

## Hort Update

Spring 2010

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### Weather

What a different start to a spring. Water seeping from places not seen in a decade and many dams with significant run off in them for the first time in many years. Probably the best chill accumulation in a decade.

The short term forecast is for the rain to persist into at least early summer and this will bring its own management issues.

### Diseases

The weather combination in spring that can cause the most problems is high humidity and moderately warm weather – 17 - 25° centigrade. Problem fungal and bacterial diseases thrive under these conditions. Brown Rot, Bacterial Spot, Bacterial canker, Downy Mildew, Powdery mildew, Shot hole, Botrytis, Rust etc are all likely to be more prevalent this year if the wetter more humid conditions persist.

Two of these diseases are likely to cause more problems than others and can often

be the hardest to contain although botrytis in grapes will also fit into this category.

Those people who are exporting fruit need to be very mindful of importing countries MRL'S when spraying.

### Blossom Blight/Brown Rot

Although we have covered these issues many times we will quickly cover a basic strategy for controlling blossom blight/brown rot in stonefruit.

Blossom blight will usually start first in low lying areas or areas where there is poor air movement and will then spread out from there. It is often not seen until near petal fall when it is an advanced stage with gumming and dieback in affected buds and laterals.

Apply propiconazole (Tilt®) as a first spray as it is the only systemic curative in common use. In years like this apply at late budswell to very early flowering. We are well past this with many plums and apricots at the time of writing. If wet weather persists apply Ipridione (Rovral®) or Procymidone (Sumisclex®) as a second spray in mid bloom.

Full bloom to shuck fall is when we usually revert to the protectant sprays such as Bravo®, Captan® and Delan®. Mancozeb® is not a good blossom blight or brown rot spray. This is a good basic program but under high pressure conditions may only just be adequate. It is many years since we had a high pressure year as this is shaping up to being.

As a general rule of thumb 5mls of rain will reduce the protective capacity of a chemical by 1 day. So if a chemical was to give you 10 days protection 20mls of rain will reduce that to six. Bravo® has greater persistence than the other protectants.

Where we have persistent rain you will just have to wait and see what the predicament is. For example, if it rains for 3 days running and you cannot get on to spray a block, then just applying a protectant will be of little value. Infections will occur over a 24hr period. You also need to take into consideration withholding periods, phytotoxic affects of some fungicides on nectarine and plum skins etc as well.

Ipridione has a broader spectrum than Propiconazole so is better on damaged fruit where other rots and moulds can be a problem. We emphasise again the need for rotation of chemicals and chemical groups to avoid resistance.

### **Bacterial Spot**

Bacterial spot re appeared in numbers after the summer rainfall this year. There is no registered control for this disease which can wreak havoc on susceptible varieties. Extensive trial work done by the Queensland DPI showed that low rates of copper applied after each rainfall event reduced the incidence of cankers. These treatments **are not** registered.

There is little doubt that blocks that have significant levels of infection already should be removed as losses of over 50% or more will be seen in wet springs.

### **Catface**

For many people this issue has virtually disappeared off the radar over the past 4 years. Before it did become a non issue it is worthwhile remembering what was supposed to be responsible.

Catface in cherries has long been attributed to low levels of Boron. Boron is generally low

to deficient in most local orchard soils. In fruit samples Rons Seedling always used to show low Boron levels but as we have seen symptoms did not consistently show up every year. Rons have always been the most consistent in showing symptoms.

Apart from the low soil levels of Boron excessive Nitrogen applications, hot dry summers followed by wet winters and excessive use of bore water have been blamed. Most people have significantly reduced nitrogen inputs and we have certainly increased our use of bore water over the last decade. It will be very interesting to see if there is an impact from the wetter conditions we have experienced over winter on the incidence of Catface. Boron is a very mobile nutrient in the soil so it is easily leached.

It will be advisable to apply Boron in the fashion that was recommended from trial work in the late 80's. Three fortnightly applications of Boron should be applied with the first one being applied at petal fall.

### **Earwigs**

Earwig hatchings have been occurring over the past fortnight and as the weather warms these numbers will increase. Treat normally affected areas accordingly or call for advice on appropriate measures.

### **Weeds**

The good soil moisture conditions will drive weed growth for some time to come. Most people have their spring herbicide in place with glyphosate the most common chemical used. Controlling the next generation will be a bigger issue particularly with young trees.

As mentioned at the past two pre season meetings we must rotate chemicals to avoid resistance particularly with ryegrass. The following are some alternatives which you may or may not be aware of:

**Alliance®:** An Amitrole/Paraquat mix. Do not apply to trees under 3 years of age. Apply at 4Litres/ha with good coverage. Wetter should only be needed if using high rates of water. Good to use in rotation and will also kill Willow herb. Compatible with Goal® and Hammer®.

**Basta®:** Use rate is 1-5L/ha with high (300-500L/ha) water volumes. Use in conditions of high humidity. Will perform better with the addition of Ammonium Sulphate if conditions are marginal. Can also be used with Goal® or Hammer®. No wetter required.

**Sprayseed®:** Better used on small weeds to get a good kill rate. Registered rates are between 2.4 – 3.2 L/ha. 90% penetration in 2 minutes. Can get a better result by spraying late in the day and allowing the paraquat to be translocated overnight. Wetters are not required unless using water volumes greater than 100L/ha.

## Queensland Fruit Fly (QFF)

Most people are aware that the two main products for controlling QFF are under review. There are no obvious replacements at this stage particularly with any systemic activity.

A Spanish company has developed a new trap and attractant for Mediterranean fruit fly as well as Queensland fruit fly. The trap, known as the Cera Trap system, is a liquid food attractant based on a specific protein formula. It does not contain any insecticide and is not used in conjunction with any insecticide in the field. The system works by attracting and drowning the flies. It attracts both female and male flies.

An Australian company is importing the attractant and has developed a trap that can be used in Australia. This system will be available this season.

The downside to this is the number of traps that need to be used and the cost. The company has advised that 100 traps/ha

need to be used which virtually amounts to every second tree in any block. Each trap requires 600mls of the solution and this will last for approximately 3 months. Traps will cost approximately \$4.00/each and the attractant is \$55.00/5L before GST. At this trap density the cost is over \$1100/ha. At the moment several applications of Lebaycid will cost less than one third of this. For this reason the fruit industry is very keen to see the retention of Lebaycid. Other possible chemical alternatives are also likely to be very expensive.

If you are interested in trialling some of these traps please contact me. We may find we do not need this density of traps in a lot of blocks.

## Foliar Fertilisers and Nutrition

Early leaves are starting to appear on plums and other stonefruit. As most people are aware blossoming and early growth are fed from what is stored in the bark, buds and roots. When the soil begins to warm and the tree starts producing foliage, roots become active and start picking up moisture and nutrients.

Foliar fertilisers traditionally were used to correct trace element deficiencies such as Zinc and Boron. These two elements are commonly low in much of the soil and tissue testing we do.

Foliar Calcium was commonly used in the season to prevent pitting disorders in apples and to improve fruit firmness and as shelf life in other fruits.

Foliar fertilisers were then used to add nutrients that were low at early fruit development as the tree tried to keep pace with foliage and fruit growth. Most new varieties of stonefruit have been bred to produce large crops of large fruit and this has added to the demand for nutrients.

Programs such as the PentaFlo program were designed to add nutrients in specific amounts when trees need them. It was

based around Calcium, Phosphorous, Magnesium, Zinc and Boron. Magnesium and Manganese deficiency symptoms can often show up early in the season with slight yellowing in the season. Other products containing general mixes of the major and some minor nutrients have also been promoted. These are generally shotgun mixes where trees look to be struggling under heavy crop loads. None of these products are substitutes for good soil health and well balanced soil applied fertiliser programs which includes fertigation.

Now there are more products on offer than you can imagine offering numerous benefits but often with little supporting independent data to back them up. In this category have been the seaweed products, compost teas, worm juice, humates, molasses etc etc. People have been spending large amounts of money and time brewing and/or using these products. No doubt there are some benefits with many of these products but whether they live up to the claims remains to be seen. They are not a complete substitute at all for well placed common fertilisers that supply large quantities of nutrients at relatively low cost. There is a place for both traditional fertilisers and many of the newer products but we need to establish the 'bona fides' of many of the newer products.

Although resources are limited we will start doing some trial work on some of these products this season to see if they make the type of differences that are claimed.

**On this note** the broad acre team with Delta Ag commenced a trial in 2009 to compare traditional and alternative products.

Final yield results showed no significant difference in yield over and above a standard treatment of MAP. This is not to say there are not some benefits from these products such as improved soil health or extra root growth.

Nevertheless when there are significant costs involved with the application of these products most people would like to see a dollar return. This trial is being done again this year.

## **POST GRAFT CARE**

Grafting old trees over to new varieties can give good early production. One issue with these old grafts is that the old stock is easily attacked by borers and wood rot fungi. Wood rot fungi with their orange fruiting bodies are very noticeable in a number of blocks this year. Short of putting a sealant every 12 months on grafted stubs there is not much we can do to protect trees from this sort of infection. Ultimately wood rot fungi will kill the tree although this may take several years.