Lobetec

Use in mating disruption to manage the European grapevine moth *Lobesia botrana*

The European grapevine moth, *Lobesia botrana* (Lepidoptera: Tortricidae) is an important pest in grapevine and table grapes. It is widely distributed thoughout Europe, but also found in Middle East, North and Central Africa and a few areas of America.



Lobesia botrana
Lepidoptera:
Tortricidae

It usually presents three generations per year, although in areas with favourable weather conditions there may be a fourth generation. The most important damage is produced by larvae of second and third generations. Adults start to fly by the end of March until May approximately, although emergence is subject to local temperature. Females from this first flight oviposit on the flower buds. Neonate larvae penetrate these flower buds and when larval size increaes they produce the typical glomerulus, flower buds agglomerated by silken threads. Second generation occurs during mid-June up to mid-July and third generation develops in August. Second and third larvae generation penetrate inside the unripe and ripe berries respectively. This damage exposes berries to secondary infections by certain fungi such as *Botrytis and Aspergillus.*
Larvae from the last generation overwinter as diapausing pupae under the vine bark crevices or other potected zones until the next spring.











CONTROL MANAGEMENT

The management of *L. botrana* has been mainly carried out by application of chemical insecticides. The use of mating disruption as biotechnical control has increased in the last years.
This technique consist of creating a saturated atmosphere with sex pheromone of the target insect to confuse males and therefore avoid the mating between individuals. Mating disruption is an effective control method especially when pest pressure is low and the plot is protected from incoming gravid females from other infested areas. When pest pressure is quite high, a complementary treatment is recommended to be applied when necessary. In the latter case the reduction of population can be reached over a few years of continuous application of the technique. Once the population has been decreased to low levels, it can be controlled practically with just mating disruption.

FORMULATION

Dispensers

The product Lobetec is a dispenser comprising (E,Z)-7,9-dodecadienyl acetate. The compound is described as the main component of the sexual pheromone of *L. botrana*.
The dispenser is a plastic vial with the liquid pheromone inside. The material of the vial is permeable to the vapors and allows the emission of the product at a controlled rate.
In regular weather conditions, the duration of the dispenser is 180 days approximately. This time may be reduced at high temperatures and/or strong wind.

APPLICATION

▪ Dispensers should be placed in the field a few days before the first flight of adults.
▪ Each dispenser should be hung in the upper third of the vine or directly in the wire in trellies trained vines. The quantity of dispensers recommended is 400 units per hectare. It is recommended to distribute dispensers homogeneously in the field and reinforce the borders with 5-10% of the dispensers.
▪ It is advisable to monitor the species by the positioning of 1-2 delta traps per hectare with monitoring dispensers (LOBELAB).
▪ Traps should be checked periodically in order to control pest pressure and also confirm the proper functioning of the technique (none to few captures should be observed). ▪ Also regular assessments of damage should be carried out. If damage is higher than the threshold established in the area, then a complementary treatment should be applied.

HANDLING AND STORAGE

The dispensers LOBETEC are supplied in parcels of 200 units. The material of the packaging is impermeable to the vapors of the product.
It is recommended to keep the product in its original packaging, unopened preferably in the freezer until ready to use. Under these conditions, the product can be stored for at least two years.
Avoid cutting, perforating and opening the dispensers.
With the usual handling of the product, there is no risk of toxicity on people, animals or plants. The product is a dispenser that emits to the air vapors of the active substance at a low and controlled rate. For the same reason, risk of water and soil pollution may be excluded.
It is recommended to use gloves in the handling of the dispensers. The dispensers used and their packaging have to be managed according to current legislation for residues disposal.











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