

season update

This publication has been facilitated by HAL in partnership with Australian Citrus Growers & has been funded by the national citrus R&D levy. The Australian Government provides matched funding for all HAL's R&D activities.

Summary Edition: February 2007

RIVERLAND, MURRAY VALLEY & RIVERINA

Drought Update

January was another record for lowest ever inflows. If no significant rainfall occurs then water storages for the Murray River will be empty by the end of April and in the Riverina (Murrumbidgee River) there is enough irrigation water till the end of March. Long term forecasts are predicting an above average rainfall in Autumn. As of 15th of February Hume Dam was 2.3% capacity, Dartmouth Dam was 26% capacity and Blowering 11% of capacity.

Heat units

Heat units for January in the southern states close to average. The cumulative trend is slightly above average heats units for the southern states. Gayndah in Qld has significantly below average heat units (-23%) which may have an affect on crop maturity.

Nutrition

Conventional application of nitrogen and potassium should cease by the end of February. Excessive and or late application of N and K can cause fruit quality problems and delay colour development. Phosphorous can assist in counteracting the negative effects (rough texture & delay in colour development) of high nitrogen or potassium. If trees have low phosphorus levels, a phosphorus spray may assist to boost levels.

Leaf Analysis

March is the time to check the nutritional status of your orchard with a leaf analysis. Ensure you pick 4-7 month old spring flush leaves for sampling. A picture guide of the correct leaves is available from the ACG resource web page. Leaf analysis should not be the sole indicator to determine next season's nutrient status. You need to take notice of the trees health, vigour and leaf colour. Also note the fruit yield and rind texture at harvest.

Foliar Sprays

Calcium nitrate sprays may assist in rind quality and phosphorous sprays may assist to build up P levels. Apply a micronutrient spray on new autumn leaf flushes.

Fuller's Rose Weevil

Growers intending to export fruit to Korea, Thailand or China should ensure tree skirts are maintained and a good weed control program is implemented. You will need to keep a diary of your pest control management practices. Fuller's Rose Weevils are emerging from the ground and will be climbing trees to eat leaves and lay eggs. Skirting trees and ensuring weeds are not in contact with the canopy reduces the ability of weevils to climb into the tree. Contact your packing house to obtain information about protocol requirements for growers. The protocol for both packers and growers are currently being reviewed and updated.

Crop Levels

No change since last report (i.e. fruit size is above average). South Australian estimates indicate a healthy navel crop that is expected to be higher in tonnage as compared to last season. Fruit size is slightly above average. More details available from CGSA 08 85821546. Official crop estimates to be published by MVCB and Riverina Citrus in March.

Pest Report

This summer there has not been the weeks of extended, extreme heat like last summer. Due to these milder conditions in some regions insect pests like red scale, mealy bug and soft scales are present in average to above average numbers.

Growers should be monitoring orchards fortnightly especially checking for scale and mealy bug pests.

Riverland

Thrips & LBAM

No new damage and these pests should no longer be a threat.

Red Scale

Red scale is a pest that is common to all citrus varieties. At present, a mixture of all scale developmental stages can be seen on fruit surfaces, from crawlers through to mature scales. Red scale infestations tend to be worse in the most exposed and dusty parts of the orchard. Red scale can particularly be a problem in young trees and newly top worked trees due to lower parasite activity in these exposed trees. If monitoring results indicate scale numbers are above your accepted threshold, an oil spray is best applied now and arrangements made for an April *Aphytis* release.

Soft Scales & Mealy Bug

Soft Scales are present, especially in young trees and newly top worked trees. Mealy Bugs can be found mainly in Navels and grape fruit varieties. Mealy Bugs live in protected sites like in navels, under calyxes and between touching fruit. A high level of ant activity in a tree is a good indication that you need to carefully check for Soft Scales and Mealy Bugs.

Spined Citrus Bug

Fortnightly monitoring is recommended at present. Spined citrus bugs are commonly found in lemons and mandarins. A high population of spined citrus bugs that has a mix of both eggs and adults would require 2 consecutive sprays at 10-14 day intervals. This will control both the adults and the eggs when they hatch.

Leaf Miner

There is a leaf flush maturing and another flush occurring. Leaf minors are mainly a problem in young trees and newly top worked trees. Growers may be using preventative 0.5% summer oil sprays 3 weeks apart combined with trace element applications to manage leaf minor. Occasionally high numbers of leaf minor may require the application of an insecticide.

Fuller's Rose Weevil

Fuller's Rose Weevil is starting to become active and has been seen in orchards. Growers intending to export fruit to China, Korea and Thailand must maintain tree skirts and manage weeds under tree canopies.

Snails

If there happens to be a period of prolonged wet, targeted baiting of snail hot spots in the orchard is recommended.

Riverina

Red Scale:

Red scale levels have continued to increase. Some orchards are requiring treatment with oil, particularly where parasite activity is low. Levels of parasitism look good in orchards where *Aphytis* were released late last season or early this season.

Soft scales

Levels are generally low with good parasite activity present. Occasional hotspots are being detected where ants are disrupting biological control, but usually do not require treatment.

Mealybugs

Numbers have declined in most orchards, primarily due to hot weather. Mealybug numbers are rarely reaching threshold levels, however both their numbers and the level of parasitism should be monitored over the coming months.

Fullers Rose Weevil

To date there has only been the occasional detection of an egg mass or adult. Growers planning on exporting to Asia should ensure tree skirts are pruned and weeds are not forming a bridge to the canopy for the flightless weevil.

Sunraysia

Apple Moth

Light brown Apple Moth larvae numbers have decreased over the last month. The majority of larvae were found in fruit clusters. The highest populations were again found in the Nangiloc area. The odd larvae can still be found under grapefruit calyxes.

Red & Soft Scale

Soft and Red Scale populations are now being found in large numbers across all districts, with red scale being the main concern. Red Scale crawlers, white caps, right up to adults, can easily be found. Red scale numbers are a lot higher than the previous two seasons and fortnightly monitoring is recommended. Monitor young fruit inside the canopy and between trees, where spray coverage is often poor. Extremely high numbers of soft and red scale were found on young trees, again in all districts to a point where the trees health is being affected.

Leaf minor

Leaf minor can be found in most districts. Their numbers are increasing. Generally they are not a concern on larger trees. In younger trees leaf minor can retard growth, yet in most cases control is not needed.

Spined Citrus Bug

Spined Citrus Bug eggs, juveniles and adults are still being found in most Lemon and Murcott mandarin blocks, with lemons the main variety affected. All were located on this season's fruit. Monitor first thing in the morning on the sunny side of tree. Record both the numbers of both spined citrus bugs and damaged fruit.

Kelly's Citrus Thrip

Consider applying baits around skirt line and in and around trunk areas, especially if you have had snail problems in the past. An application of copper is also needed next month which will help control a number of leaf diseases - especially Greasy Spot, which has been found in a large number of blocks across Sunraysia. It is best to start talking to your packer about Snail and Fuller's Rose Weevil control as soon as possible.

WESTERN AUSTRALIA

Climate

Mean daily maximum and minimum temperatures have been slightly lower than average. Evaporation rates have also been lower than average and rainfall fairly average. Growing regions experienced 3 – 4 days of 35+ temperatures this month. Average daily evaporation rates for the coming month (March) are: Harvey 6.8 mm, Gingin 7.5 mm, Carnarvon 8.7 mm and Kimberley Research Station 6.4 mm.

Phenology

All varieties are in fruit growth stage two 'cell expansion'. Keep an eye out for colour break and record when this occurs, this will assist with application of GA treatments.

Production

Harvest of White Flesh Grapefruit continued throughout the month in the Burekup area. Valencia harvest continued throughout the south west region.

Management

This is a critical period for irrigation, correct irrigation scheduling is essential. Apply 25% of annual nitrogen and 30% of annual potassium in the January to April period, supplementing potassium with foliar applications of potassium nitrate. Leaf nutrient analysis can be carried out anywhere between January and March. Soil nutrient, salinity and pH samples can be carried out during February/March. Collect soil and leaf samples at the same time each year. Apply GA to navels one month before colour break for the management of Albedo breakdown and to delay rind aging.

Kelly's Citrus Thrips are still causing problems in lemon and grapefruit blocks and regular monitoring is recommended. Lemons need to be monitored once a week for at least another month. High numbers of fruit can be damaged in a very short time. Places to look are between clusters of fruit and under the calyxes.

Mealy Bug

Mealy Bug is now being found in reasonable numbers in and around the calyx areas. Some Sooty mould was recorded around the calyx. Grapefruit is the main variety affected. Cottony cushion scale is also being found, mainly in the crown areas of young trees. Most districts are affected. Regular monitoring for mealy bug needs to be done right up till harvest.

Two Spotted Mite

Two spotted mite was found in a number of lemon blocks in different districts of Sunraysia. At this stage they are not causing any major damage, but if left unchecked they can cause yellow spotting on fruit and leaves. A heavy infestation causes leaf drop and the fruit can be unmarketable due to the surface damage. Two spotted mite commonly infest blocks where broad spectrum insecticide use has been heavy and predatory insects have been killed. Some times insecticide use is unavoidable due to other insects (spined citrus bug) that require control.

Look for two spotted mite is inside the canopy, on the under side of leaves. They can often be found on the top sides of leaves in a heavy infestation, especially in dusty blocks.

Fuller's rose weevil

Now is the time to implement Fuller's rose weevil management strategies.

Skirting and weed control are the two main jobs that MUST be done, to have any chance at getting into the Korea, Thailand and Chinese markets. Tree foliage must not be in contact with either the ground or weeds.

Snails

Basically the same controls are needed for the USA market. Snail inspections will be starting in the next couple of months. Jobs that need to be done are skirting and weed control.

Pests and Diseases

Monitor for Greenhouse Thrip weekly on fruit to be harvested late. Also monitor scale crawlers and leaf miner, applying targeted oil sprays where necessary. Ensure you have your ants under control as they can exacerbate a scale problem. Consider releasing Green lacewings if Mealybug is a problem. Fruit fly has been less of an issue in the northern south west growing regions this season – continue to monitor for fruit fly.

QUEENSLAND – Production

After the longest dry period on record, the Central Burnett district receives welcome rainfall. Both Mundubbera and Gayndah townships have recorded in excess of 100mm for the first three weeks of February. Falls of better than 175mm were recorded in some areas of the district. As a result of the rain, water is again flowing in the river, filling the Mundubbera weir. However there is still no inflow to the main storage dams of Waruma and Boondooma. This means that future water security remains unsure. Unfortunately some orchards received more severe hail during the recent storm events. Many orchards have now been seriously damaged by hail.

Red scale is well behaved at this stage with the odd block showing higher levels. An emergence of young scale stages is occurring at present. Parasitism assessments indicate that aphytis levels are good to excellent. Some blocks, where red scale counts are high and parasitism relatively low, continue to receive supplemental releases of aphytis.

Oriental spider mite is active again this season. High populations of this pest are usually associated with some form of disruption and crop scouts are reviewing records to establish if any trends can be identified.

Rust mite populations are low with very few blocks requiring treatment. The exceptions are those blocks that have been disturbed by repeat application of OP or dithiocarbamate (eg mancozeb) sprays. Predatory mites are present in good

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numbers and are expected to strengthen further following improved seasonal conditions.

Monitoring for **jassid** activity has commenced. Populations of jassids are variable and expected to increase with the new flush developing now.

Fruit fly has also been active with some early damage reported. Growers should remember to bait all early season varieties. Growers using ICA-28 must commence baiting at least 12 weeks before harvest. The application of protein bait treatments to perimeters and in late season varieties -at reduced rates- will improve overall levels of fruit fly control. Early susceptible varieties (eg imperial mandarins) should be considered for twice weekly baiting while the risk from fruit fly remains high.

The third, and final, distribution of **MAT cups** is being made now as part of the fruit fly area wide management program (MAT=male annihilation technique). Growers should place

QUEENSLAND

Marketing

Lemons

Being in short supply, summer lemons are facing a good market on account of reduced imports because of the freeze in California.

Imperial Mandarins

Queensland Imperials will commence in mid-April. Growing areas have been impacted by severe drought conditions throughout 2006. However, rainfall during February has resulted in a significant improvement in prospects for the 2007 season. Imperial volumes are estimated to be similar to the 2006 season. However, hail storms in November, and again in recent weeks, will result in a 20 percent increase in second grade fruit.

Exports

After testing the water in 2006, the Queensland industry is looking to make more significant inroads into China this year.

PROCESSING

In spite of a good deal of rain in eastern NSW recently they has reportedly been no change to the status of water restrictions in the key citrus growing areas across the nation. Growers are now trading water allocations as well as fruit.

Ratios remain below normal at 11-13. Yields for the major processors are at around 470-490 single strength litres of NFC juice to one tonne of Valencia - similar to this time last year - but still lower-than-usual due to the poor fruit sizing brought on by the lack of rain. Due to the shortage of fruit this season any oranges available for juicing are expected to be crushed.

Industrial Valencia fruit is available on the spot market at AUD220-250/tonne delivered, on par with the contract prices fixed two months ago. While the industry is praying for a downpour, it is also anticipating official forecasts on the 2007 crop which are expected in March from the various state boards.

Retail

Retail juice sales have been very positive over the past month - certainly higher than last year, say industry sources. While growth is not as healthy as products such as ice tea it is still positive. Processors point out that there will have to be a hike in retail prices at some point in the first quarter of this year due to the increase in fruit prices and overheads. Indeed, one of

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their MAT cups into the field promptly to ensure optimal suppression of male fruit flies district wide.

Black spot levels have been low although counts may rise from now. Pressure from **Emperor brown spot** (EBS) is expected to increase with the new flush. Any continuation of showers and wet weather will favour further development of EBS. Growers should ensure that protectant treatments have been applied.

Overall the **crop size** is surprisingly good considering the poor growing conditions to date. Most overhead irrigated blocks have little or no fruit. The remainder are generally showing a good crop. Fruit size is better than expected considering the dry conditions that have been experienced. Many growers are still behind schedule with their **fruit thinning** program and are urged to pay special attention to this area as fruit size and quality will be compromised if adequate thinning is not carried out as a matter of urgency.

the major Australian producers has already managed to implement this with the retailers. Meanwhile, there have reportedly been a number of problems on the manufacturing side, mainly due to consolidation within the packing sector, and there is now a shortage of capacity. The hot summer has apparently helped juice sales through the "route" sector (sales through garages, restaurants, hotels etc.) and, at the same time, has not had a negative impact on grocery/supermarket sales, say industry sources. In dollar terms the route sector generally commands around 60% of the juice market, with the remainder going to the grocery division. In volume terms this ratio is reversed.

Overseas market

After months of volatility the Brazilian FCOJ market reached its peak in November 2006 and has since settled back down enough for most Australian importers to make long-term contracts. The domestic Australian market is now covered for the next nine to 12 months at USD2300-2400/tonne 66 brix delivered.

Apple and pear processing

The Australian industry is expected to process 93 000 tonnes of apples during 2007, significantly down on the 115 000 tonnes and 153 000 tonnes pressed during 2006 and 2005 respectively, says a report by the US Department of Agriculture. Pear processing is also expected to be cut-back this year to 54 400 tonnes from 68 000 tonnes in 2006.

MARKETING

To be made available shortly on the ACG website.

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Weekly domestic market reports can be accessed from the Murray Valley Citrus Board website:

www.mvcitrus.org.au/publicat.html.

For further information, visit the ACG website at:

www.australiancitrusgrowers.com