

Future Orchard 2012 – Goulburn Valley Orchard Walk November 2006

Notes prepared by Ross Wall, fruitscope@mcmedia.com.au , 0408 727 463

HENRY SCHNEIDER, DPI

Water use per ha to date is about 1 to 1.5ML . Crop will require 5ML/ha to see out the season. Allocation of 23% could already be gone. Need to remove uneconomic trees, or abandon part of the orchard or minimally maintain trees. GMW is saving water to extend the season beyond 1st April, to 1st May currently, so unlikely to be any further allocation unless circumstances change dramatically.

We are now two weeks into RDI for pears or peaches, from 1st November shoots start bolting away. Instead of 50cm and no terminal shoot, need 20cm and a terminal shoot. Trees will forage for water. Don't need extra growth, need to save the water for the last 6 weeks to grow the fruit. A few growers, of the 30 in attendance, responded that they are using RDI.

For apples don't have a kink where they don't grow, any deficit of irrigation and they will be smaller. Need to thin hard. Pull back to half a crop. Start this afternoon to thin. The deficit of water comes from the fruit if it gets too dry. Keep fruit that is sheltered and take out likely sunburn fruit.

(If thin past mid November, once past 35-40mm, will sunburn at a much lower temperature, says John Wilton.)

For young trees add mulch and keep irrigating. Pull fruit off young trees, don't let them stunt. For trees cropping on dwarf rootstock, just water the root zone, not the weeds around them. Remove weeds. May also need a higher frequency of water application due to the smaller root zone.

Thin stone fruit and give early crop to mid January as much water as possible. Too late for apricot thinning. Cannot fix with nitrogen, apples and pears are bolting at present.

Need 1 to 2 irrigations after harvest or won't get dormancy break. Recovery becomes the major issue, need flowering and fruit set next spring, not in the autumn/winter.

JOHN WILTON, AgFirst

(See reference notes also)

Tree architecture, training and tree support (pp2/3, 10)

- Must visualize tree form aiming for. Vigorous rootstock trees in tight places, say 4m by 2m on strong soils. Pendant branches easy to look after and turn vigour into fruit.
- Moving to dwarf rootstocks M9 and M26. Stack tree with small branches to get transient light, rather than permanent light that causes sunburn.
- Renewal pruning includes moderate and severe renewal, taking out 4 year old wood or moderate renewal taking out 3 year old wood and younger.
- Long pruning involves removal of old poorly located fruiting branches and lateral branches and renewal of old fruiting branches with selected cuts.

Start branches high to avoid weeds and won't thin. Manipulating branches to fill tree space. Allowing gap between each tree to allow in light. For central leader eventually older branches produce too many water shoots. Once limb exceeds 3cm in 1m length, time to take it out. Keep productive wood close to the centre of the tree, don't take up space of the next tree.

Aim for fruiting branches is to achieve 1) simple units 2) the same from top to bottom 3) have simple mathematics 4) ability for simple supervision 5) consistent light leads to consistent quality.

Crop loading (pp4/5/6/7)

Use of trunk cross sectional area to assess crop load for young trees. Use surface area with older trees as this can be more accurate. When filling the canopy need to capture 60% of the mid season light to maximize yield.

Planting preparation (pp8/9)

Preplant soil fumigation kills fungi but if phytophthora present it will recur quickly as it comes back in the water. Need good drainage or a rootstock more tolerant to phytophthora.

Water Use (pp11/12)

Today trees will use 5 litres, by summer that will be 10 litres per day. In young trees drip very efficient. Available water for tree growth.

Fertilisers (p13)

Need 2 grms nitrogen per week to get young trees moving. Monthly side dressing an option, but fertigation preferable. Aim for a young orchard is primarily to grow the canopy quickly.

Magnesium, potassium and certain trace elements are needed where deficiencies are known to exist. Potassium nitrate and magnesium sulphate options. Apply trace elements as foliar applications, as an alternative to fertigation. Consider monthly side dressings of 20 to 25kg N/ha per application.

Young orchards need regular fertilizer applications. Fertigation is the most effective. Side dressing programs make the trees grow well. Nitrogen is the main fertiliser requirement at 100kgN/ha or about 50grms N per tree.

FIELD WALK (John Pottenger orchard)

Cripps Pink 1.42ha, 1,500 trees, planted 2001 and Gala 3.6ha, 4,000 trees planted 2003.

Thinning is always a priority, 10 grms weight loss for each week delay after bloom. These trees had cultar applied. John W. says Regalis in Nz, applied early on new shoot growth about 2.5 to 5cm to maximize effect, made a huge difference but cost is about \$700/ha.

Need a plan to take out big branches. So 3 to 4cm to go and keep 1 to 2cm. Will reduce water shoots. Limbs become stronger as thicken to throw water shoots. Shortening cuts stimulate vigour. On M106 rootstock.

Nursery trees to be planted without branches preferably below elbow height says John W. Can't buy nursery trees in Australia that are even that height to start with was a grower reply.

Long term likely will prune in the winter to bud numbers, like grapevines. By pruning out crop at winter pruning saves thinning.

Counted fruit numbers at 10 per branch. Tree range will be 80 to 140 per tree. Set the crop load and then 4 to 6 weeks out from market may use a growth regulator, eg Retain, to get another 10 days sizing. Will pick up 1% per day so 10 days is equivalent to next size. But crop load must be set at a level where they will continue to size.

For maintaining height let them run past their height and the crop will bring them back. Where too much height run another leader alongside the main one, then cut out the main leader and will slow down the tree with the secondary leader.

High quality water and plenty of it to control sunburn. But catastrophe if water stops.

ROSS WILSON – 5th September 2006

Early and high yields needed for sustainable profit. 50 to 55t/ha, aim for 60t/ha marketable yield early and late varieties. Need an 85% packout. Need ease of management, simple systems. Organic successful in NZ. NZ Jazz, 80% on M9. Red Gala also. 1,800 to 3,000 trees /ha.

Look at \$10,000/ha 10 years out. Discussed varieties Granny Smith, Rosy Glow, good red Gala, maybe Sundowner. Asian market love sweet apples, high brix Fuji, but high colour is a problem. Beware of russet and sunburn. Pacific Queen in NZ is russet prone.

Rootstock for Rosy Glow - need virus free dwarf rootstocks, but M9 and M26 still going through the virus testing process before release by APFIP soon.

Low Internal Rate of Return can take 10 years to get money back. But Paul James and Predo Jotic have IRR of 25% for Cripps Pink, Cripps Red 55 to 10%. On dwarfing stocks can achieve \$140,000/ha after 11 years compared with \$24,000/ha for 667 trees per ha.

Above notes in conjunction with other recorded notes at the session. Field day site was Gala, 3.3ha and 7,260 trees planted 2004.