

July 2016

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*Season Update*, 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

There is an equal chance of a wetter or drier than average season for citrus production in the southwest of WA from July until September – with temperatures expected to be cooler than average.

In the north there is a greater than 65% chance of a wetter than average season, with an increased chance of warmer than average days in the far northern growing regions.

## Evaporation and irrigation

Expected average daily evaporation rates for July are: Harvey 2.3 mm, Karnet 1.8 mm and Carnarvon 3.7 mm. A large citrus tree (14 metre square canopy area) will need an average of 17 to 25.5 litres of water each day during July in the south-west and 36 litres in Carnarvon.

A loamy soil (with no rock component) such as in Harvey can hold around 20 mm of water that is readily available to a citrus tree. Assuming an average July evaporation rate of 2.3 mm per day, water within the soil will run out if there is more than 12 consecutive days with no rainfall. Small amounts of rainfall may not be enough to maintain good soil moisture.



## Phenology

Fruit is 'colouring-up' well with Afourer, Hickson and Mystique at or nearing full colour.

For next season's fruit we are now in the floral induction stage where buds in the tree are making the transition from vegetative to floral buds. Cooler temperatures during winter induce citrus buds to flower.

The number of flowers produced and the proportion of different types of flowers is strongly influenced by crop load in the previous season. Most flowers are produced on shoots that grew during the previous year.

If you would like a chart of the key phenological stages for citrus, please contact Bronwyn at [industrymanager@wacitrus.com.au](mailto:industrymanager@wacitrus.com.au).

## Internal maturity

Good results have been recorded following pre-harvest testing and market testing for WA oranges and mandarins. Keep monitoring fruit maturation rates closely for new varieties to ensure fruit meets Australian Citrus Standards before harvest. Hickson mandarins have produced inconsistent results in previous seasons so be vigilant. Fee-for-service payers can have the internal quality of fruit independently tested without charge (two samples per variety per grower). Just drop your samples to any agent at Market City.

## Management

The long-term management goal during the **floral induction stage** is to achieve consistent levels of flowering with a high proportion of leafy inflorescences carried on strong bearing shoots.

Light crop loads (for oranges < 3.5 to 4.0 fruit per 0.5 m quadrat); drought or water stress and good vegetative growth in the previous season can all result in excessive flowering. To achieve balanced flower numbers and good fruit size next season it's important to act now by applying winter Gibberellic Acid (GA) and ensuring a well-pruned canopy. Good management and keeping trees stress-free can also help reduce granulation.

## Flower manipulation (Winter GA)

Application of GA in the form of Ralex during floral initiation will reduce the number of leafless inflorescences (white blossom) and increase the proportion of leafy inflorescences. Leafy inflorescences set more fruit and have a higher initial growth rate, resulting in larger fruit at harvest.

The first opportunity to apply Ralex was in mid-June however growers will still see an effect if applied up to bud break. The timing of bud burst varies depending on variety and location, occurring between early August to mid-September in different varieties in WA. Apply Ralex in sunny conditions in the middle of the day, allowing trees to dry before nightfall to avoid the risk of marking fruit.

## Pruning

A well-pruned canopy with a good distribution of strong bearing shoots close to main scaffold branches promotes leafy inflorescences. Pruning after harvest therefore assists in balancing crop load if heavy flowering is expected.

See: [Citrus pruning](#)

## Harvest timing

Think carefully about the timing of harvest as this can have a significant impact on the rind quality of the current crop and on flowering and fruit set next season. A late harvest for any given variety will reduce flowering the following season, particularly in many mandarin varieties. For mandarins, have an early select pick, taking the largest and most coloured fruit first. This takes the load off the tree and allows the remaining fruit to increase in size.

## Preparation for flowering

After harvest consider foliar applications of urea and micro nutrients to promote flowering for the next season particularly if you suspect a light flowering year. Do not apply urea if you expect a heavy flowering. Management of nutrition, irrigation and pruning now may prevent granulation issues next season.

### **Oleocellosis**

Oleocellosis is rind damage usually in the form of spots or dark areas resulting from picking in poor weather conditions (too cold or too wet) and rough handling of fruit. Damage does not fully appear for up to 4 days after the injury/damage occurred and can significantly reduce the value of your fruit. To minimise oleocellosis, harvest in the warmest part of the day and pick from the northern side of the tree first. As a rough guide, ambient air temperatures should be above 12°C, however a wet bulb temperature and rind oil release pressure test should be conducted to provide a more reliable guide. It is best not to harvest if fruit are wet.

### **Pests and diseases**

Monitor for pests such as scale and mealy bug in the orchard whilst harvesting and record observations. This will help you take the correct action when determining control programs for the spring and summer period when juveniles of these pests are active.

Keep an eye out for any galls along the stem of your trees, particularly in last year's growth and in lemon trees. Citrus gall wasp will be emerging in the spring so pruning over winter is a good opportunity to remove the pest from your orchard.

# Queensland

## Climatic conditions

Generally warm temperatures have prevailed during June. Minimum temperatures have been well above their long-term averages while maximum temperatures have only been marginally warmer than average.

Warmer than average temperatures have been a consistent theme for the majority of the growing and harvest season and show no signs of abating. It is hoped that there are prolonged periods of cool to cold weather soon to prevent trees from early flowering.

Rainfall throughout the growing districts has been quite good during the past month as a series of trough systems have moved across the state.

Location	Monthly Rainfall mm	Historical Avg Rainfall	AvgMax Temp °c	Historical Avg Max Temp	Avg Min Temp °c	Historical Avg Min Temp
Gayndah Airport	52.2	36.8	23.8	22.6	11.2	8.7
Mundubbera Post Office	12.7	35.1	N/A	N/A	N/A	N/A
Emerald Airport	110.0	29.4	23.7	23.2	13.0	10.1
Gin Gin Post Office	149.2	54.3	N/A	N/A	N/A	N/A

## Phenology

Pruning of early season varieties is underway in most orchards and this program will continue for the next few months. Given the high levels of black spot experienced this season, growers are strongly encouraged to thoroughly prune blocks that have shown high levels of the disease. All pruned timber should be removed from the tree as this can be an additional source of inoculum.

Any blocks that require treatment for bud mite will need to be treated with a miticide now. Some lemon blocks are now flowering and the earliest of these blocks have a significant crop of young fruitlets. These are likely to come under pressure from thrips and broad mite.

Basal fertiliser programs on early season varieties have been delayed until the onset of some cool weather as growers are not wishing to promote the flushing and subsequent flowering in these blocks.

Harvest of the midseason varieties continues in earnest. The external qualities of the Low Seeded Murcotts is quite good again, with low levels of the blemish that plagued the variety in its early years.

### **Pests and diseases**

Pest and disease pressure is quite low at this time of the year.

Emperor brown spot levels are very low this year - mostly due to the very dry conditions experienced, with levels remaining low despite the recent rainfall.

Black spot levels continue to rise in some of the older Valencia blocks in the district, but levels remain generally quite low in the Murcott blocks.

Thrips and broad mite are showing up in some of the early lemon blocks. This pressure is likely to increase as the volume of flowering increases.

# Riverland, Murray Valley and Riverina

## Climate

Mean daily maximum and minimum temperatures for June were near the historical average. A few frosts occurred throughout the region in mid-to-late June; though they appear unlikely to cause economic damage in most areas.

Scattered rain occurred throughout the month causing harvest delays. Riverina has received the most rain (127 mm) in June and has therefore experienced more harvest delays than Sunraysia (18 mm) and the Riverland (23 mm).



## Phenology

Washington navel fruit is mature and late navels are in the final stages of the maturation phase. Most trees are still in the floral induction stage. Floral induction is the transition of vegetative buds to floral buds. Floral induction peak occurs around mid-June, about six weeks before bud break. A second peak occurs at bud break around early July.

Low temperatures during winter induce citrus buds to flower. The number of flowers produced and the proportion of different types of flowers is strongly influenced by crop load in the previous season. Most flowers are produced on shoots that grew during the previous year.

## Pruning

A well-pruned canopy with a good distribution of strong bearing shoots close to main scaffold branches promotes leafy inflorescences. Pruning after harvest therefore assists in balancing crop load if heavy flowering is expected (in an “on” year). Mature tree pruning should be a quick exercise (within 1-2 min per tree) to minimize cost, targeting large branches or limbs.

Watch the [NSW DPI pruning video](#) - featuring Darren Minter demonstrating the navel chunk pruning technique.

## Winter Urea spray

Foliar applications of urea can be used during winter to promote flowering in expected light flowering years. Do not apply urea if expecting a heavy flowering.

## Pests and diseases

Maintain a good weed control program to reduce the incidence of Fullers Rose Weevil and to help control snail populations. Apply snail baits as required.

## Harvest

Internal maturity is well in advance and acid levels have been low. Minimum internal fruit maturity standards were reached before fruit colour. Colouring of fruit has been reasonable throughout June. Washington Navel harvest is about halfway through in Sunraysia and the Riverland, whilst one quarter to one third complete in the Riverina, mainly due to rain causing delays in harvest.

A heavier crop is being picked in the Riverina with slightly smaller sizes with larger fruit being picked in Sunraysia and the Riverland due to the slightly below average crop. Blemish is at average levels and some albedo breakdown has become evident in Washington Navel blocks.

The early season navel program has completed and went well. Fruit has been received in overseas markets without major issues. Late navel season is expected to commence in the middle of July for Sunraysia and in August for the Riverina. So far the season is progressing well.

## Oleocellosis

The harvesting of late navels will commence in August and these fruit will be highly susceptible to oleocellosis. Oleocellosis is rind injury damage resulting from rough picking and handling of fruit.

Damage does not fully appear for up to 4 days after injury and can significantly reduce the value of your fruit. It is most likely to occur when the cells on the surface of the orange are fully swollen due to irrigation or cold weather.

It is important to familiarise yourself with optimum harvest practices to reduce the incidence of oleocellosis, taking special care with new pickers. Obtain an electronic PDF copy of the “New 2016 Citrus Harvest Handbook” from your packer to help train pickers.

# Processing Report

Juice yields for the current Valencia crop have been very good over the past few months registering at around 50-55% or 500-550 litres per tonne of fruit. However, the yields are now dropping. Processors are already starting to see some of the 2016/17 crop fruit, which has now coloured, mixed in with the 2015/16 crop. While this 'double crop' situation was anticipated, it is still problematic for processing and results in inconsistencies in both juice yields and ratios.

There is an abundance of Valencia on the trees at the moment and industry sources expect there to be plenty left when the new season gets up and running in a couple of months. For this reason, the spot price for industrial Valencia fruit is trading at AUD150-210/tonne farm gate. This is significantly lower than the contract prices fixed before the season of AUD270-300/tonne.

Processors continue running limited volumes of Navels to juice. These volumes will be blended with Valencia juice for non-premium products.

There could also be an opportunity to run additional fruit to concentrate in the coming months if Brazilian import prices prove too expensive.

Brazil exports significant quantities of concentrate to Australia each year, but export prices have risen since last month (see below).

## 2016/17 Valencia

Next season's Valencia crop will begin in September/October. Current indications suggest production will be up to 30% lower than the current season due to tree stress from the current bumper crop, coupled with natural tree attrition.

One grower/processor said they had removed 10% of their Valencia acreage due to tree age, low returns and oversupply.

Contract prices for 2016/17 season Valencia fruit are on par with last season at AUD270-300/tonne.

## Overseas

The 2015/16 crop in the USA is effectively over. At 81.4 million boxes, it was one of the smallest crops on record and next year's crop is not expected to be much better. Citrus greening in the US has devastated production over the past few years and there is a question mark as to whether Brazil will be able to supplement the shortfall next year.

Fundecitrus in Brazil have recently forecast the 2016/17 crop in Brazil at just 246 million boxes, compared with 300 million boxes the year before.

Price levels on the frozen concentrated orange juice (FCOJ) market in the US have rallied to USD1.77/lb solid, from USD1.52/lb last month.

Offers for Brazilian concentrate have also climbed to USD2000-2300/tonne from USD1900-2000/tonne at the start of June.

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