

Hort Newsletter

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Seasonal Conditions

The soil moisture profile is as good, for this time of the year, as it has been for a long time. May maximum temperatures were about average, while average minimums were down, indicating we may have started to accumulate some good chill hours already.

It is anyone's guess as to what will really happen over the next few months. The Bureau of Meteorology is predicting average rainfall for this area while maximum temperatures are likely to be up and minimum temperatures to be normal.

Plantmate and No Gall.

Thanks to those people who have responded to the recent reminder sent out. Planting will be starting for many people over the coming month so do not forget your No Gall and Plantmate if you wish to get trees off to a good start.

Some 4 year old trees were seen this past summer with significant galling (Crown Gall) at soil level. These trees had apparently been treated with No Gall but I suspect the mixture may have been too old or the infection was in the trees prior to planting. No Gall solutions are really only effective for 24 hrs and should be stirred regularly as dirt will attract the active bacteria and carry it to the bottom of the solution. The tree roots should still be moist from dipping when planting.

Crown Gall symptoms are not always easily seen but you should pay particular attention to inspect each tree before planting. Galls can form on nursery stock or older trees often starting at the crown (where the soil line is and where many of the young feeder roots are attached to the stem). Later they can form on the trunk and side branches as the tree ages.

Galls first appear as small roughened lumps of tissue. They enlarge darken and take on an uneven shape. They can vary in size from 25 to 50 mm on nursery plants to 300mm on older trees in the field. Sometimes the first we are aware of the disease is when older trees can suddenly collapse under hot conditions. In this case the galling has become so severe that it has blocked much of the water conducting tissue in the roots and tree.

The bacterium can live in the soil for many years and multiply quickly when non

treated host material is planted. Plants are usually infected through injury.

Infection can also occur from grafting or budding scars but may also occur through mechanical injury or insect attack. The infecting bacterium injects a tumor forming agent into the plant cells forcing them to divide uncontrollably and form galls.

There is no cure for infected plants hence the need for treatment at planting. Even if the nursery has treated the stock when lifting you still need to treat the trees before planting.

Tree/Vine Sealant

In the past we have sold Emastak as the preferred plant sealant for grafting or large wound sealing. There are some toxic byproducts that can leak from Emastak so we are going to stock a rubberised bitumen sealant as the preferred product. It is a blend of rubber latex and bitumen. It is non toxic, solvent free and water based. It forms a tough, flexible, waterproof and UV stable film that resists moisture penetration, bacterial and fungal growth and disease.

The rubber latex polymer provides good elasticity to withstand seasonal expansion and contraction.

It is ideal for sealing grafting and pruning wounds in trees.

Soil Testing and Fertiliser

It is not too late to do soil tests and not too early to start thinking about this year's fertiliser program. A lot of soil tests have been done since the end of the season. Results are not dramatically different from previous years but a summary with recommendations will be given at a pre season meeting in July.

Generally soil tests are recommended every 3 to 5 years. Some people test far more regularly particularly over the last few years when there has been such a large amount of bore water used. This has changed the soil chemistry around the root zone.

In most cases we are only testing the top 20cm of soil unless there are nutritional problems we suspect at depth. Most of the deeper soil issues should have been resolved prior to planting.

Please call if you wish to get some soil tests done.

Starting New Trees

Apart from the issue of treating trees before planting for disease, several other things must be taken into account. Everyone wants to get trees off to a good start with a metre or two of growth in the first year.

For those who read the American Good Fruit Grower there is a good letter in the June 2010 edition from a nurseryman. The emphasis in the article is on watering trees in from the day of planting. Roots start drying out the moment they are lifted so have to be wet after planting. The term "mudding them in" is used with an obvious meaning. The roots need to be wetted and you need to eliminate air pockets in the planting hole. What this means is that you need to firm the trees in and then saturate the soil around them to prevent roots drying out and dying.

Another issue is matching roots and shoots after planting. The letter advises pruning the trees straight away, which would include heading cuts. If you do this make sure any wounds are sealed to prevent infection.

To get trees into production early we need to maximise growth in the first three years. The key is to avoid uneven or lop sided growth or trees that simply do not get off to a good start.

I still believe that trees that have fertiliser placed under the roots seem to get away better than fertiliser that is place on top of the ground. In the past we have avoided recommending fertiliser applications under the tree for fear of 'burning' tree roots. Provided the fertiliser is mixed through the tree row and into the soil prior to planting you should avoid immediate contact with tree roots and hence no problem.

Waiken and Dormex

For those people who have been using these products it is time to start thinking about them again. Like any growth regulator they are timing specific. Their use is usually based on historical knowledge relating to bud burst or flowering.

Waiken® is registered in vines, cherries and apples as a dormancy breaking product with the principle purpose of advancing flowering and making it more even. With grapes it has also been used to delay flowering.

In grapes Waiken was registered to delay flowering in Pinot Noir to reduce the risk of frost damage. When applied 25-35 days prior to normal budburst it delayed budburst by 10 – 14 days.

In cherries it has been applied approximately 65 days prior to full bloom to advance and compact flowering. This has helped in blocks where pollination has not always overlapped correctly.

Dormex® is registered in grapes, kiwifruit and apples as a dormancy breaker for the

regulation of budburst. It is also being used extensively by cherry growers in marginal chilling areas around the world. Trial work done in Young many years ago resulted in severe bud burning in Supremes hence future interest was limited. However, experimental work in other Australian districts, reduced local chilling hours and the non performance of one or two varieties has renewed interest.

Those people who attended the National Cherry Conference in Young in 2004 heard Joe Grant speak on the work that had been done in California where marginal chilling hours have been an issue for quite some time. Until lower chill varieties are bred and their focus has been on chemistry to try and improve fruit set.

Dormex generally gave the best results among a host of other products that have been used. Applied as a 1 - 4% solution (1L - 4L per 100L of spray solution) to cherries, approximately 30 days before normal budburst it will advance flowering by 10-14 days. Provided suitable weather follows, maturity is usually advanced by 7 – 10 days. The higher rate of 4% is the one most commonly used. It should never be applied within 7 days of an oil application.

There are obviously a number of ways in which Dormex can be used but certainly for a variety such as Kordia it would be tempting to do some trial work. In the May edition of the Tree Fruit Magazine there is an article on Kordia. Kordia is a magnificent variety with a very variable production record. There is little doubt in my mind we simply do not get enough chill to be confident about planting this variety. Some growers have already made the decision to get rid of it while others are planting more (not many). Others are going to persevere to see if extra pollinators will help.

No doubt some people will be tempted to trial some Dormex on Kordia trees to see if they can get a more uniform flowering. There are a few things you need to consider before doing this. If you trial some Kordia trees you must remember to treat the pollinating varieties as well so that they will still flower at approximately the same time. Secondly there is the possibility that buds will be burnt and lost. Different varieties react differently to Dormex. Thirdly Dormex is not a registered treatment in cherries so fruit harvested from treated trees cannot be sold.

Delayed Heading Cuts

In some varieties of cherries and apricots you can see the development of blind wood at the bottom of relatively young trees. It is a characteristic of some varieties that the trees energy goes to the growing tips while buds lower down the tree fail to develop. It is a hormonal response in the tree as it tries to grow tall and reach for more light. One way around this is to delay any heading cut into spring until leaves start to appear on the tips. These leaves produce a hormone that travels back down a branch preventing the lower buds from opening. By removing these buds we prevent the movement of the hormone.

Usually a heading cut will only force the 2 to 3 buds directly below it to emerge. Pinching these back as they grow or doing a second heading cut have been tried to force extra buds to break further down.

This is a technique worth trialing on Black Star particularly on Colt Rootstock where we have experienced problems with blind wood developing over the second and third year of growth.

San Jose Scale

As mentioned in the autumn newsletter there was a buildup in many orchards over the past summer of San Jose Scale. In many instances this has been happening for some years. In these cases it is time to bite the bullet and apply Supracide® @ 125mls/100L in late dormancy. It can be applied with a reduced rate of winter oil @ 2L/100L.

Disclaimer: This newsletter is for the benefit of clients. It is not intended to be a complete analysis of all issues raised in the newsletter. As individual circumstances can vary, further professional advice should always be sought before any course of action is undertaken.