus in the family Dematiaceae. It has been described more than 140 years ago, and occurs on *Erysiphales* (powdery mildews)**





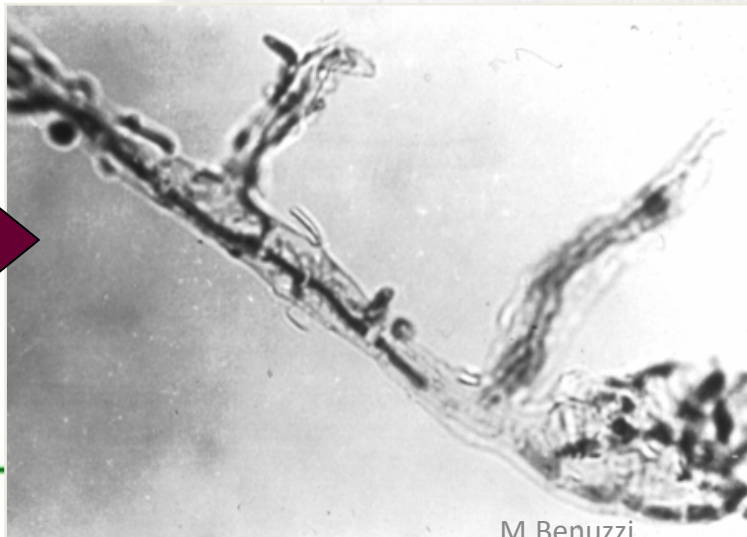
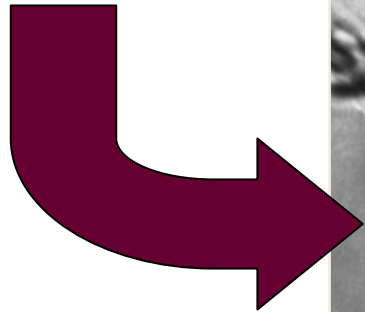
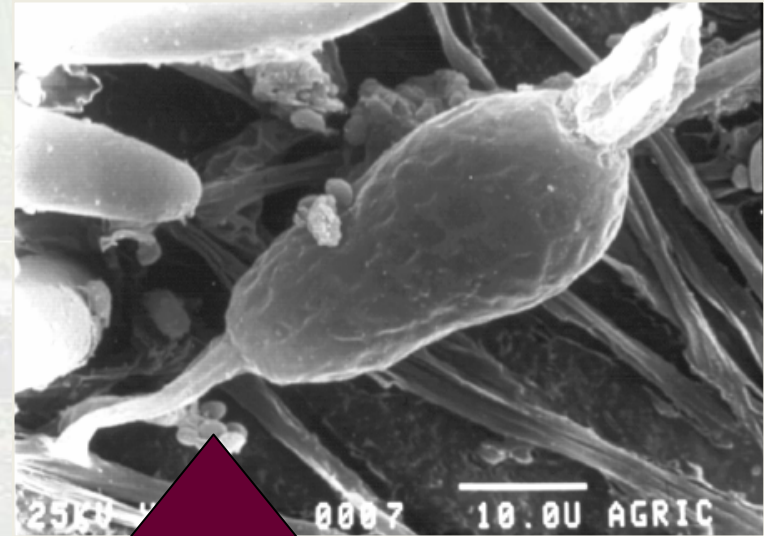
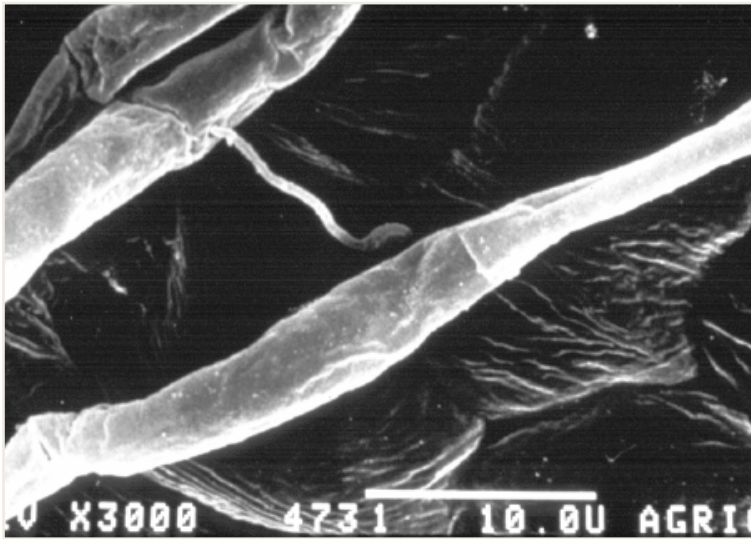
# The cycle of *A.quisqualis*







# Mode of action

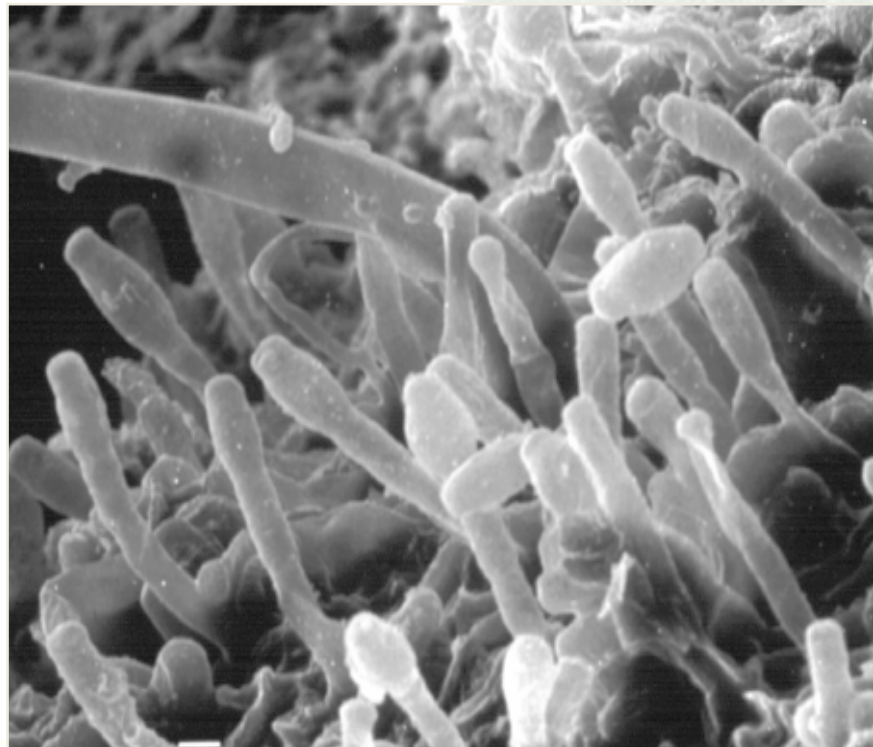




## Powdery mildew

untreated

treated with **AQ10<sup>™</sup>**  
Biofungicide





# AQ10<sup>TM</sup>

Biofungicide

- is formulated in water dispersible granules (WDG)
- contains  $5 \times 10^9$  spores/ gramm
- the original strain M-10 was isolated on *Catha edulis* in Israel
- it is not genetically modified
- it can be stored for more than 12 months at ambient temperature, and for more than 2 years in the refrigerator (4-6°C)





## Registration status

- 🛡️ The active ingredient has been included in Annex I in April 2005 (7 years after the application)
- 🛡️ In Europe AQ 10 is registered in Italy (vinegrape & tablegrape, eggplant, tomato, sweet pepper, cucurbits, strawberry, rose) and Slovenia (vinegrape)
- 🛡️ AQ 10 is also registered in Israel, South Africa, Egypt and Switzerland
- 🛡️ Registration pending (in EU): Spain, France, Germany, Netherland, Greece, Slovakia and Morocco







L'apporto biologico alla Agricoltura Integrata



**AQ10<sup>TM</sup>**  
**Biofungicide**

**Application on  
grapevine**

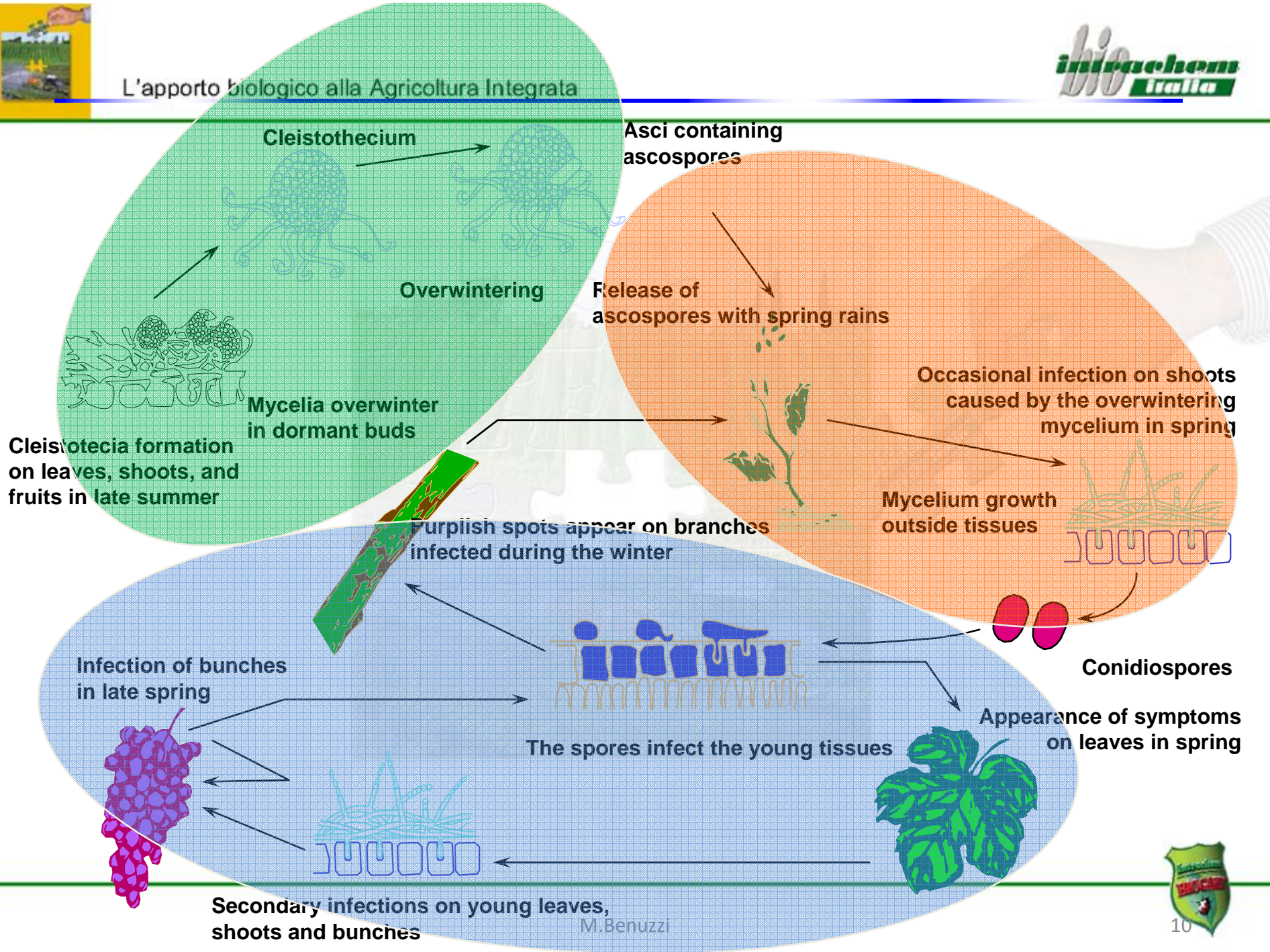






## How to apply **AQ10** on grapevine:

- rate: 30-35 g/ha (also 20-25 g/ha for the first 2 treatments at the beginning of the season)
- tank-mixing with an adjuvant (Nu Film P – 300 ml/ha), summer oil (0.1-0.2 %), or organo-siliconic based adjuvants is strongly recommended
- apply treatments early in the morning or in the evening
- at 7-10-day intervals
- ensure thorough wetting of the vegetation

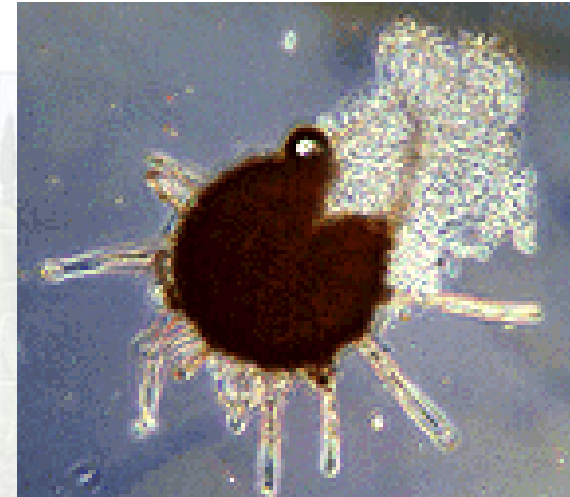






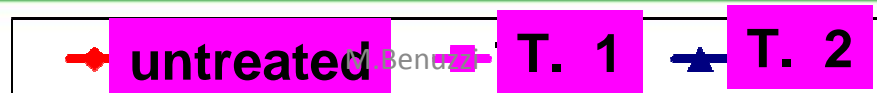
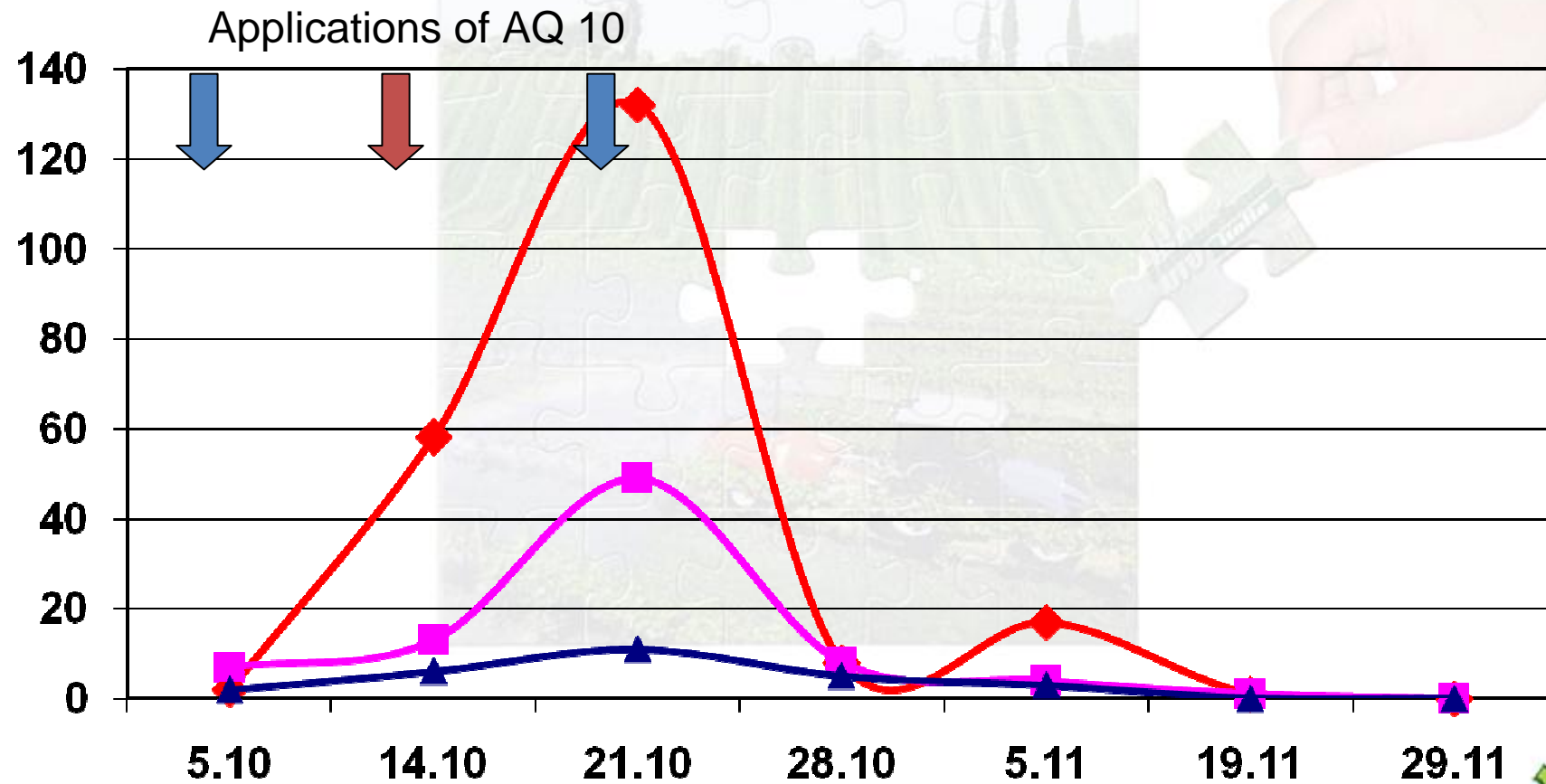
## Application to control overwintering *Cleistothecia*

- ❖ **AQ 10 treatments have to be applied before and/or after harvest to reduce the amount of overwintering cleistothecia**
- ❖ **Autumn AQ10 treatments can positively affect the Powdery Mildew attack during the next season**





## Number of cleistothecia captured over time in the funnels in the different treatments

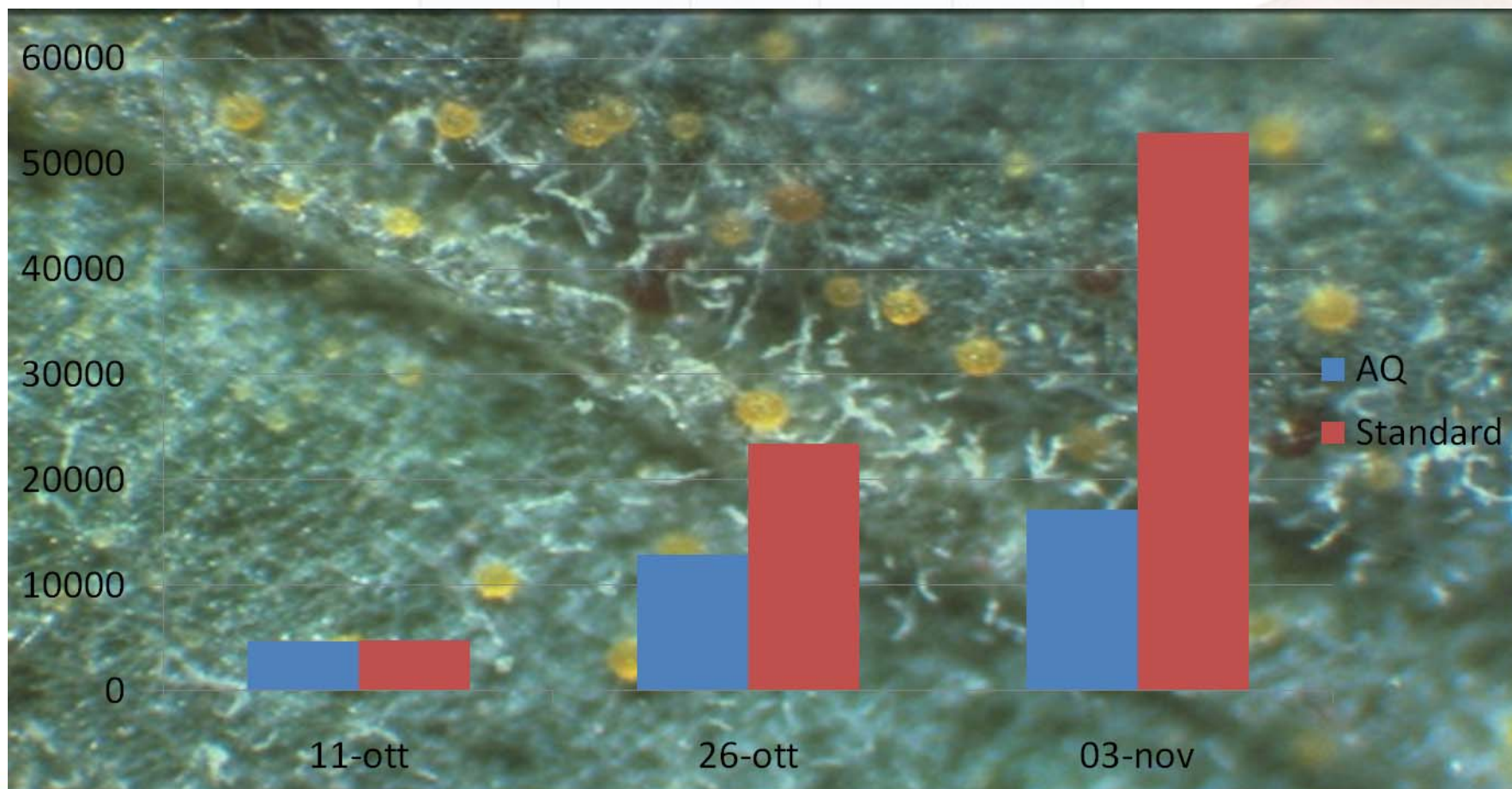






## 2006-cleistothecia trials

### No.of cleistothecia detected on the leaves





L'apporto biologico alla Agricoltura Integrata

**biochem**  
**Italia**



**AQ10<sup>TM</sup>**  
**Biofungicide**








**Application on  
Vegetables, Strawberry  
& Roses**







## How to apply on vegetables:

-  **Dose: 50-70 g/ha (3-7g/hl)**
-  **Tank-mix ing with an adjuvant (Nu Film P – 300 ml/ha) or organo-siliconic based adjuvants is strongly recommended**
-  **Apply in the early-morning or evening**
-  **Apply at 5-7-day intervals**
-  **Ensure thorough wetting of the plants**



# General Benefits of

**AQ10<sup>TM</sup>**  
**Biofungicide**

- Original mode of action, different from any other fungicide
- Can be applied in IPM strategies
- Permitted in organic farming
- Harmless to beneficials
- Safe for humans and the environment





# Technical Benefits of



- reduces the risk of the appearance of resistant strains
- tank mixing with SBI (mychlobutanil) as anti-resistance strategy
- active at low temperatures (12°C) (lower than those of sulphur)
- reduces the amount of overwintering cleistothecia
- not phytotoxic
- does not leave any residues (no pre-harvest interval)
- does not affect vinification processes





 **Thank you for your attention**

