

| Grape |

DiPel[®] and XenTari[®]: Excellent control of vineyard worm pests

DiPel and *XenTari* Biological Insecticides are the premier Bt products in the world today due to efficacy, formulation quality and value.

DiPel and *XenTari* advantages

- **Proven, cost effective control with resistance management benefits:**
 - controls grapeleaf skeletonizer, omnivorous leafroller, and other worm pests.
 - Unique mode of action makes them excellent partners with conventional synthetic insecticides for resistance management.
- **Ultimate market and worker flexibility:** Exempt from tolerance, no residue issues in wine, table, juice or raisin grapes, the lowest restricted entry interval (REI) allowed by law – allows workers to get back into vineyards soon after spraying, 0 days to harvest. Organic, OMRI and NOP certified, safe for farm workers and non target organisms.
 - IPM: *DiPel* and *XenTari* are specific to lepidopteran insects, and will not harm beneficial insect predators and parasites
- Proprietary, superior formulation with consistent quality batch-to-batch.

How To Use

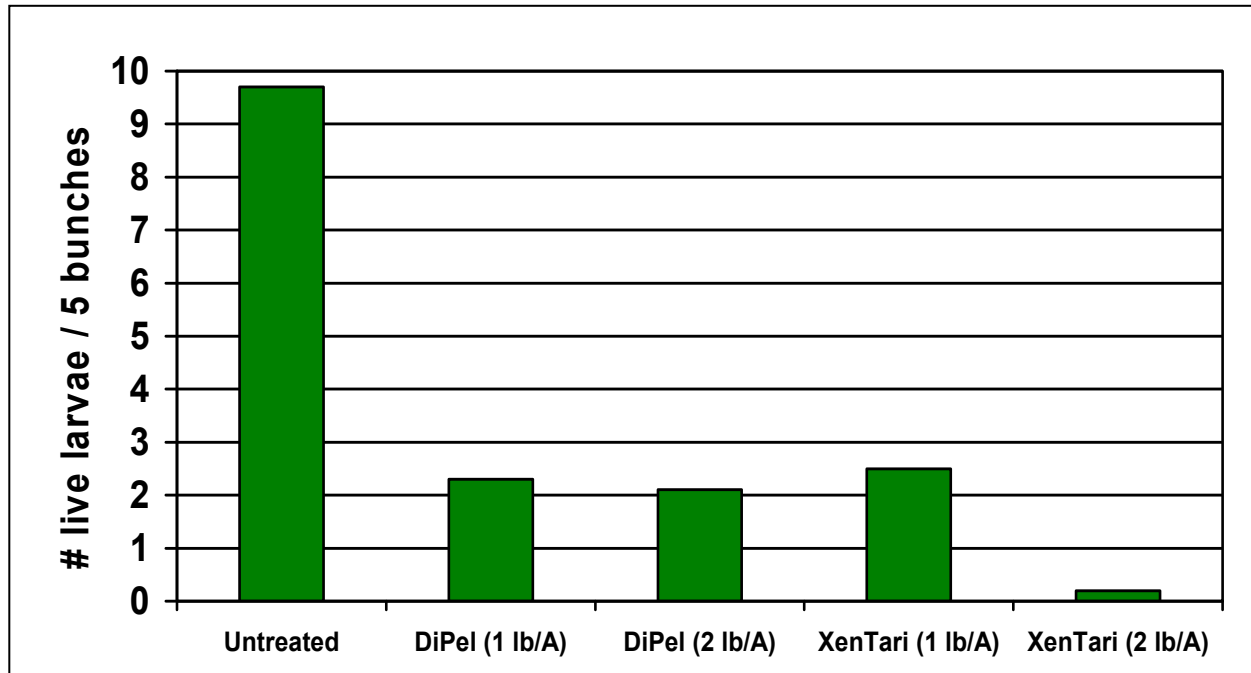
Rate	0.5-1 lb/A for normal infestations of grape leafroller, omnivorous leafroller, grapeleaf skeletonizer, grape berry moth Use 2 lb/A for heavy infestations.
Timing	Monitor insect populations, starting before bloom. Apply <i>DiPel</i> or <i>XenTari</i> at time of hatch or when larvae are small.
Spray volume	Use spray volumes that will provide complete, uniform coverage of foliage and fruit.
Adjuvant	Use standard surfactants to improve spray coverage

Other Important Information

- Easy to mix, dust free DF formulations
 - Long shelf life-3years
 - Compatible with ProGibb[®] PGR
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***DiPel* and *XenTari* field efficacy**

Control of grapeleaf skeletonizer on Thompson Seedless Grapes (Arvin, CA)



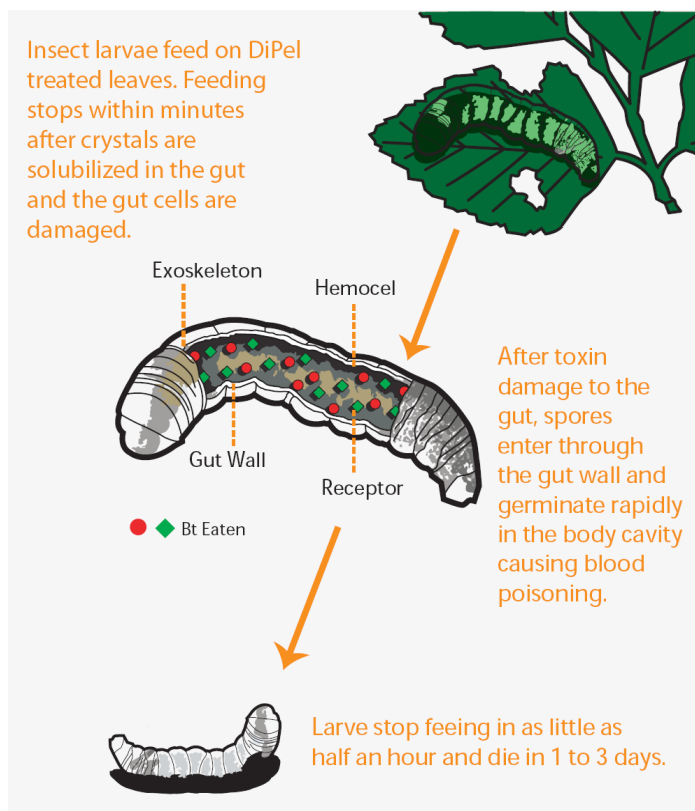
Application with backpack mist sprayer
Surfactant: 0.2% Latron[®]
Application volume: 250 gal/A
Cohort = Minimum of 15 1st-3rd instar larvae or eggs

Mode of action

DiPel and *XenTari* each have four different insecticidal crystal proteins. Once ingested the toxic proteins disrupt the insect gut causing cessation of feeding within minutes and thus prevent damage to the grapes. In addition, *DiPel* and *XenTari* have spores that enter the insect blood and usually kill the insect after 1-3 days.

Quality

Fermentation products like Bt require experience, expertise and strict adherence to quality control standards. Other companies lack the 30 years of experience and expertise that Valent U.S.A.'s sister company, Valent BioSciences Corporation, brings to the production of *DiPel* and *XenTari*. Each product is manufactured in state-of-the-art facilities under pharmaceutical processes and quality control standards. This means a consistent product that will work in the field time after time.



Bio
A Rational Approach.
Where Sound Science Meets Better Business.



For more in-depth information on *DiPel*, *XenTari* or Bt insecticides in general, please visit www.biorationalapproach.com. Here you'll find an educational gateway from Valent BioSciences Corporation, a global leader in biorational products, that provides easy-to-understand information on the full complement of Bt attributes. The web site also includes audio and video clips featuring growers, researchers, and crop managers who share their experiences with Bts.