

Spring Vine Health Field Day Survey Canberra District Wine Industry

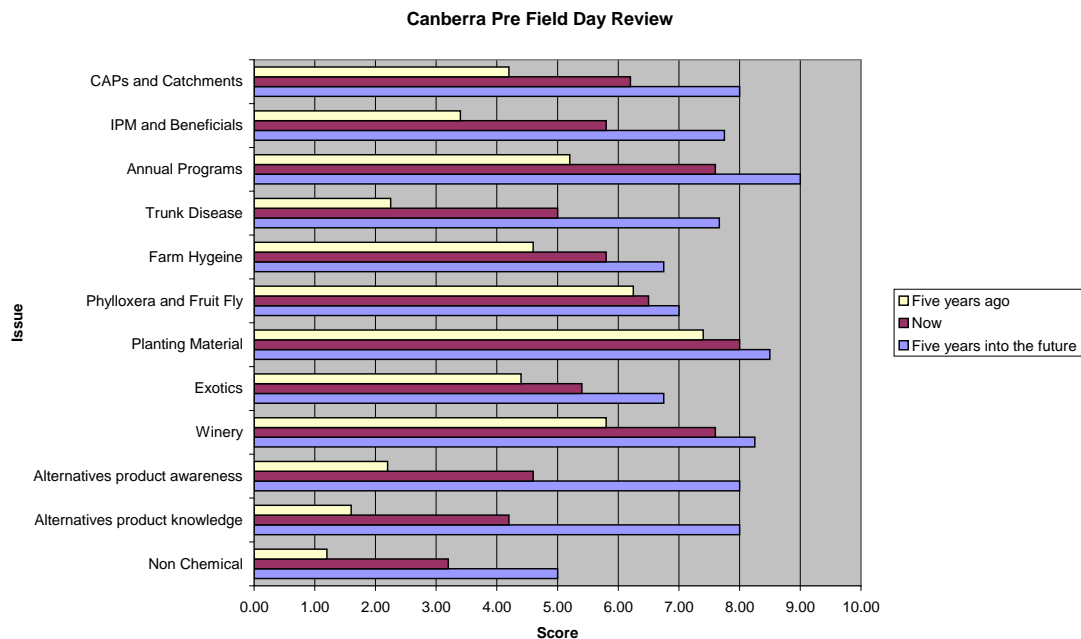
Background

The Spring Vine Health Field Day held at the Royal Hotel, Gundaroo on Saturday 4th September, 2010 and was attended by more than 30 vineyard managers and owners from principally the Murrumbateman / Canberra district. The day was relatively wet and this reminded all participants that with the return of spring and summer rainfall there could be an increased disease pressure to be faced by the industry in the coming season.

In the lead up to the Field Day a survey of viticulturists who had nominated to attend was undertaken. The questionnaire sought to ascertain district pest and disease practices as well as their attitudes and understanding of these practices. Opportunity was also taken to solicit attitudes to a range of natural resource management issues. A survey questionnaire was forwarded to all participants attending the Field Day and the response analysed. Follow up interviews were undertaken with some respondents, those whose response to the questionnaire raised further questions. Approximately 50 percent of the questionnaires were returned.

The survey also had the added advantage that the results were able to provide some guidance for the principal presenter at the Field Day, Dr Mary Cole of Agpath Pty. Ltd, with some details of district pest and disease control practices.

Results and Discussion



Viticulturists aspired to make progress in all of the areas rated. Issues with the greatest opportunities include working with the catchment action plan, understanding beneficial biodiversity, annual programs, trunk disease management and alternatives to chemical approaches.

On the other hand issues such as the exclusion of Phylloxera and the use of selected planting material from accredited nurseries are high on the priority list for, and well understood by all viticulturists.

Pest and Disease Control Practices

It needs to be remembered that the Canberra district has been facing a moisture deficit to severe drought for approximately the last decade. These conditions have resulted in reduced or minimal disease pressure being faced by all vineyards in the Canberra district. Because of the age of the majority of the plantings many of the viticulturists have not experienced conditions of extreme disease pressure from diseases such as downy mildew and botrytis and other bunch rotting organisms. Many of the plantings had not reached full bearing prior to the commencement of this recent period of lower than average rainfall.

In relation to mildew control the largest majority of viticulturists are relying on a program based on regular sprays with copper based fungicides and wettable sulphur. Most report very little to no powdery mildew over the last few years, despite seasonal conditions that have not been adverse to its development. A number of respondents reported significant powdery mildew infections in some sections of the vineyard in some previous seasons, now up to a decade ago, but that the current control program has maintained a clean or relatively clean vineyard.

Some respondents reported using fungicides such as Captan ® at flowering or pre bunch closure for botrytis control. It needs to be remembered that netting for bird control is widely practiced and thus spraying after veraison is difficult or impossible depending on circumstances.

For about the last decade up until the 2009/10 season conditions have not been favourable for the development of downy mildew. Late spring rainfall in this last season favoured the development of a primary infection and where the spray regime was inadequate or not existent the disease developed in some vineyards. (There are a number of vineyards in the Canberra district that have been abandoned in recent years and are of concern to the local industry.) No respondents to the survey reported the development of downy mildew.

Botrytis has not been a disease of concern to the district viticulturists for many years until this last season. Pre vintage rain in late January and into February 2010 resulted in fruit splitting of many varieties and the subsequent development of botrytis and other fruit rotting organisms in some situations that resulted in losses to the individual viticulturist. A few respondents reported having seen the development of some botrytis following fruit splitting this season although reported losses were minimal whilst others reported fruit splitting without the development of botrytis.

Knowledge and Application of Alternative Products

Dr Mary Cole's approach to pest and disease management is one that relies on organic solutions rather than the more traditional chemical approach. In her address she sought to increase the understanding of the life cycle of botrytis, its mode of infection and the expression of the disease under favourable conditions. She also discussed management options to reduce the flowering trash present in the bunch as well as encouraging quicker drying of the fruiting zone after rainfall. The use of compost and compost teas to not only improve soil health but also to encourage beneficial fungi was discussed at length as well the use of the various biological products such as *Trichoderma harzianum* that are on the market.

The questionnaire sought to gain an understanding of the participants understanding and application of less traditional (principally non chemical) methods of pest and disease control. It is apparent from the responses that Canberra district viticulturists five years ago had very little understanding or interest in pest and disease control practices such as that proposed by Dr. Mary Cole. Their awareness and interest in this approach has greatly increased over the last few years and many are looking to implement this style of approach in the next five years.

Many respondents made comment on the use of techniques to promote an open canopy by leaf plucking, foliage trimming or shoot thinning for example to promote quicker drying of the canopy and fruit zone in an effort to reduce disease development particularly botrytis. Some commented on the wind exposure of their site as an advantage in promoting quicker canopy and fruit zone drying and their attempts to maximise this advantage.

There is no doubt that all respondents are seeking to implement 'softer' pest and disease management practices into the future and relying less on copper, sulphur and other manufactured fungicides. Some commented that they saw their participation in the Spring Vine Health Field Day as the start of their learning process in this regard. One respondent though in his comments stated that scientific trials needed to be undertaken and the results published before he would consider changing his current practices. Some viticulturists commented that the 'softer' approach had significant environmental advantages in that it had a significant impact on reducing carbon pollution.

Vineyard Biodiversity and Natural Resource Management

The survey results indicate that respondents are far more aware today of issues related to biodiversity and natural resource management than they were five years ago and they report a further increasing awareness as we move forward over the next five years. Comments were made by respondents such as

- 'very necessary but very little progress either on property or in catchment'
- and
- 'very important for maintaining high quality grape production into the long term future.'

Comments were also made about maintaining a grass sward in the vineyard, retaining remnant native vegetation and controlling pest plants such as blackberries and gorse.

A number of respondents commented as well as on establishing areas of native grasses on the property and carefully managing areas of native vegetation.

Soil health was also an area that received a number of comments such as

- ‘Particularly interested in soil biodiversity and think healthy soils are the key to healthy vines and better wine.’

Beneficial organisms such as insects and fungi

There is no doubt that survey respondents are becoming more aware of the role of beneficials and are adapting management practices to encourage them. Survey respondents also expressed a desire to increase their understanding of them and their role.

Integrated Pest Management was an area promoted by the then CRC for Viticulture some years ago and a number of respondents reported attending the workshop that flowed from this program. Whilst other respondents indicated little knowledge in this area and a desire for further understanding and education in this area.

Trunk diseases, are they an issue

The vineyards of the district are relatively young and generally the responses indicated that the respondents had little understanding of trunk diseases and their potential impact. They all indicated that trunk diseases were not an issue five years ago are a moderate issue today and will become an important issue in five years time.

This increasing trend matches the increasing trend in response to almost all the questions for which a response was sought. In this instance thus may not be a response from a position of understanding.

Farm hygiene for the control/exclusion of insects, disease and weeds

Commonly with all respondents farm hygiene was rated as a medium issue and yet the comments from all indicated that considerable effort is expended and attention given in this area. Comments for example were

- ‘Quarantine feeding of imported hay. All imported feeds are reviewed for weed seed. Serrated tussock and salvation jane sprayed, introduction of insects to control salvation jane.’
- ‘Have purchased an undervine mower to control vineyard weeds.’

and

- ‘Hand removal of weeds such as thistle. If / when pruning when scale / phomopsis / vine moth present, we rake and burn all prunings. When vines are cut down or old cordons removed, we rake and burn. Cordons 1 year old are mulched / mowed. Have a semi-weed-free under-vine area - but not completely.’ With these sorts of comments indicating a great attention is paid to detail in relation to farm hygiene

These sorts of comments indicate an awareness of the importance of farm hygiene in the management of the environment in which the farm / vineyard sits.

Regionally contained and regulated organisms

Comments ranged from

- ‘Phylloxera issue addressed.’

to

- ‘Have no Queensland Fruit Fly problem, aware of regulations relating to phylloxera, abide by appropriate interstate protocols.’

There is obviously some confusion amongst the respondents in relation to this issue. There has been considerable discussion within the industry at times about the impact of abandoned vineyards on neighbours in the past. This was not an issue raised by any respondent.

Planting material supply

All respondents made comment about the purchase of the best available planting material from quality nurseries and saw this as a very important consideration. This was on question where the respondents saw little change over time in the importance of planting material supply. Comments such as

- ‘New plantings in the last five years have all been certified material. Have used a combination of own rooted and grafted material.’

and

- ‘Initial plantings were with certified material. Intention will be to use certified material for all new plantings.’

Is the Region sufficiently protected against exotic pests and disease?

The Viticultural Society has been very active and generally well supported in the district by the members of the industry generally but respondents do not clearly show this support. Surprisingly the respondents did not rate its importance as any more than moderate. Comments included

- ‘All ok as far as I know. Maybe something to discuss at Viticultural Society level.’

and

- ‘Have awareness of major exotic plant pests (Verbascum). Have done research via internet – currently trialling spray regime.’

and

- ‘District is not protected.’

How do pest and disease impact on your relationship with the winery?

There is expressed an increasing involvement in vineyard management by the winery and winemakers from the position five years ago until today. The respondents express an opinion that this position will not change into the future. An indication is shown by the comments such as

- ‘Wineries now more involved in grape progress thru the growing season.’

and

- ‘Have always supplied top class fruit.’

Recommendations

- That viticulturists review Dr. Mary Cole's presentation online and her evaluation report. Other useful resources include the presentations from Spring Vine Health Field Days that have been held elsewhere recorded online. These resources will help in designing their annual vine health management programs.
- Particular attention to canopy management will help with Botrytis control, especially given that full soil profiles at the end of winter and potentially the wet Spring will lead to significantly increased vigour as compared with many previous seasons.
- The process of pre field day review, evaluation and reporting allows for continuous improvement especially if these presentations and reports are collated for future reference. It is recommended that this process begin earlier next season to allow results to be used for inclusion in planning field day topics.
- The Spring Vine Health Field Day is a useful annual opportunity for the wine industry to understand how to align industry practice with achieving the Catchment Action Plan. A Spring Vine Health Field Day should be pursued by the Murrumbidgee CMA and the association again next year.
- Specific training about trunk disease management should be offered to this region.
- There needs to be an educational program developed to assist vineyard managers in increasing their understanding of soil health and its implications for soil and vine management leading to the production of improved quality fruit.
- To increase understanding of the Catchment Action Plan and its implications for and co-operation with the viticultural industry there should be greater liaison between the Murrumbidgee CMA and the Viticultural Society of the Southern Tablelands (NSW and ACT) Inc.

Conclusion

The Spring Vine Health Field Day was well received by all attendees. An evaluation form was completed by participants at the end of the day and the views expressed were all very positive. It was generally agreed that there should be further such educational opportunities provided to industry participants. The Viticultural Society also circulated a questionnaire seeking guidance on future educational opportunities that are sought by the industry participants.