Murray Valley Winegrowers' Inc

Australian Government
Grape and Wine Research and Development Corporation

Vineyard Floor Management



FINAL REPORT to

GRAPE AND WINE RESEARCH & DEVELOPMENT CORPORATION

Project Number: **RT 04/03-1**

Principal Investigator: **Susan Byrne & Liz M^{c}Guire**

Research Organisation: **Murray Valley Winegrowers' Inc.**

Date: 9/12/05

Executive Summary

Vineyard floor management is an aspect of viticultural production that can be easily manipulated by growers' providing varying visible effects to vineyard winegrape production.
Growers' have their own opinions as to the best vineyard floor management technique in their vineyard, however there are aspects of vineyard management that growers' would like to have more information on in order to make more accurate production decisions.

This project aimed to provide growers with that information examining the following three areas of vineyard floor management:

1. "*Understanding your soil survey*",
2. "*Managing soil structure*" and
3. "*Weed management*"

Due to expenses however, only the "*Weeds management*" component of this project was completed. After discussions with GWRDC it was decided to remit the remaining funds and determine new ways of including the remaining floor management topics into future projects. This would ensure that the detail of the topics would not be compromised.

The weeds management workshop was well received by participants and allowed growers to investigate new techniques for weed management in their vineyards.

Background

This project developed from results of the 2004 Murray Valley Research and Extension survey, with over half the respondents showing a strong interest in vineyard floor management. The three topics for this project "*Understanding your soil survey"*, "*Managing soil structure"* and "*Weed Management"* were developed by the Industry Development Officer Susan Byrne.

Objectives

The aims of this project were to:

1. Conduct a total of six workshops, two for each topic area.

Within the "*Understanding your soil survey workshop*" expectations were to:

1. Learn about soil characteristics and how they affect vine growth and water movement / retention through the soil profile.
2. Learn how to interpret the results from the soil surveys.
3. Learn how to use the results from soil surveys for:
    a. Determining soil problems.
    b. Designing irrigation systems.
    c. Ensuring similar soil types are irrigated together.
    d. Identifying where to place soil moisture monitoring equipment.
    e. Identifying root zone.

Within the "*Managing soil structure workshop*" expectations were to:

1. Learn about soil characteristics and how they affect vine growth and water movement / retention through the soil profile.
2. Learn how to identify soil problems.
3. Learn about the available options for ameliorating soil problems.

Within the "*Weeds management workshop*" expectations were to:

1. Identify weeds that affect local vineyards.
2. Develop weed minimisation strategies.

Changes

This project was more expensive than first determined in the original RITA application budget with only one component of the project (Weeds Management) completed. After discussions with GWRDC, the problem was resolved by remitting remaining funds to GWRDC and considering the remaining components of this project to be included in future projects.

Method

Sunraysia TAFE was approached to run the Weeds Management workshops. The workshops were to cover key aspects of weed management including:

1. Characteristics and identification of vineyard weeds.
2. Chemicals available for control and timing of application
3. Sprayer set up and application techniques.

Growers' were invited to the weeds workshop by a mail out invitation.

Results / Discussion

Workshops were well received by growers who participated on the days. Eight people attended the Mildura workshop and fifteen people attended the Swan Hill workshop. The majority of participants rated the program content, delivery and resources highly with overall satisfaction in the course also being highly rated.

Growers' who attended the workshop were very interested in the ability to identify weed species in their vineyards, know what chemicals were the best treatments and what the best timing to eliminate the problem was. Growers' indicated that the session investigating the right nozzles to use to get the best coverage and result provided valuable information, with many growers indicating that they would be looking closely at the quality of their own nozzles to ensure they were getting the best results.

Outcome / Conclusion

The Weed management component of this project was a success with growers pleased with the information presented and keen on implementing information they had learnt for better weed management results in the vineyard.

Unfortunately the "*Understanding your soil survey*" and "*Managing your soil structure*" components were unable to be completed on account of budget constraints. It is expected however that these components will be included in future programs developed to assist growers' in the area of vineyard floor management.

Acknowledgements are made to GWRDC for providing funding for this project.