



Broad-Spectrum Insecticide/ Miticide for Grapes

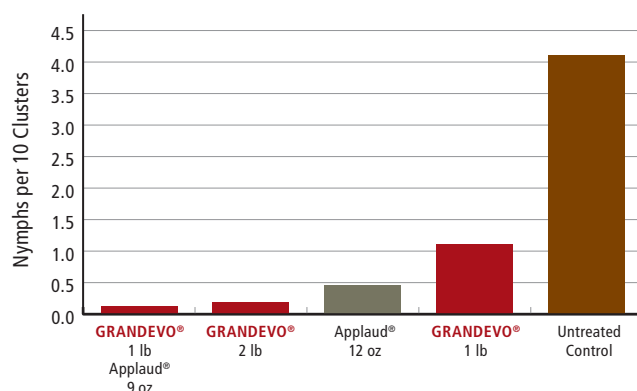
Grandevo® is an advanced, broad-spectrum bioinsecticide that offers proven protection against chewing and sucking insects and mites. Its performance profile—including unique and complex modes of action and extended residual control, gives growers a powerful new tool to strengthen their pest management strategies. Grandevo provides performance and flexibility for control of **mealybugs, grape berry moth, leafhoppers, mites, leafrollers** and other damaging pests in your grapes whether grown in conventional or organic farming operations.

IDEAL FOR RESISTANCE MANAGEMENT AND IPM PROGRAMS

Grandevo protects your crop through three actions; oral toxicity, decreased fecundity and repellency. This combination makes it very difficult for insects to develop resistance. Applied early when pest pressure is first present, Grandevo provides residual activity that gets your IPM spray program off to a strong start. Whether it is used alone, in a tank mix or as part of a spray rotation Grandevo is an excellent tool for resistance management. And in addition, Grandevo won't interfere with beneficial insect activity or populations so you can use it as a cornerstone insecticide in your IPM program. Because it is tolerance exempt from EPA Minimum Residue Level (MRL) regulations, Grandevo is an excellent choice for minimizing chemical residues to meet your customers' increasingly strict standards.

Mealybug on Grapes

Pacific Ag Research, Arroyo Grande, CA



Treatments applied on Aug 2, Aug 9, Aug 20, 2012.

Treatments evaluated on Sep 17, 2012.

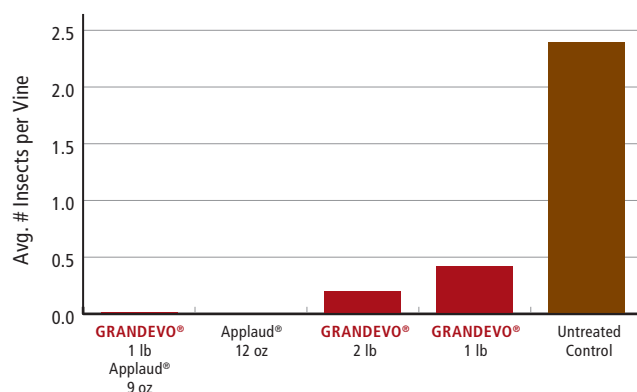
Refer to product labels for approved rates and application directions.

Target pest species: *Pseudococcus maritimus*

Grandevo offers effective pest control with 4-hour REI and 0-day PHI

Leafhopper on Grapes

Pacific Ag Research, Arroyo Grande, CA



Treatments applied Jun 30, Jul 11, Jul 23, 2012.

Treatments evaluated Jul 26, 2012.

Target pest species: *Erythroneura elegantula*

FEATURES

- Broad-spectrum protection against mites and chewing and sucking insects
- Complex mode of action
- Easy on beneficials
- 4-hour REI / 0-day PHI
- Tolerance exempt
- Minimal PPE / no buffer required for spray applications
- Approved for field and greenhouse applications
- NOP compliant and OMRI approved

LABELED CROPS

- Grape
- Amur River Grape
- Gooseberry
- Kiwifruit
- Maypop
- Schisandra Berry

LABELED PESTS

- Grape berry moth
- Grapeleaf skeltonizer
- Grape leafroller
- Omnivorous leafroller
- Light brown apple moth
- Glassy-winged sharpshooter
- Mealybug
- Mites
- Thrips
- Whitefly
- Orange tortrix

BEST USE RECOMMENDATIONS

Close scouting and early attention to infestation is important. Applications should begin early to reduce reproduction by adult sucking insects and mites and to target newly hatched larvae and nymphs. Thorough coverage of infested plant parts is necessary for effective control. Apply Grandevo at 1-3 pounds per acre for broad-spectrum control of pests such as grape berry moth, grape leafroller, light brown apple moth and omnivorous leafroller¹. Apply Grandevo at 2-3 pounds per acre for control of mealybugs, mites, thrips and whiteflies¹. Mix Grandevo with a good quality non-ionic surfactant (NIS) containing at least 75% surface agent or an organosilicone-based surfactant. Re-apply as needed on a 7-day interval. Under heavy populations, Grandevo can be rotated with other insecticides/miticides and can be tank mixed with contact or systemic insecticides/miticides at 1 to 2 pounds per acre.


The proper mixing procedure for Grandevo in tank mix combinations with other pesticides is:

1. Fill the spray tank 1/2 full with clean water.
2. While recirculating and with the agitator running, add any products in polyvinyl acetate (PVA) bags. Allow time for thorough mixing.
3. Add the required amount of Grandevo and any other wettable powder (WP) or wettable granules (WG) products.
4. Add the required amount of any other “flowable” (FL or SC) type products.

5. Allow enough time for thorough mixing of each product added to tank.
6. If applicable, add any remaining tank mix components such as emulsifiable concentrates (EC), fertilizers, micronutrients and spray adjuvants.
7. Fill spray tank to desired level and maintain constant agitation to ensure uniformity of spray mixture.

NOTE: Do not use PVA packets in a tank mix with products that contain boron or release free chlorine. The resultant reaction of PVA and boron or free chlorine is a plastic that is not soluble in water or solvents.

¹ See Grandevo product use label for complete instructions

Product*	Leafhopper	Grape leaf skeltonizer	Glassy-winged Sharpshooter	Grape berry moth	Mealybug	Mites	Leafrollers	REI (hours)	PHI (days)
 GRANDEVO <small>INSECTICIDE</small>	◆	◆	◆	◆	◆	◆	◆	4	0
CLUTCH®	◆	◆	◆	◆	◆			12	0
DIPEL® DF		◆		◆			◆	4	0
AGRI-MEK®	◆	◆		◆		◆		12	28
MOVENTO®					◆			24	7
ALTACOR®		◆		◆			◆	4	14
PROVADO®	◆	◆	◆		◆			12	0
ENTRUST®		◆		◆		◆	◆	4	7
PYGANIC®	◆	◆	◆		◆	◆	◆	12	0

* Chart reflects approved foliar use applications in California.



CAN BE USED IN ORGANIC PRODUCTION



Always read and follow label directions.

FOR ADDITIONAL INFORMATION, CONTACT YOUR LOCAL RETAILER OR CONTACT MARRONE BIO INNOVATIONS:

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MarroneBio.com/Grandevo