

Pruning of peach and nectarine trees

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For all deciduous fruit trees, in actual fact all fruit trees, light management is critical. It is important to remember the saying, we don't farm fruit, and we farm light to produce fruit.

The principle of peach and nectarine pruning is that peaches and nectarines crop on one year old wood and one needs to achieve good quality bearing units (one year old shoots) as near to the structural limb as possible:

- No matter what training system one is using, one must identify the structural limb and keep this on a single plane, that is, remove all forks off the structural limbs, be it a central leader tree, a two leader tree or a four leader vase tree. Identify the structural limb and prune leaving one year old knitting needle thick and slightly thicker one year old wood as near to the structural limb as possible.
- Remove all forks off the structural limb, that is, side branches thicker than 1/3rd the thickness of the structural limb, leaving a 2cm "tappie".
- Remove all two year old and older wood by cutting back to a one year old shoot, knitting needle thickness and thicker. Ideally 30cm-80cm in length. The nearer these one year old shoots that one is cutting back to is to the structural limb, the better, so the aim must be to have as little two year old and older wood besides the structural wood in the tree.

- If one concentrates on removing the forks, one normally sorts out most of the light problems.
- Remove matchstick thickness and thinner one year old shoots. These thin little bearers just do not have enough reserves and leaves to produce good quality fruit.
- Do not cut back into one year old wood, especially in winter as these cuts normally create dieback.
- Upright, up to 80cm in length one year old shoots are fine as they will bear fruit and then with the weight of the fruit, the shoots will bend down and no longer be vertical.

The best way of checking if one is doing enough pruning or too much pruning, is to calculate the number of fruit a tree can produce per centimetre trunk circumference. Some of the early varieties, one cannot load more than 6 fruit per centimetre trunk circumference but for some of the later highly precocious varieties, one can go up to 14 fruit per centimetre trunk circumference.

It is good to find out from your Technical Advisor what would be the ideal crop load that these trees could carry given the variety, tree density, training system and tree age. One counts all one year old shoots longer than 20cm in length as a bearing unit and works on an average of 1.5 fruit per bearing unit. So for example, if one has a variety that can produce 6 fruit per centimetre trunk circumference given the training system age etc., and the trunk circumference is 30cm then this tree is capable of producing 180 fruit of a desired size per tree. In order to get 180 fruit one needs 120 bearers per tree (1.5 fruit per bearer).

The author likes pruning peaches in early autumn so that the remaining wood can be exposed to direct sunlight and mature properly before going into winter rest. **See picture below** of good quality one year old bearing wood that one is aiming to leave on the tree to carry the next year's crop.



Disinfection of pruning equipment after pruning of each tree is important, one does not want to spread bacterial or other diseases with the pruning shear. You should disinfect with a recommended disinfectant strictly adhering to the label instructions.

With stone fruit, the author prefers to paint pruning wounds bigger than a R5 coin, with a suitable tree sealer. The author does not believe it is necessary to paint apple and pear wounds but likes to do this with stone fruit.

Never prune on a rainy day as one can spread disease very easily in rainy conditions.

The author has no problems with putting pruning cuttings on the “bankie”, either by chipping them with a pruning cutter/slasher that then places chips on the “bankie” or placing them neatly on the “bankie” by hand. The bigger branches can be cut up fine to put on the “bankie”. It is a good way of building up the organic material on the “bankie”.

Post-harvest and autumn chores

A number of production inputs need to be attended to in the post-harvest/Autumn period. It is good to go through the check list to make sure that they are all actioned:

- Drainage: Make sure all drains are open, unblocked and ready for the winter rains
- Support Trellis: Repair and wires tightened etc.
- Weed Control: Attended to, especially perennial weeds; perennial grasses such as Kikuyu, Fynkweek etc., these are easy to control in autumn with a good systemic herbicide when the sap flows to the roots.
- Study Cull Analysis Results to determine what the pest and disease problems were in the previous season and start defining a strategy for the coming season. Many pest and diseases are controllable in autumn or winter.
- Make sure that all trees are tied firmly to the support trellis, you do not want trees rocking in the ground.
- Analyse yields of the previous season and determine which factors contributed to lower than expected yields and how many of those factors can be addressed, and attended to, during the coming autumn, winter and spring.
 - For example; cross pollination: Was there adequate cross pollination and did you have the right pollinizers? For plums this is critical. As discussed previously, two pollinizers are better than one. You can determine whether it is necessary to graft in additional cross pollinators in July/August and start making plans to action.
- Nematode Samples: Take Nematode samples and submit for analysis, to determine if this is one of the limiting factors in the orchards. General indicators may include high soil K% and low leaf K%, poor growth and fruit size decline.
- Obtain a post-harvest fertilizer and foliar nutritional spray programme from your plant nutrition consultant

Pest and Disease Control

Stone Fruit Pests and Diseases:

- **Bacterial Canker, Bacterial Spot/Xanthomonas & Gumspot – All Stone Fruit.** For a standard maintenance programme (no exceptional problems have been experienced this past season) on all stone fruit trees, a **single application of Copper Oxychloride @ 350g/hl**, needs to be applied **@ 75% leaf drop**. If problems have been experienced this past season, **2 sprays of Copper Oxychloride @ 350g/hl** could be applied, with the **first at 50% leaf drop and repeated at 80% leaf drop**.
- **In Xanthomonas problem situations**, a comprehensive Bordeaux programme (Copper sulphate and spray lime mix) could be considered. A series of “**homemade Bordeaux**” sprays, should be applied as follows: i) 25-50% leaf drop; ii) 90-100% leaf drop; iii) Middle winter; iv) first signs of bud swell in spring; v) 7-10 days later. This homemade “Farmer Bordeaux” can be produced, by mixing and applying 600g/hl of copper sulphate plus 800g/hl of spray lime. This spray mix is feasible BUT nozzle blockages will happen, which will delay the spraying time considerably.
- **Leaf Curl – Peaches and Nectarines.** A **single application of Copper Oxychloride @ 350g/hl**, needs to be applied **@ 75% leaf drop**.
- **Scales and Mealy bug – All Stone Fruit.** A **minimum of 2 high volume** sprays per season @ 100% TRV must be applied 4-6 weeks apart, comprising **100ml/hl Lirifos plus 500ml/hl mineral oil (MCW EOS oil)**. The first spray should be applied before pruning and followed up after pruning. The second spray should be added to the rest breaking spray if applied, otherwise can be mixed with the early bud swell copper application. Dormant applications of Chlorpyrifos will cause no detectable residue being found on fruit in the new season.
- **Chlorpyrifos as an active ingredient is to be phased out as follows:**
 - The use of chlorpyrifos containing products may not be applied after 31 December 2023.
- **In problem scale situations, 3 winter sprays** should be applied **4 weeks apart**, ensuring a thorough coverage and wetting of the tree structure. The second of these sprays should be applied at 70% TRV, DRIVING UP and DOWN THE SAME ROW, for a total wetting. On early flowering cultivars, the first spray will need to be applied with the ¾ leaf drop copper spray, to enable the 3 sprays to be applied with 4-week intervals.
- **Mealy bug Situations – All Stone Fruit.** **50ml/hl Tokuthion** as a high-volume application, ensuring a thorough wetting of the tree structure must be applied BEFORE any sign of bud swell.
- **Fruit Fly Baiting – All Stone Fruit.** Continue baiting weekly throughout the entire farm if 1 fly or more are caught per week on the farm. Once zero flies are caught for 2 consecutive weeks on the farm, then baiting can be dropped to once every 14 days.

- Throughout the winter, a minimum of once per month fruit fly baiting, of the evergreen vegetation like wind breaks and home gardens with citrus and subtropical trees, must be undertaken in terms of the Phytclean export certification.

Conclusion

In conclusion, post-harvest/autumn is the time that one starts planning for the new season and try to rectify the short comings of this past season. A well planned strategy for this coming season is invaluable and this should be undertaken in the post-harvest/Autumn period.

TIMELY HINTS CONTRIBUTORS

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