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Summer Pruning

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With the general emphasis on better color, many growers will be viewing summer pruning as an effective method for maintaining good light levels within the canopy.

Carefully managed summer pruning has a place but, generally, my view gained from experience over the years is that summer pruning can be a very destructive practice. In many respects, I view the need for significant summer pruning an admission of failure in tree management. Exceptions to this rule are some of the trellised systems which definitely require summer pruning to make the trees fit their somewhat unnatural growth parameters.

WATER SHOOT REMOVAL DESIRABLE

Water shoot rubbing, particularly in the lower branches, is a good way of maintaining high light levels into lower tree fruiting zones.

Water shoots and suckers coming from where heavy pruning cuts were made to remove heavier side shoots on structural branches create a lot of shade if left to grow. Furthermore, if left, they become very strong and are difficult to prune out. This type of shoot is best plucked out before it hardens up and cutting with secateurs is required. By plucking (stripping or tearing) out these shoots, adventitious buds at their base are removed, making regrowth less likely. Once you have to cut them out, the basal buds remain and regrowth is certain.

The timing for this operation is usually during the period between flowering and the commencement of hand thinning. It is better done as a separate task from thinning for the following reasons:

1. By thinning time, water shoots have already hardened, so it is too late.
2. Shading has already begun to have detrimental effects on spur leaves and fruit development.
3. Workers are focused on a single task.
4. Once water shoots are removed, fruit clusters are easier to see so fruit thinning can proceed more efficiently.

TIPPING FLEXIBLE LEADERS AND 1-YEAR LATERALS

With Fuji and Braeburn in particular, allowing fruit to be carried close to the terminals of long, flexible laterals leads to future tree management problems due to fruit weight dragging the leader over, or bringing laterals and branches into pendant positions.

Usually the fruit being carried on this type of 1-year wood is of poor quality and very subject to sunburn injury. Tipping the ends of these shoots back by 10 to 15 cm (4 to 6 inches) during the

month after bloom removes the heavy fruit set toward their tips and is enough to stiffen the lateral. Timing is quite critical because developing fruitlets size rapidly and quickly drag the lateral or leader too far over. It is critical to do the tipping before the fruit weight pulls the shoot too far over.

Tipping at this time will also stimulate some bourse shoot development farther back on the lateral but, because fruit is present, avoids excessively vigorous shoot growth which can arise from dormant pruning. This bourse shoot development helps fruit size and can provide some leaf cover to prevent sunburn.

With the talk of a strong El Niño weather pattern we can expect more wind and sunburn damage, so management practices which stiffen flexible branches and stimulate leaf cover for sunburn protection may pay good dividends.

SPEED THINNING

Weaker growing Royal Gala varieties often have heavy fruit set on weaker 1-year-old laterals. This lateral bud set fruit does not usually size well and is difficult to remove with chemical thinners. In trees which have substantial amounts of this weak wood fruiting, a bit of secateur work to eliminate this poor fruit will speed up the thinning job.

Shortening horizontal or pendant branches with Gala assists fruit sizing by stimulating better bourse shoot development. It also reduces wind rub and sunburn.

LATE SUMMER PRUNING

Where late summer pruning is required, I believe overall tree management has failed. The canopy is far too dense and often the fruit bearing wood is weak and shaded. Indiscriminate summer pruning at this stage is often detrimental to future tree performance. The big danger with this late summer pruning is that new wood required as future fruiting wood is lost, leaving little opportunity to tackle the fundamental fruit quality problem which is caused by cropping on old shaded spurs.

Where fruiting wood is poor and shaded, the smart way to overcome the low color and fruit size problem is to lay down new fruiting wood in better locations with good light exposure. Now, if the new laterals required for this have been cut off as part of the summer pruning program, it is not possible to exit the low quality fruit treadmill the orchard is on. I have seen a lot of this problem in Chile, particularly with non-spur-type Red Delicious. It also happens here at times with Royal Gala.

In addition to losing the new replacement laterals for future fruiting wood, leaf required to support the current season crop is also lost with heavy late summer pruning. So while color can be helped with summer pruning at this time, poorer fruit size can be one of the results. Also if the summer pruning is particularly heavy, sudden exposure to direct sunlight can result in sunburn.

Where summer pruning has to be done late it must be well supervised, using well-trained people who understand the need to retain nonfruiting wood for future fruiting sites.

In situations where late season summer pruning is required, other tree management options need to be considered in the future. These could involve reducing tree vigor by root pruning or girdling treatments and improving within-tree light penetration through complete limb removal during the dormant season. Excessively large branches in the upper tree tend to shade the lower canopy so their complete removal and replacement by lighter, less vegetative branches overcome the shading problem.

In the extreme situation where branches reach right through the middle of the adjacent tree, removal of alternate trees may well be the best long-term answer.