

Diseases impact on wine quality and grower's bottom line

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Marlborough's wine industry is all about delivering intense "fresh" fruit flavours.

Diseases affect our ability to do this. Three disorders are important.

- The most common fruit disease issue, **Botrytis**, imparts "processed" fruit characters such as dried apricots, citrus peel or marmalade, as well as making the wine prematurely age.
- **Powdery mildew** (the most common vine disease), makes the berries more prone to Botrytis, delays maturity, and in severe cases, gives the wine a musty or earthy flavour.
- **Sour rot** creates vinegar from bacterial contamination of mainly **bird peck**, but also of splitting.

Winemakers do have a raft of techniques to lessen the effects of these diseases but,

- They only work up to a certain level of disease
- They put cost onto the winemaking
- They lessen the "fresh" fruit flavour concentration (read quality)

As a result of this, most grape supply contracts specify a maximum level of disease at which grapes can be supplied. Most (but not all) contracts specify less than 5% for "Disease" (Botrytis, powdery mildew), and less than 1% for sour-rot.

It is important that you understand your winery's assessment of the disease. As a general rule,

- "**incidence**" refers to the **percent of bunches** with a disease,
- "**severity**" is calculated from the incidence and how much of each bunch is affected, which effectively gives you the **percent of berries**.

If the "5%" is percent of bunches, then you are likely to exceed even with 'good' disease control. But a 5% "severity" will usually correspond with a 30% "incidence", hence if the winery does mean % of berries, they are actually allowing a quite ugly disease situation.

How disease affects vineyard income is when they reach or near the specified level, one of the following may happen,

- A financial penalty may be imposed, this will be similar to a speeding fine and will increase exponentially the higher you are over the limit.
- You may be asked to pick immediately and incur a lower price for lower brix
- You may be asked, (or opt) to remove the most affected bunches to reduce the severity below the threshold and avoid the above measures.

This normally involves removing bunches with more than quarter of berries with Botrytis (as it is the heavily botrytised bunches that tip severity over). Removing these bunches hurts the growers back pocket twice! The cost of labour involved in removal will seem most apparent, but the greatest cost will be the loss of yield. This option may end up costing more than the brix or disease penalties, and an analysis should be done on your best option.

Analysis of most disease problems at harvest, the finger can be pointed at some management practice. The most common one I see is the choice and timing of flowering sprays.

Another important quality aspect, affecting market access, is agrichemical residues. Larger companies send their product to a range of global markets and will generally establish pre-harvest intervals that are suitable for all markets. When applying chemicals (particularly post flowering), ALWAYS refer to your wine company. NOT your spray rep, NOT your spray contactor.

The price of land in Marlborough dictates we are at the high value, quality end of the market. While disease can be dealt with in the winery to a certain extent it will always reduce the quality of the wine produced. Growers that supply, and wine companies that take diseased fruit, do so at the detriment of Marlborough's place in the world market, effectively punishing good growers and winemakers.