



Report by Al Mac Donald - WineSkills Sustainable Wine Production Mentor, September 2012

Introduction

This was my first visit under the Wineskills mentor program. I did have the advantage of reading the previous reports submitted by the other mentors involved in the program. Their detailed reports indicate the challenges faced in a relatively new and small cool climate region. The WineSkills website is filled with valuable information on aspects of vine growing, winemaking, and marketing. Plumpton College has the expertise, facilities, and research capabilities to provide training for quality wine production.

It is my understanding that the weather conditions during the current vintage are some of the worst experienced in modern wine growing of the UK. The UK climate conditions were characterized by a cooler and wetter than average weather pattern. This weather pattern persisted well into the summer. These wet and cool conditions delayed timely planting, weed control, increased disease pressure, and contributed to poor fruit set in the more mature bearing vineyards.

I was able to visit seven of the eight sites on the itinerary. As this is a very small sub-set of the number of vineyards planted in the UK my comments are not intended to reflect the industry as a whole. All of the vineyards visited were relatively young plantings. The oldest being in its sixth leaf and three of the sites were planted this year.

There were very few clusters on the bearing vines and the clusters that did develop suffered from poor set and very late seasonal maturation. It is certain that desired ripeness and yield would be severely compromised this year. These vineyards and wineries would be operating at an economic loss this year.

It is possible that a part of low cluster numbers were a reflection of weather conditions during bud development the previous growing season. The current weather conditions this growing season may again contribute to low cluster numbers for the next years growing season.

Strengths in the UK wine industry

Education & Training

Plumpton College offers a wide range of educational programs and workshops. The information provided on specific topics and available on their website should be helpful to the UK grower. The College has an operating vineyard and commercial winery for training and education. The practical aspect of these facilities will increase the number of competent industry personnel that receive training. The Wineskills program has brought experts from around the world and their observations have provided valuable insight to problems faced by the UK winegrowers.

Sustainability

The focus of my visit was to get an idea on how well the aspects of sustainability, that is, environmentally sound practices, socially responsible organizations, and economically viable operations over time were integrated into the sites visited. I was also asked to contact vineyards prior to my visit to determine what areas of concern they would like to discuss. I have summarized below the concerns presented.

Environmentally responsible farming

Weed Control

A number of the vineyards were interested in reducing or eliminating the use of synthetic chemicals in the production of grapes on their farms, of particular concern was the use of herbicides. Management of under the vine vegetation comprised of using compost, mechanical weeding, and hand weeding. These vineyards indicated that compost was readily available for use as mulch. When herbicides were used it was often done once or twice by a hired contractor.

It would appear that reliance on compost for weed suppression also presented problems.

- Some of the vineyards had done soil reports for nutritional status of the soil, few had actually analyzed the compost for any contribution to values represented in the soil reports.
- The combination of the addition of large amounts of organic material in the vine row and the deep depth of planting of the vines was promoting scion rooting.
- Lack of weed control in a timely manner severely delayed development of some of the new plantings, as the compost (mulch) was not thick enough to suppress weed plants.

Suggestions to improve weed control in newly established vineyards.

- Begin field preparation at least a year prior to planting if possible to decrease the number of weed seeds present and planting an appropriate weed suppressive cover crop.
- Examine alternative materials for weed suppression. There are a number of biodegradable films and other thin materials available that could smother weeds. The use of these materials would reduce scion rooting, and the nutritional value would be minimal.
- In row cultivation could be used if strong training stakes for the tripping mechanism are installed at the time of planting.
- If consistent with the vineyard philosophy herbicides could be used sparingly at establishment and be phased out after the vineyard is established.

Poor weather conditions and excess vigor appeared to be contributing to low cluster numbers and fruit set.

- I don't have any suggestions to improve the general weather conditions however; improving the micro climate around the vines would at least give the best chance for increasing yields. Shading of the renewal canes was observed and contribute to the lower cluster numbers per vine.
- For vineyards showing vigorous growth experimenting with low growing under the vine vegetation that may be periodical mowed would inhibit growth.

- Explore the use of divided canopies (Scott-Henry, GDC, or similar) to decrease the growth of individual shoots and increase yields. Vigor diversion canes have been used in other growing areas with some success. Decreasing the overgrowth of individual shoots and increasing sunlight to the developing buds helps with fruitfulness. Each vineyard could experiment with these methods to see what works for their site conditions.
- Cover crop management both under the vine and in-row is a dynamic practice as some years are too dry and some too wet. As most of the vineyards visited were not yet fully grown long term effects of cover crop management were not assessed.
- Rootstock selections were not always appropriate for each site. S04 is one known to promote growth and is prone to certain nutrient deficiencies.
- Clonal selection should be based on the end use of the grapes. A few vineyards were using low yielding, erratic, and disease prone Pinot noir clones more suitable to red wine production.

Disease & Pest Control

- A number of the vineyards desired organic control methods for disease suppression. The number of chemical control methods is limited with an organic approach. The effectiveness of these control products could be improved with the installation of local weather stations for disease model prediction. Timely canopy management is dependent on a readily available local labor force and most of these operations were done by hand. If labor is not readily available in a timely fashion then mechanical methods (leaf removal, hedging, etc.) should be explored.
- Matching of sprayer technology to each site could be improved. Some of the sites had undersized sprayers that required frequent time consuming filling or a reduction in coverage to finish the applications.
- There was little crop in the vineyards visited and a number of the vineyards were non-bearing. Therefore the subject of control of fruit eating birds was not addressed. Birds are certainly a problem in most wine growing regions. Providing perches and housing for local raptors, owls, and other predators should be encouraged. Bird netting for smaller vineyards would be the most effective.
- Deer fences and rabbit shields were installed in vineyards subject to these pests.

Biodiversity improvement

As is typical in most vineyard plantings a mono-crop approach is practiced. There were few insect pests observed in the vineyards visited. However, that may not always be the case.

- There were signs of mites present in the vineyards and there is always the possibility new pests may find their way to the region as more vineyards are planted. Precautions should be taken if planting material is imported from areas pests are known to infest.
- There is an opportunity to augment the biodiversity within and around the vineyard plantations. Looking at planting native flowering plants and shrubs in and around the vineyard margins could be done as time allows serving as a reservoir for predatory insects.
- A mix of flowering plants could be planted in selected rows within the vineyards, (every 5th row for example and rotated through the years.) Trials at the Plumpton Vineyard showed species of flowering plants that may be used.
- I have found the below publication helpful and can be order at

<http://www.agridea-international.ch/index.php?id=632&L=0>

Ecological Infrastructures: Ideabook on Functional Biodiversity at the Farm Level Temperate Zones of Europe.

Boller, E.F., Häni, F. & Poehling, H.-M. (eds.), 2004. 220 pp.
English-German, 1st Edition August
ISBN 3-906776-07-7

Socially responsible

This is rather difficult to define, but does included labor relations and the integration of the operation in the local community. As most of the sites were relatively new to their areas it was a little early to determine how well the operations would fit into the local communities.

Potential conflicts that may arise include;

- How well would an organic vineyard fit in with conventional adjacent farms? Would pesticide drift from adjacent farms be a concern to organically certified vineyards?
- Would there be an increase in vehicle traffic on local roads if a winery is built and events and tastings planned?
- Is tourism or selling products at the site a part of the business plan? Have relationships been established with local tourist facilities? (B&B's, hotels, area attractions).

Labor

Finding a trained local labor source to perform vineyard and winery operations in a timely manner is important for quality production. Of the sites visited the larger ones had competent trained managers and the smaller sites were owner managed. The absence of mechanization would indicate there are times through the year when a number of trained workers on a temporary basis are necessary for timely hand operations.

- In other wine growing regions the labor is often provided by companies being formed that can provide these services if the sites are in close proximity.
- Larger operations may contract with nearby smaller ones to provide steady employment for local workers.

Economically viable

Of the sites visited most lacked a long term written business plan. Some of the operations had just a general idea if more acres were to be planted and where the plantings would take place, or how much wine or grape sales would be needed to cover production costs.

- The weather conditions this year will result in severe crop losses and financial hardship on many of the producers. Growers in Oregon are able to purchase crop insurance policies to help protect against unusual weather events. I am not aware if any such insurance programs are available in the UK.
- If weather events similar to this year occur more frequently, i.e. on average once every 10 or 20 years how are these low yields figured into the viability of the businesses?

General observations

The Wineskills Sustainability Workbook provides an excellent outline of vineyard/winery practices that could be incorporated into a development plan. Many growers and winery owners in regions visited had a tendency to underestimate the amount of labor and money it takes to develop a wine business. The time between first planting and the production of wine takes several years and delays in establishment are very costly.

- An economic analysis of the cost of establishment and production of vineyards and of wineries in the UK would be helpful, giving new growers and investors a benchmark of the resources required for the businesses.
- More use of current technology should be encouraged.
 - Install weather stations. These stations are used to predict disease pressure and spray timing.
 - Weather stations would also provide information to evaluate and compare sites. Information from these stations would help new growers evaluate environmental risks prior to planting.
 - Conduct industry surveys on production, prices, new plantings, etc. In Oregon an annual survey is done to assist in planning for our marketing organization.
http://www.nass.usda.gov/Statistics_by_State/Oregon/Publications/Vineyard_and_Winery/index.asp
 - Attention to clonal and rootstock selection for the varied vineyard sites could be improved, as the sites visited had very diverse growing conditions. Selections more appropriate to each site, end use, and disease resistance would increase quality.

Summary

My observations are similar to the other experts invited to tour vineyards and wineries in the UK. The reports they have submitted should be seriously valued. I found the visits to the vineyards very informative and will submit individual reports to each site visited. It is encouraging to see the enthusiasm of the new growers to the expanding UK wine industry. Plumpton College offers an excellent program of education, mentor opportunities, and online information for wine growers, wine makers, and wine marketers. As stated at the beginning of this report there were a limited number of visits made and most were relatively new to wine growing.