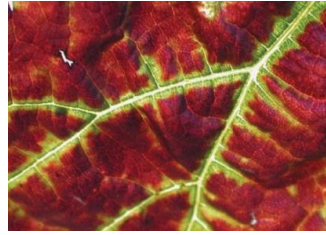




UNIVERSITEIT
STELLENBOSCH
UNIVERSITY

100
1918-2018



LEAFROLL CONTROL STRATEGY

10.4 ANT CONTROL AS PART OF THE MEALYBUG CONTROL STRATEGY

The correct management of ants in the vineyard is essential to ensure effective biological control of mealybug. Mealybugs secrete honeydew, the primary food source for four species of ants found in vineyards. It is important to identify the type of ant infestation to determine the best method of controlling the ants.

10.4.1 Identification

Argentine ant:

- Light brown in colour
- ± 3 mm (workers only)
- Nest holes found mostly in the soil; small and insignificant

Cocktail ants

- Dark brown in colour; heart shaped body with sting
- ± 5 mm (workers only)
- Nest in grapevines

Pugnacious ant (two species)

- Medium/dark brown in colour
- $\pm 3-10$ mm (workers & soldiers)
- Nest holes only in the soil; fresh/loose soil around the opening



From top to bottom: Argentine ant, Cocktail ant and the Pugnacious ant.

10.4.2 Monitoring

Monitoring for ants can be done in conjunction with monitoring for mealybug as follows:

- Start early in the growing season looking for the first signs of ants in the grapevine canopy
- Monitor 20 sections consisting of five grapevines evenly distributed throughout the block (up to 2 ha)
- Only note the presence or absence of ants **in the grapevines**
- The total number of infected grapevines will indicate the percentage of ant infestation in that block
- Once **20%** of the grapevines are infested with ants where mealybugs occur, chemical control can be applied (October/November)

10.4.3 Chemical Control

- **Ants that nest in the soil:** Stem treatments should be applied with a back pack spray pump equipped with a ring sprayer. 50 ml of the spray mixture should be applied evenly around the stems, above the irrigation lines. All training poles should be treated as well. Spot sprays are ineffective as ants can move along crosshairs. Treat the whole row. One treatment should be enough for the whole growing season, except where the ant pressure is high. Chemical control after harvest is unnecessary. Chemical stem barriers have the least impact on natural enemies.
- **Ants that nest in the grapevines:** A full surface application should be applied during dormancy to control cocktail ants.

Products that can be used are available on:
www.ipw.co.za

10.4.4 Cultivation Practices

Plastic used to cover ridges can create an ideal environment for the nesting of ants, especially in the winter due to an increase in soil temperature and soil moisture. When large numbers of ants are observed under the plastic, remove the plastic as soon as possible.

10.4.5 Weed Control

Control weeds throughout the whole year. Weeds growing high and into the grapevine canopy can provide alternative paths for ants to get into the canopy. Weeds should therefore be specifically controlled during the growing season. The use of a cover crop system can assist with weed control. Many broadleaf weeds act as host plants for mealybugs and the honeydew excreted by the mealybugs is a food source for ants.



Argentine ant looking for honeydew from the mealybug.



Argentine ant with honeydew.

Images page 1: P. Addison, Stellenbosch University. Images page 2: R. Stolk, IGWS.

Hierdie navorsing is befonds deur



Department of Viticulture and Oenology, Stellenbosch University
Author: Prof Gerhard Pietersen, University of Pretoria / ARC-PPRI