

Future Orchards 2012, Orchard Walk 5 Wednesday the 6th of June, Batlow.

The orchard walk started at the Batlow RSL club at 12:30pm, the practical tour started about 3pm, after a cuppa.

Seven springs – Gala on M26 (2m x 4m) 1250 trees/ha



- Pendant, simple fruiting units are more fruitful than “hairy” branches with lots of 1 year old growth
- Good cropping is all about harvesting light. In this orchard where trees are 2m apart, there is a lot of space between trees. Big holes limit production. Pruners have taken too much wood out, especially in the bottom tier, in an effort to get heavy branches out of the trees.
- It is important to keep wood light in the tops of the trees, but heavier branches can be effective in the bottom tier to capture light, as they will not be shading anything.
- Tree height: In this block row width is 4m. Ideally tree height should equal row width, or be within 0.5m of row width. Here trees are 3.5m, which is good.
- Tree height vs. OH&S issues- one of the participants said that they can't get pickers to go higher than 2m. If this is the case and you truly need a pedestrian orchard, then you must have close rows to match tree height. Eg: 3m rows for 2.5m to 3m high trees. In Batlow with sloping land, this may not be possible
- A pedestrian orchard with lots of short trees will probably only ever achieve 30 T/ha if it has wide rows.
- This orchard has been set up well in past years

Pruning demo tips:

- Ross prefers to start at the top and work down
- Always make the biggest cuts first
- Try to get a whorl of fruiting units (branches) all the way down the trunk
- Tops: look for a piece of fruited up wood that has some elevation to become the new head if you need to control height
- Take upright 1 year old wood out of the tops; leave 2 year old wood in.
- When considering whether or not to remove a branch, consider the target bud number, you can take it out next season if you are likely to run short this year
- Pruning is a chance to do some early thinning, encourage buds by detail pruning
- (RG) for a 60T/ha gala crop you would need 390 - 400 fruit buds per tree (Ross counted the pruned tree- there were 500 buds left)
- When single lining branches, take any shoots off at the base (flush cut), if stubs are used, there are more buds left to regrow. Flush cuts have a weaker re-growth response.
- Maybe consider leaving small stubs “toilet seat cuts” might be OK on M9 if you need some regrowth.
- Not every branch can be single lined in a wide spaced tree; you need a bit more wood to get enough buds to set a good crop.
- Prioritise big cuts for this year and the next two
- Give the chainsaw to the most experienced pruner
- Take out tired spur structures to encourage new ones and simplify thinning

How to set bud & crop targets

Say the target marketable yield is 60T/ha of 100 count (180gram) fruit.

Target yield (Kg) ÷ No of trees per ha = Kilogram fruit per tree at harvest

$$60\ 000 \div 1250 = 48$$

To get 100 count size (old 18kg bushel counts)

Fruit weight per tree ÷ target weight per piece = number fruit needed

$$48\text{kg fruit} \div 180\text{g} = 266 \text{ pieces of fruit}$$

$$(48 \text{ kg} \div 0.18\text{kg} = 266.666)$$

Allow an extra 10% loss between hand thinning and harvest = 293 pieces.

Calculate the “bud factor”.

(In Batlow we allow 1.3 to 1.5 buds for each piece of fruit for Gala, 2-2.5buds/fruit for Fuji and 2.5-3buds for Braeburn)

So for Gala: 293 pieces x 1.3 = approximately **381** buds per tree

Leave some extras on to allow for culls, but don't add too many! Otherwise size will suffer.

Farm visit 2- Batlow Fruit Co-op “Van” block

Royal Gala on M9 (3m x 3.5m), 3.5m tall

- Normally this block yields around 38 T/ha. This season picked 26T after frost & hail



- This year fruit were late thinned (summer) to improve fruit size
 - Target is 13- 140 pieces of fruit/tree
 - Aiming for no permanent branches
 - Ron wants to target 50 T/ha at a 90 count (200g) average
 - Ron suspects they could do up to 55T, they had to take a lot of old wood out in the last 2 years, and trees are starting to settle again
 - (Ross) It's really important to promote new wood at the trunk
 - Ron's not pedantic about single lining the bottom tier- it's not shading anything
 - Also trying to spur prune (shorten them) to take out weak buds
 - Ross- you really want to have calm units
- Trees did not have any Regalis® this year

Cripps Pink on M9

- There's no need for permanent branches at this spacing
- On fully leafed trees, if you can see in three rows, then there are enough gaps for light
- Sawtooth pattern in the tops is good
- Most of the pendant wood has occurred naturally here under fruit weight, but some string has been used to train some branches at the top
- (RG) We thin more branches out in CP because the leaves are so large, it lets more light in to colour fruit
- Some branches have been shortened to try and stiffen them up a bit

Braeburn on heat treated Northern Spy (2m x 4.5m) 1111 trees/ha

- This block had never really cropped for the previous owners, so Ron took it on as a challenge.
- Vigour is a huge issue, trees have been girdled before
- This season they had 3 Regalis sprays. This has really slowed them down
- All big branches were taken out last year
- This season there was no crop in the bottoms (frost), 39T/ha was picked
- Next season we are targeting 55T/ha
- Will leave pruning until blossom “when you can see the white of their eyes”
- (Ross) They look good, there’s only one issue. The trees are 3.5m tall but the ladder is only 2.4m
- Braeburn is not a popular apple in the marker. Only smaller sizes (110 count, 163g fruit) sells
- Maybe these trees have not reached their optimum tree row volume yet since the heavy pruning
- Looking for 15% increase to drive block profit
- We really need big bottom tiers in a wide spaced block to capture the light (and another 0.5m on top)
- Braeburn need 2.5 – 3 buds per fruit, very biennial variety so we need lots of resting bud for the following year’s crop
- Targeting 60T a year
- This block will look hairier than Gala when the bud counts are right

Fuji on Virus tested Northern Spy (also wide spaced)

- This block is chronically biennial
- Last season had 2 Regalis
- Drought affected growth
- Very little pruning to be done this year (at blossom)
- We need to chemically thin heavily for return bloom. For 400 fruit, we need 800-1000 buds on Fuji (2 to 2.5 buds per fruit)
- Last crop was 44T/ha
- Next year we expect ½ to ¾ crop depending on how the buds turn out
- There are not enough branches in this block, which limits tonnage