



## XENTARI APPLICATIONS IN GRAPEVINES FOR LOBESIA BOTRANA



Provides effective control  
for *Lobesia botrana*



Can be used in organic  
production systems



Exempt from  
residue tolerances



Cry proteins provide  
a multi-component  
mode of action



No impact on non-target  
insects to maintain populations  
of beneficial insects that  
naturally control other pests



Critical tool for  
resistance management

# XenTari®

## Biological Insecticide

### EFFECTIVE CONTROL OF EUROPEAN GRAPEVINE MOTH (*LOBESIA BOTRANA*) WITH A TARGETED, SUSTAINABLE MODE OF ACTION

The European grapevine moth, *Lobesia botrana*, is a serious pest of grapes that feeds on the flowers, bunches, and berries. Grape cultivars with tight clusters and higher sensitivity to rots suffer greater damage. Based on climatic conditions, *L. botrana* can have from 2-4 generations per year. It is recommended that all generations be controlled.

XenTari is the only product on the market made from a native strain of *Bacillus thuringiensis* subsp. *aizawai* (Bta). Its unique blend of four Cry proteins combines the broad efficacy of a Bt subsp. *kurstaki* (Btk) with unique insecticidal proteins that are more effective against difficult to control pests, like armyworms. Combined with short re-entry and preharvest intervals, no impact on beneficial insects, and an excellent worker safety profile, XenTari is a critical tool for managing *L. botrana* in sustainable vineyards.

### Strain Specific Insecticidal Cry proteins and Spores

SPECIES	CRY1AA	CRY1AB	CRY1C	CRY1D
<i>Lobesia botrana</i>	+	++	—	++
++ GOOD ACTIVITY    + MODERATE ACTIVITY    — MINOR ACTIVITY				

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Biological Insecticide

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## What You Need to Know to Control European Grapevine Moth

**FIRST GENERATION** Significant egg hatch occurs 5–10 days after peak flight. Search for eggs around flower buds, pedicels, and fruit clusters.

**SECOND GENERATION** Significant egg hatch occurs 3–7 days after peak flight. Larvae feed on green berries, hollowing them out and leaving the skin and seeds.

**THIRD GENERATION** Significant egg hatch occurs about a week after peak flight. If populations have been allowed to grow, third-generation larvae cause the greatest damage by feeding on berries after veraison, exposing berries and clusters to bunch rot and other secondary fungi.

**For best results, XenTari® Biological Insecticide applications should be initiated about 10 days after peak male flight for each generation.**

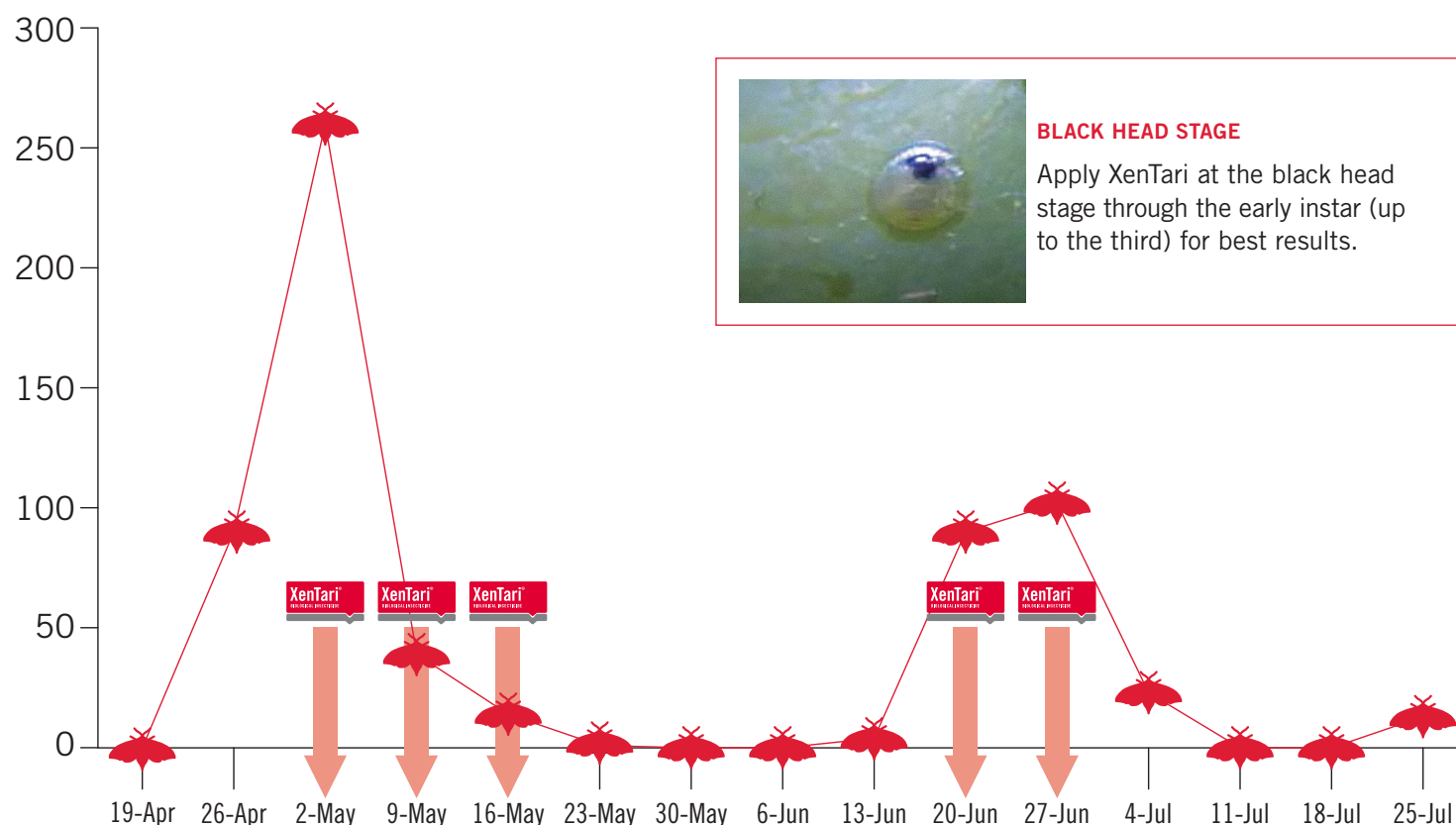
## XenTari Rate

1–2 lbs per acre. Use higher label rate under heavy pest pressure. For best results, apply twice per generation, depending on pest pressure. The first generation is more protracted and may require three applications.

## XenTari Coverage

Thorough spray coverage is needed to obtain uniform deposit of XenTari at the site of larval feeding. Larvae must be actively feeding on the treated, exposed plant surfaces. Use a spreader sticker for hard-to-wet crops and to improve rain fastness.

## XenTari Timing (2007 Estimates)



Always read and follow label instructions.

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CP2200