AEF GLOBAL Biopesticides

FungOUT

Biofungicide for downy mildew and Phomopsis in grapes



Minimum Risk Pesticide

OMRI Listed® for organic use

Friendly to beneficials and pollinators

ACTIVE INGREDIENT

Citric acid

Formulation: liquid concentrate
Chemical group: N/A — biopesticide
Packaging: case (2 × 2.5 gal) or tote (275 gal)

MODE OF ACTION

Dual action: a protective barrier plus antifungal and bactericidal activity.

Forms a protective barrier on the plant surface, inhibiting conidia germination, germ tube formation and elongation, appressorium and haustorium formation and hyphae branching. Also exhibits bactericidal activity.



Application Guidelines

01 Use Pattern

RATE
2.0% v/v
Foliar spray

TIMING
Bud break
When conditions are conducive to disease development

INTERVAL
7–10 days
Protect developing tissues

PHI / REI
0 day / 4 h
Pre-harvest / re-entry

Targets: downy mildew *(Plasmopara viticola)*, Phomopsis cane and leaf spot *(Phomopsis viticola)*
Spray volume: use the minimum spray volume to obtain full coverage

- Begin applications after bud break if conditions are conducive to disease development.
- Ensure excellent plant coverage and spray quality.
- Repeat at a 7–10-day interval to protect developing tissues before infection periods.
- Always read and follow label instructions.

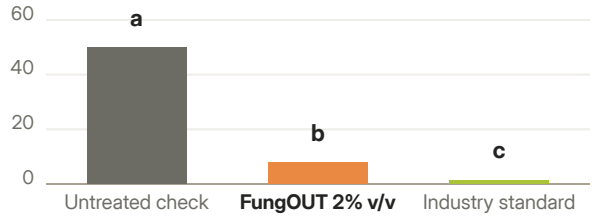
02 Field Evidence

Michigan grape trial (2025): overall disease severity

Dr. Timothy Miles's research team (University of Michigan), Trevor Nichols Research Center, Fennville, MI

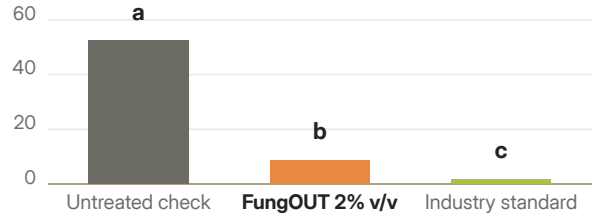
Downy mildew

Severity on leaves (%) · Sep 14, 2025



Phomopsis

Severity on clusters (%) · Sep 20, 2025



- Randomized complete block design, 4 repetitions (7-vine plots, mature Niagara block)
- Industry standard: rotation of Manzate Max 3 qt, Abound 15.5 oz, Switch 14 oz + Revus Top 7 oz, Pristine 23 oz/acre; same interval as FungOUT (2.0% v/v)
- 12 sprays at a 6–14-day interval from 5–8-inch shoot (May 20 – Aug 23), 50 gpa
- Assessment of 25 leaves (downy mildew) or clusters (Phomopsis) on the central vine of each plot

Means followed by the same letter are not significantly different (Fisher's Protected LSD, p = 0.05). Overall severity = (incidence × severity) / 100.

Let's talk about your spray program. aefglobal.com | info@aefglobal.com

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