

March 2014

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Western Australia

February climate summary

Rainfall for February was lower than normal across most of the state by 11-19mm. In the far north Kununurra continued to have higher than average rainfall, receiving close to triple its normal February rainfall at 597mm.

Temperatures were mostly slightly warmer (~1°C) than the long-term average for the state's citrus production areas. There was a larger variation from the historic average for Carnarvon by 2-4°C.

Heading into March, rainfall normally increases by a small amount (1 to 3mm) north of Perth, and a little more south of Perth rainfall (3 to 9mm). Lastly, in the north rainfall normally drops by 3mm in Carnarvon and 50mm in Kununurra.

March temperatures generally drop by 1-2°C for most of the state. Carnarvon and Kununurra see relatively similar temperature to February.

Seasonal outlook – March to May

There is a slight shift from the February outlook, with an increase to a 60-65% chance of a wetter than normal autumn for western parts of WA. Kununurra remains at an equal chance of a wetter autumn.

Similar to last month, cooler days and nights are more likely in the Kimberley. Warmer nights are more likely on the coast. For daytime temperatures there is an equal chance of exceeding media maximum temperature.

Phenology

All varieties are in the cell expansion stage of fruit growth. Keep an eye out for colour break and record when this occurs. Colour break is when the rind changes from dark to light green. This occurs as early as mid-March for some varieties.

The key management goal during the cell expansion stage is to maximise fruit size. Moderate temperatures (20–30°C) during January and February, optimum fruit loads and correct irrigation scheduling favors good fruit growth during this stage.

Irrigation

Late summer and autumn is the best window for reducing water applications if water resources are running low. Minor water stress at this time can be tolerated without a major effect on fruit size. Prolonged water stress will however reduce fruit size, and is more pronounced when the crop load is heavy. Prolonged water stress can also influence internal fruit quality characteristics, increasing the acidity and Total Soluble Solids (TSS) of fruit, while slightly decreasing percent juice. Mid-summer and autumn leaf flush will be suppressed, which can affect next seasons flowering sites.

Nutrition

Now is the time to leaf test. Collect the smaller narrow leaves that formed in the cool conditions last spring. You can see these amongst the foliage if you stand back from the tree and have a look. Collect leaves from spring flushes that have not gone on to produce further leaf flushes or fruit. It's best to sample at the same time each year, sampling healthy trees of the same type. Take three to four leaves from each tree, sampling from all sides of the tree.

Fertiliser applications should taper right off towards the end of March. Excess applications of nitrogen and potassium after this time can cause delays in maturity and colouration and produce coarser rinds.

Rind quality

Apply gibberellic acid (GA) to navels at colour break for maximum delay of rind aging and extension of harvest. 10 ppm GA may delay colour development by 20-30 days. Note: late navel colour development is more sensitive to GA.

Copper sprays

Spray copper before autumn rains to protect fruit from fungal infections and disease. Copper works by protecting the fruit surface on which it is applied. It does not kill fungus in already infected fruit. Coverage deteriorates over time as fruit grows and when exposed to wind and rain. As only minor fruit growth occurs after March, an early autumn application of copper provides reasonable protection until harvest. Note: Copper can darken blemishes like wind rub.

Pests

Leaf miner: Monitor for leaf miner and spray young growth with white oil when detected, particularly on young trees. Oil sprays reduce leaf miner numbers by reducing egg laying and should be applied before too many eggs have been laid. New growth should be protected as soon as it is formed.

Red scale: Monitor scale crawlers and apply oil spray to heavily infested areas when crawlers are active. Consider a second release of aphytis for red scale control if levels of parasitism are below 20%.

Ants: Ensure you have your ants under control as they exacerbate scale problems.

Mealybug: Consider releasing green lacewings if mealybug is a problem.

Fruit fly: Continue to monitor fruit fly levels particularly as we head towards colour break.

Kelly's citrus thrip: Monitor for Kelly's citrus thrip weekly until calyx closure (around March) and greenhouse thrip weekly on fruit to be harvested late (January – March). Take action if 5% or more fruit is infested with Kelly's citrus thrip, 10% or more for greenhouse thrip.

Queensland

Climatic conditions

Conditions during February have again been hot and dry over most of the growing areas. Emerald is the exception to this, where they managed to get close to their average monthly rainfall. All other areas have received very little rainfall again and are now perilously dry. Gayndah and Gin Gin have now recorded their driest summers on record.

Location	Monthly rainfall (mm)	Historical average rainfall	Average maximum temp °C	Historical avg max temp °C	Average minimum temp °C	Historical avg min temp °C
Gayndah Airport	7.4	92.7	34.1	32.2	20.1	20.6
Mundubbera Post Office	14.8	92.8	N/A	N/A	N/A	N/A
Emerald Airport	61.6	80.8	32.8	33.4	21.0	22.0
Gin Gin Post Office	11.6	156.6	N/A	N/A	N/A	N/A

Phenology

We are still in cell expansion stage where the combination of optimal crop load, sufficient potassium levels and adequate water will determine the fruit size.

At present in the Central Burnett, irrigation is of utmost importance with most growers irrigating blocks on a four to five day cycle.

Pests and diseases

Black spot has started to express in some Imperial blocks throughout the district. This is unusual given the dry growing season.

Oriental mite continues to pose a problem in some blocks, particularly in those blocks adjacent to dusty roadways.

Spined citrus bug and fruit spotting bug are still active in those varieties that are most prone. Fruit spotting bug is most likely to be a problem in those blocks which have bushland surrounding them.

Queensland fruit fly is now starting to affect Imperial mandarins as they ripen. Damage is starting to be seen in some blocks. Baiting should be done twice per week or after rain.

Jassid activity in Imperials remains quiet; a reflection of the current conditions where there is not a lot of flush for the Jassid numbers to increase. Imperial mandarins remain most at risk as the fruit turns colour.

Growers' field day

During February, the Regional Advisory Committee in conjunction with Citrus Australia held a well-attended field day where growers had the opportunity to visit three Imperial growing operations.

The basis of this field day and associated forum was to explore the different agronomic techniques used in Imperial growing and how this impacts internal and external qualities.

Riverland, Murray Valley and Riverina

Climate

Mean daily minimum temperatures and maximum temperatures were significantly above average and evapotranspiration was above average. Good rainfall occurred in the middle of the month helping fruit and tree growth.

Phenology

Fruit are in the cell expansion stage.

Management

Nutrition

Conventional application of nitrogen and potassium should have ceased by the end of February to avoid colour delay. Some blocks with low levels of fruit are showing signs of coarse rinds. Phosphorous can assist in counteracting some of the negative effects of coarse rind texture caused by low crop loads and/or excessive rates of nitrogen or potassium. Extra P application has the best effect if P levels are low.

Leaf analysis

Late February/early March are the times to check the nutritional status of your orchard with a leaf analysis. Ensure you pick four- to seven-month-old spring flush leaves for sampling. Leaf analysis is only an indicator and you need to take notice of the trees' health, vigour and leaf colour. Also note the fruit yield and rind texture at harvest. Shop around for deals on selected laboratories.

Foliar sprays

Calcium nitrate sprays may assist in rind quality and phosphorous sprays may assist to build up P levels (if required). P sprays also help to reduce the coarseness of the rind (see nutrition comments). Apply a micronutrient spray on new autumn leaf flushes.

Snail control

As the weather cools and dews form on cold morning snails will commence to be active. As they break dormancy they will be hungry and snail baits will be a very attractive meal!

Fruit size & crop load

Preliminary reports indicate that the Riverina crop is up from last year, Valencia is up significantly, navels up by 10-20% and trees are carrying a good average crop load. However some blocks of late varieties have very low crops and fruit size seems to be near or slightly below previous seasons. South Australia and Sunraysia preliminary reports indicate that the crop is up from last season. Navels will be better than last season. Some blocks with excessive levels of fruit are showing signs of slow fruit growth. Wind blemish is higher this season than other seasons and first grade pack-outs will be lower. Official fruit size and crop estimate data will be released in around end of March/April.

Fruit size model

The updated fruit MS Excel Washington Navel fruit size model is posted on the Citrus Australia website. This spreadsheet can make a prediction of your pack-out sizes at harvest.

Korean/Thailand/China Export Program – Fuller's rose weevil and red scale

The first inspection of fruit for the Korean, Thailand and China export program has occurred. Growers need to continue to maintain control strategies for a second inspection will occur before harvest. Korea has a nil tolerance to red scale, so red scale control must be initiated on problem blocks if intending to export to Korea. This is a good time for oil sprays for mid to late varieties as next month may be too late for all varieties (delay rind maturity). Continue to ensure tree skirts are maintained and good weed control program is implemented for Fuller's rose weevil control. Continue trunk band spraying on blocks

suspected to have Fuller's rose weevil issues. Contact Citrus Australia or your packing house to obtain information about protocol requirements for growers.

Next Month:

- GA sprays for late harvest
- Cling spray for early maturing varieties
- Autumn copper sprays

Pests, diseases and issues

ALERT: Monitor your blocks for red scale now and apply oil sprays on mid and late season varieties if above threshold levels.

Riverina

Red Scale: Red scale build up has been occurring in many blocks and about 30% required oil sprays. Most natural enemies are lower than usual, but still present. Autumn releases of Aphytis are recommended especially on blocks that have not used an oil spray.

Mealybugs and soft scales: Very low levels are being detected. The recent hot weather reduced populations.

Spined citrus bugs: Spined citrus bugs lower than other years. However they have been persistent in some lemon blocks and require control sprays.

Fuller's rose weevil: Eggs are being detected under the calyx of fruit. Growers involved in Asian exports need to ensure they apply their trunk band sprays.

Two spotted mites: These are being detected in orchards that apply trunk band sprays. Some might need spraying are not at damaging levels but should be closely watched. High levels may need spraying now. Mites cause silvering/dulling of the fruit rind.

Leaf miner: None still

Riverland

Red scale: The heat has had a significant impact reducing the levels of small scale that had emerged in January. However some blocks have scale building up on isolated fruit that can be a threat to another generation spreading on maturing fruit throughout the tree. Late March is the last opportunity to apply oil on mid to late varieties, so keep a close watch on scale populations. March is a good time to boost Aphytis populations by targeted releases.

Mealybug: The heat has had a significant impact reducing levels. Levels are now low and are not expected to rise for the rest of the season.

Two spotted mites: Mites have been increasing on trees using trunk band sprays. Most are below thresholds but some have required miticide sprays. The mites tend to congregate in the navel which makes control more challenging.

Soft scale: The heat has had a significant impact reducing levels.

Spined citrus bugs: Some minor activity in lemons and mandarins, but generally at low levels.

Fuller's rose weevil: Adult weevils are emerging and laying eggs as expected at this time of season.

Leaf miner: Leaf miner levels are continuing to be suppressed by the heat event in February.

Sunraysia

Soft scale: Very little soft scale has been detected over the past month, numbers in all districts do appear to have been controlled, and numbers are very low.

Red scale: Red scale seen last month has been controlled using paraffinic type oil.

Kelly's citrus thrip: Thrip numbers are still remaining low, however, do monitoring, especially lemons. Look mainly between fruit clusters.

Light brown apple moth: Apple moth grub numbers have declined significantly since my last report.

Mealy bug: Mealy bug are low. The only variety with reasonable numbers is grapefruit, under the calyxes of fruit. However the numbers are low, and in most cases thresholds have not been exceeded.

Fuller's rose weevil: These are being found in all districts, with most being found feeding on the foliage in the crowns of trees. If you are intending on exporting your fruit to China, Korea and Thailand, you should have finished your skirting and weed control by now and you would have had an inspection. Nearly all the blocks that have been trunk sprayed, kept skirts up and weeds under control, have passed the recent February inspection inspections.

Juice update

2013/14 Valencia

Processors say that the volume of Valencia fruit reaching the plants is between 30-40% down on last year. The poor availability of fruit was only realised once picking was underway. Since then the trees have been suffering from a spate of heatwaves which has hampered fruit maturation. Nevertheless, the high temperatures have also led to both sunburnt fruit and re-greening, which has resulted in more fruit being diverted to the processing sector over the past two months.

Juice ratios in most areas are much higher than average. Processors say they are currently running fruit with ratios between 20-30 due to very low acid contents. Brix levels have remained stable between 10-11 brix, while the acid content has dropped to just 0.3-0.5%. The ratios started climbing at the start of February and industry sources say it is just weather conditions favouring a much sweeter fruit. In January, juice ratios were registering just 11-13. Given that 100% not-for-concentrate juice cannot be blended, it could result in sweeter juice sitting in supermarket refrigerators. Nevertheless, juice packers say this sweeter juice falls well within the normal flavour profile offered to consumers.

Valencia fruit for processing purposes is changing hands on the spot market for AU\$280-350/tonne – similar to last month.

The current crop is expected to wind up mid-June, which is earlier than usual. The last few seasons have seen fruit picked right up until the subsequent harvest.

Meanwhile, juice retail sales are reportedly benefitting from heavy discounting by the major supermarkets which are aiming to regain some of the market share that was lost last year.

2014/15 Valencia

Growing conditions are currently favourable with warm days and regular rain. However, the recent heatwaves arrived at the same time as the flowering for the next Valencia season which may have had a negative impact on the fruit set. Industry sources say it is still too early to gauge whether there is any damage at the moment.

The biggest problem that processors are seeing is a lack of investment in the plantations – the farmers say they do not have enough money to properly manage the acreages.

Overall industry sources suggest production from the next Valencia crop will be up by around 5% on the current 2013/14 season.

Overseas

The 2013/14 Florida orange forecast is unchanged on the previous month at 115 million boxes, 14% lower than last season's production, says the United States Department of Agriculture.

In spite of a reduced freeze risk in Florida and lower levels of movement, the frozen concentrated orange juice futures market has crept slightly higher over the past month to trade around US\$1.47/lb solid. Traders say this is probably a result of easing inventories due to the low production period coupled with news of 25% of the bearing acreage in Brazil being removed.

Limited processing of the 2013/14 crop from the smaller operators continues in Brazil, but the major producers have now finished.

Offers from Brazilian frozen concentrated orange juice in Europe has eased slightly to US\$2050-2150/tonne 66 brix FCA Europe. There are rumours of price levels appreciating by US\$150/tonne, which may encourage buyers to fix contracts.

Analysts in the US think the large removal of trees in Brazil, mentioned above, will probably limit the 2014/15 crop in Brazil to 300-325 million boxes.

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