

E-letter # 8 – May/June 2013

Written by Peter Coppin 06/06/13 – can be reprinted as long as the author is acknowledged

1.A Autumn sprays:

We all know how many fungal and bacterial diseases (Leaf curl, Shot hole, Pear scab, Anthracnose, Bacterial canker, etc) can devastate many fruit trees, even the fruit. We also know that organic copper-based sprays (Bordeaux, Kocide, CopperOxyChloride, etc) are the best preventative measure we can take.

Most texts state that the best time for this is at early budswell, but another one at early leaf-fall can make all the difference. This is because it puts a protective fungicide layer on the leaves before they fall to the ground. This will stop 'secondary infection' in the spring, where while you may have got a good early budswell spray on and the first new growth is clean, sometime later growth is disease affected because spores germinate when the soil warms up and float up into the tree. This spray is imperative if you have had bad disease problems in the previous season.

What? All deciduous fruit and nut trees should be sprayed, and even grapes if you have had Downy mildew in the past. Citrus also can benefit as it helps control Anthracnose and soft rots in the skin of the fruit. It also helps reduce Sooty mould, but remember the cause of this is scale insects or aphids, and these should be managed as well.

When? In cooler areas the first or second week of May, through to the last week of May in warmer coastal areas. With citrus, you can apply it with the first rains, and this can often be early April.

It may now be June, but it's never too late, though a lot of the advantages may be lost. So get out and spray as soon as possible, as long as there's no more than 10mm of rain within fifteen hours of application.

1.B Dormancy & Chill Units:

What are chill units?

Most deciduous plant species come from regions where the winters are very cold or even iced, snowed or frozen, and their sensitive foliage can't tolerate that.

Therefore, they have developed a process called seasonal senescence, or winter dormancy, where they shed their leaves and stop sap-flow for the duration of the cold period. So how do they know when to burst back into life in the spring? Well, it's all to do with hormones.

During winter dormancy, deciduous plants may look totally asleep (no sap-flow or feeder root activity, etc). But like a hibernating bear, there's still a lot of internal activity. Amongst other places, behind the buds there is quite a bit of biochemical activity going on. One of these is the production of Gibberellins – the growth regulator/hormone that initiates flower-bud formation and thus flowering therefore fruiting.

So, the colder it is during dormancy, the more Gibberellins are produced, resulting in more flowers and of course, more fruit. Species/varieties originating in regions with long cold winters have a high chilling requirement, otherwise they would burst into life too early and their flowers would be literally frozen off. Conversely, 'low-chill' varieties only need a small amount of winter chill to burst into life in the spring. Remember that chilling (hours below 7.2 degrees) only has the required effect when the trees are dormant, which doesn't happen till every green leaf has fallen.

A further advantage of the autumn copper spray is that it can help knock trees into dormancy earlier. With medium to high chilling requirement varieties, eg, most cherries, this can result in heavier crops. We often get considerable chill hours in May - places like Northam have had 4 degrees and less this week (thanks to Sue H for that info ☺); and then night-time minimums tend to rise in June and July when the winter weather patterns set in. Another trick is to hand strip green leaves off that remain after the autumn copper spray, thus forcing the trees into dormancy.

You can also do this with un-neutralised copper and zinc sprays, but you really have to know what you're doing as these can cause a lot of unwanted burning – contact me if you are interested in trying this.

2. Winter sprays:

Mid-dormancy is the right time to apply oil sprays to most deciduous trees. This can be mid-late June for early varieties and early August for late-flowering trees such as apples, cherries and pears. Early-mid July is the best time on average.

This leaves a thin film of oil over all surfaces, which helps smother young mites and scales as they emerge from their eggs in late winter and early spring. In fact, it's critical for serious species such as Two-spotted mite and San Jose scale, as these can have devastating consequences and are also extremely hard to control during the growing season without using quite strong chemicals. Use products like Pest Oil® (petroleum-based) or Eco-Oil® (vegetable oil).

Even though it's not stated on product labels, you can also include another copper-based product such as Kocide in with the oil spray. If you've been having persistent problems with diseases such as Leaf curl, Shot hole, Bacterial canker, etc, this extra mid-winter copper application can be a very effective addition to the usual leaf-fall and bud-swell sprays.

It's nearly time to apply sulphur-based sprays on grapes. If you had a bad year last season with Powdery mildew consider using Lime sulphur, as its oil base allows the spray to penetrate behind buds and loose bark much more effectively than wettable sulphur sprays. Apply it as close to bud-burst as possible for maximum results, but you can't apply it to green buds or new leaves because it can cause serious burning to green tissue. Knowing the right date is difficult unless you keep a diary (which I always suggest).

You may hear Lime sulphur being recommended as a fungicide spray on stonefruits and pomefruits. Yes, it can be much more effective than copper, but it also is a miticide and kills off predator mites, resulting in a worse problem with Two-spotted mites in summer.

Over the last couple of seasons, many people either experienced Downy mildew in grapes for the first time or had noticeably worse problems than in previous seasons. This was due to the very wet spring together with mild-warm temperatures – conditions that this disease thrives in. While I don't normally suggest you do much, if you had problems last season it would pay to treat for it this year.

Unfortunately, sulphur sprays aren't effective so you need to use copper sprays instead that need to be applied before flowering. If you have powdery mildew as well, you will have to do both copper and sulphur sprays, but not within ten days of each other.

HINT: When mixing powder products like copper, premix the measured amount into a slurry with a small quantity of tepid or lukewarm water first as this will improve how the powder dissolves. Then mix this into the cold water in your sprayer.

3. Buying and planting trees & vines:

Mid-dormancy is also the best time to plant deciduous trees and vines. Also, much of the new season's planting stock is now coming onto the market. So even if you're not ready to plant just now you will get the best selection from nurseries and garden centres.

I prefer container grown plants, with one advantage being you can hold them for many weeks before planting. However, don't let the pots dry out completely.

Bare-rooted plants are 'old technology', and you have a limited timeframe between purchase and having to plant them out. To store them before planting, cover their roots with just straight sand and keep them moist, ideally in a cool, shaded part of the property.