

# Marlborough Focus Vineyards

## Field Day 26.05.05

### Questions/Notes Generated from the Three Presentation Sites and Keith Vincent's Presentation

#### Dominic and Tim

- How many holes should you dig and to what depth can you influence nutrition
- Are we looking at soil organic matter
- Is foliar fertiliser any good
- Is there a specific depth of sampling – *mainly where the roots are and a realistic influence area*
- K Movement and type of application, when should you put it on – *now and in the drip line not broadcasted, this allows use of the winter rain to penetrate – you can't get enough K through foliar spray*
- Need to look at Ca levels when applying K
- How do you choose sites to dig holes
- Is there a rule-of-thumb for rates of movement through soil – *depends on the chemical*
- What is the timeframe in the year to put nutrients back
- When will Tim's results be available
- Tim what are you predominately looking at in your project – *variability rather than water and nutrients*
- Vineyard ripping – *need to mix soil layers for roots to penetrate – best to use clip plough as ripping does not necessarily open soil for grapes*
- How many holes are required for nutrition information *post planting you need less but pre planting use a grid system it is your choice as to how close*
- Why sample two depths, top and subsoil
- How do you sample the pit to get a good result

#### Richard & Darren

- Is there a benefit of blade over petiole testing
- Is there a link with the Sauvignon Blanc research project
- Should we get both blade and petioles tested - *looking at water and nutrients to achieve a benchmark*
- What is the gauge for optimum flavour/yield rather than size of stem – *some answers may come from the wine that is being brewed*
- How accurate is the variance between results of petiole ranges at flowering – *Richard doesn't know what it means*
- Is there a consistent relationship between soil and petiole analysis – *too many variables*

- As a plant grows in steadily depleting soil, to what extent does the plant buffer the soil nutrient drop before the problem becomes visible
- Does ARL combine leaf and petiole analysis – *Dry matter test gives historical knowledge a sap test may be best*

## Murray and Marc

- How do you deal with rain events on a trial
- Questions based on specific decisions and timing on a trial – *how to irrigate depends on soil moisture monitor rainfall and ???*
- How are you putting on water if 6L/vine is your control
- How many people are over irrigating – *12 L is adequate for all properties over season. More than half may need to go over that limit in a short time period – the amount of water applied can be adjusted for the time period*
- How much water needs to be applied for optimum yield and quality – *Need to find answer to that one*

## Keynote Speaker – Keith Vincent

What determines where you grow grapes

*The less fertile soils are best for grapes yet we have started with the best land, limited by rainfall and frost. For water less is more*

Nutrients- We need to explore unknown factors

NZ doesn't have a good grasp of nutrient requirements for grapes, but we are getting better at it after 20 years

1. Sampling depth
  - Sampling depth sampling a series or horizons
  - Soil solution will be a useful tool
  - Irrigation is supplemental it may not always work for some nutrients
  - Banding under vines for in row irrigation
  - There is value in broadcasting as older vines tend to explore the space under the rows
2. We need to replace K due to removal of nutrients
  - Consider how often to top up
  - Need to consider ratio K Mg and Ca when you add nutrients
  - What is and how do you measure optimum levels
3. Phosphate is usually not limiting in grape soils
  - Encourage excess vigour
  - Michorrhizal is best source of phosphate

- Large doses of phosphate equates to low micchorizal populations
4. When and how to sample
- Petiole/Blade/Soil analysis?
  - Pre plant – soils are usually compared to known samples – different soils = different answers – major nutrients plus boron and pH are important – easier to correct problems and put chemicals on before planting
  - Post plant – Petiole and blade analysis – need to monitor petiole levels and soil levels then compare – may not be a direct relationship due to the plants buffering capacity
  - Timing of petiole sampling is important – Midday is used in California but need to look at this in the focus vineyard project – Midday petiole sample gave consistent results

Site discussions – Keith’s visual analysis of the soil pits

- 1000 – 1500mm looked at

Site 1 (Marc and Fruition by row 1)

- Moderate vigour site
- 165mm stored water capacity
- > 80ml water in dry conditions

Site 2 (Dominic and Tim)

- Moderate to low vigour site
- Fine sandy loam with good root development
- 90 mm stored water capacity (moderate to low)

Questions

How does established base line data and estimates – historical from Hawkes Bay and recalculates

How do you ascertain water holding capacity  $15\% * thickness\ of\ horizon$

Final plug for Keith’s Book – Soils in New Zealand Landscape