

October 2017

Season Update

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Season Update is facilitated by HIA in partnership with Citrus Australia, is funded by the national citrus research and development (R&D) levy. The Australian Government provides matched funding for all HIA R&D activities. Season Update provides a monthly summary on the major citrus growing regions.

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Western Australia

Seasonal outlook

Overall, October to December the chances of a wetter or drier average three months are roughly equal. During October and into November, north of Perth there is less chance of exceeding average rainfall. For these months, in far northern WA and south of Perth there are equal chances of being wetter or drier.

In October far northern WA daytime temperatures are likely to be warmer than average. South of Perth less chance of daytime temperatures being warmer. Chances of cooler or warmer nights are roughly equal for October to December.

Evaporation and irrigation

Average daily evaporation rates for the coming month of October are: Harvey 4.4 mm, Gingin 5.2 mm, Carnarvon 8.2 mm and Kimberley Research Station 9.9. A large citrus tree (14 metre square canopy area) will use an average of 43 litres of water each day during October in Harvey and 80 litres in Carnarvon.

Phenology

In October harvesting continues of the late mandarin varieties, Afourer and Mystique, and navel varieties, Lane late and Chislett.



Most varieties will reach full bloom in October. Petal fall is also likely to have started/and or finished before the end of the month. **Record the timing of petal fall** as it is an important stage for wind and thrips blemish. The key management goal for this stage is to **ensure the trees are well supplied with all required nutrients leading into fruit set.**

Now is a good time to **tag the spring flush** to ensure you collect the correct leaves for nutrient analysis in February/March.

Management

Nutrition: After harvest consider foliar applications of urea and micro nutrients to promote flowering for the coming season, particularly if you suspect a light flowering year. Further foliar micronutrient sprays applied to the new spring flush when it emerges will also boost tree nutrition and help improve fruit set and fruit size. Apply the spring micronutrient spray when leaves of the new spring flush are at least 1.5 cm long – large enough to adsorb a good proportion of the applied nutrients.

Aim to **apply 40 to 50% of annual nitrogen requirements in the pre-bloom to flowering period (August to October)**. Nitrate forms of nitrogen such as calcium nitrate and potassium nitrate are the best forms to use during this stage as they are quickly and easily taken up by the roots. Ammonium and urea forms of nitrogen can be too slow to convert to nitrate in the soil and can therefore be lost before they are taken up by the roots. Apply nitrogen in split applications to avoid loss to leaching.

Phosphorus is also important at this time and should be applied just before and during the bloom period. **Apply the bulk of phosphorus now** and the remainder at monthly intervals. **Apply 30 to 40% of annual potassium during the pre-bloom period.**

Irrigation: Your trees need adequate water in their root zone to take up nutrients. Monitor irrigation requirements very closely. Although your soil may appear moist, if you have a dig around, you may be surprised that the soil is not as wet as you think. Small amounts of rain (5 mm or less) should not be factored into your irrigation schedule.

Pruning: Pruning after harvest encourages new growth that will bear bigger fruit. Good canopy management will also allow for more efficient application of foliar nutrient and GA sprays and assists in reducing crop load in an “on” year. Pruning will also significantly help a tree to cope with water restrictions and depending upon pruning severity, save water. Note, pruning late navel varieties from flowering to fruit set has been known to result in excessive fruit drop.

Crop Regulation: Looking forward, in addition to pruning, **chemical thinning in mid-November can be used to thin a heavy crop** in an “on” year. This will assist in maintaining good fruit size.

Mulch and compost: Now is a good time to consider applications of compost and mulch as part of your nutrition, irrigation and pest management strategies. Compost has been shown to be highly effective in the control of Kelly’s citrus thrips and its water conservation properties have been shown to increase fruit size and yields.

Pests & diseases

Citrus gall wasp: Monitor for galls and wasp emergence. Act quickly to manage.

<https://agric.wa.gov.au/n/3398>

Weeds: Maintain a good weed control program to reduce the incidence of Fullers Rose Weevil (problem in export markets) and to help control snail populations

Snails: Baby snails are on the move so now is a good time to **apply copper sprays to control snail populations**. Apply the spray early in the morning on a predicted fine day for best effect. Affected snails will dehydrate in the warm sun before they have a chance to recover from the spray.

Fruit fly: Continue monitoring and bait spray programs for fruit fly until after harvest.

<https://agric.wa.gov.au/n/1608>

Red scale: If red scale is a problem consider the release of *Aphytis melinus* as a biological control. Plan for the release of *Aphytis* now and order early for the first release in October/November. Keep an eye out for scale crawlers (the juveniles) and apply oil sprays only when crawlers are active.

Thrips: Monitor for thrips. <https://agric.wa.gov.au/n/1122>

Queensland

Climatic conditions

Extremely dry conditions have prevailed through all of Queensland during September with many centres experiencing their driest September on record. In conjunction with this, average maximum temperatures have been approximately 3 degrees above average. During the last week of September many centres experienced their hottest September day on record. Minimum temperatures are consistent with long term averages.

Location	Monthly Rainfall mm	Historical Avg Rainfall	AvgMax Temp °c	Historical Avg Max Temp	Avg Min Temp °c	Historical Avg Min Temp
Gayndah Airport	0.2	33.9	30.4	27.7	11.6	11.5
Mundubbera Post Office	3.4	31.0	N/A	N/A	N/A	N/A
Emerald Airport	0.0	29.5	31.9	28.9	13.5	13.5
Gin Gin Post Office	0.0	32.6	N/A	N/A	N/A	N/A

Phenology

Flowering is generally completed in most of the early season varieties with the late season varieties continuing for a week or so. The flowering has been somewhat drawn out which is consistent with the temperatures received during August and September.

The flowering in Imperial mandarins was expected to be quite strong, however it does look as though it is somewhat patchy, particularly those blocks on Cleo rootstock. The flowering on all other varieties look strong at this stage, although some of the Murcott blocks that were harvested late are still yet to flower.

The warm conditions experienced during winter has produced some extremely advanced fruit in some of the mandarin blocks around the district, as shown in the photo below



Management

The first fungicide sprays for the season will generally have been applied by now, particularly in early season varieties where there is now close to 100% petal fall.

Nutritional sprays such as Zinc, Manganese and Boron will generally have been applied prior to fruit set, however some of the zinc applications may be applied with the first fungicide.

Pruning is still underway in a number of orchards.

Pests and diseases

Broad mite has shown up in several lemon blocks already in a pre-cursor to the coming season. This pest seems to prefer varieties with a rind of rougher texture which includes lemons, grapefruit, freemonts and murcotts.

Thrips are again causing problems in lemon blocks. Most lemon blocks now have fruitlets in the susceptible size range so expect to see pressure from thrips for the next 4 – 6 weeks.

As stated above, the fungicide programs for the control of black spot and alternaria brown spot have now commenced. Although the pressure from black spot was much reduced this season compared to the previous one, the potential impact from this disease should not be underestimated and accordingly a thorough fungicide program should be implemented. Remember that 70% of mancozeb residue has disappeared in the first 14 days after application.

At the time of writing there has been widespread rainfall across the growing districts. This has been more than sufficient to provide infection for both diseases, further emphasising the need for the fungicide program.

Riverland, Murray Valley and Riverina

Climate

Mean daily minimum were near average and maximum temperatures were about 1 to 2° above average for September. Below average rainfall occurred throughout the southern regions. Soil moisture should be carefully monitored, irrigation needs would be higher than usual this spring due to the dry weather.

Phenology

The trees are at mid bloom for Sunraysia and Riverland and Riverina is about two weeks behind. Bloom is about average based on longterm data, but slightly later than in past several seasons.

Management

Flowering & Crop regulation: Flower observations throughout the Southern Australian regions indicate a lower level of flowering to last year. Trees that had very heavy crop loads this season have a lighter than average flowering and trees with medium crop load have a good level of flowering. Blocks in the Riverina that were significantly affected by frost have a light and mixed flowering. These trees will probably set a below average crop load. The main fruit drop will occur during late October and the initial stages of fruit set will be known by mid-November. Growers should assess their crop load in mid-November and adjust crop nutrition accordingly; a light crop loads will require less nutrition (see below).

Nutrition: Soil temperatures are sufficient for root activity. Adequate levels of nitrogen should now be present in the rootzone. There is a significant amount of flush on trees and a subsequent demand for Zinc (Zn) and Manganese (Mn) and Iron (Fe). Apply micronutrient foliar sprays. The best availability of iron in alkaline soils is in the EDDHA chelated form. A moderate level of potassium and phosphorous is required for growing fruit. Soil N and other nutrient levels can be monitored by soil solution extraction.

Pruning: Pruning should have been completed but can continue on late harvested navels. However minimal pruning is suggested on light flowering crops and a heavy pruning is suggested for next season.

Harvest: Some late navels are still being harvested and most exports will finish by late October. Due to the slightly smaller fruit size the season was not as good as the previous, but still very successful. Valencia harvest for fresh market (October early harvest) has commenced and there is reasonable demand for good size good quality fruit.

Pests & Diseases & Issues

CRITICAL TIMING: The above average rainfall might cause unusual pest activity (i.e. plagues or decrease). Monitoring your crop this season will be very important. Red scale favour mild spring conditions. From the beginning of November is the critical time to monitor for Katydid, thrips and LBAM is from the, however monitoring from mid-September will provide a good indication of what possibly to expect and time to prepare. Calyx closure (mid November) is the **KEY** time for these pests (see below for more details). Gall wasp is expected to emerge in October.

Soft scale: Generally in low numbers but are on the rise.

LBAM: LBAM can be visible in flowers. High numbers have been seen in Sunraysia and low numbers in the Riverina and Riverland. Control is not applied until calyx closure because damage now during flowering has minimal effect. Sprays should only be applied on very high levels that can impact on the second generation. Excessive LBAM numbers at flowering that requires action is rare.

Kelly's Citrus Thrip: Thrips can be present in some lemon blocks. Monitor these blocks now. Adults are emerging from the soil. Adults do not cause damage, larva that hatch from adults that have laid eggs cause halo damage. Spraying during flowering is not greatly effective because more Thrip will emerge after the spray. Waiting until early calyx closure is the best strategy because most of the Thrip have emerged and both adults and larvae are killed.

Katydid: Juveniles might be seen in the orchard. The best timing for control is soon after the first main drop occurs, which is just before calyx closure. Fruitlets that are damaged before or during the first main drop fall anyway. However it is important to protect the ones that remain after the first main fruit drop. Katydid are generally worse in blocks that border native bush. Timing of sprays is critical because Katydid can cause significant damage in a short time. An early spray might be required in high pressure situations.

Gall wasp: Wasps are expected to emerge in late October. The citrus roadshow seminars throughout the southern regions will discuss control options as developed by the Hort Innovation Gall wasp project. Trial data suggests that calcined Kaolin clay (e.g. Surround®) sprayed during wasp emergence disrupts egg laying and will reduce galling. Systemic soil applied insecticides applied after flowering to target egg hatch (December) seems to provide good control on small to medium sized tress. Samurai® is the only chemical (systemic) registered (permit) for gall wasp control. Autumn spray options of foliar systemic insecticides are also providing good results. If gall wasp is at concerning levels in your orchard discuss options with a citrus advisor, consultant or pest scout.

LBAM Pheromone traps: Light brown apple moth can attack flowers. Monitor flowers for signs of activity. Mating disruption pheromone dispensers (LBAM Plus®) can be placed in the orchard to reduce the probability of female moths producing viable eggs. LBAM reduction will assist in reducing the probability of detection occurring at export markets.



Events calendar

October 29

End of season meeting, Gayndah,
QLD

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