

May 2017

Season Update

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This publication is developed with contributions from Mal Wallis, Citri Care, Queensland; Steven Falivene, NSW Department of Primary Industries; Bronwyn Walsh and Kevin Lacey, Department of Agriculture & Food WA.

Although the information in Season Update is designed to provide the latest seasonal information for growers, Citrus Australia strongly recommends growers seek professional advice before acting on any of the information.

Western Australia

Seasonal outlook

The chances of below average rainfall over the south west of WA during May to July are greater than 65 to 75%. Similarly, there is a high probability that day and night time temperatures will be warmer than average for most of WA. For the far north of WA the chances of above or below average rainfall and temperatures are roughly equal.

Evaporation and irrigation

Average daily evaporation rates for the coming month of May are: Harvey 2.7 mm, Karnet 2.1 mm, Gingin 3 mm and Carnarvon 5 mm. A large citrus tree (14 metre square canopy area) will use an average of 20-29 litres of water each day during May in the south-west and 49 litres in Carnarvon.



Phenology

Most early season varieties reached 50 to 60% colour in mid to late April. Some mid-season varieties have now reached colour break. Colour break is when the rind changes from dark to light green. Keep a good record of when colour break occurs in each variety in your orchard. This will help with the accurate timing of GA applications.

GA Applications for rind quality

For maximum delay of rind aging and extension of harvest apply 10 ppm GA at colour break. This may delay colour development by 20 to 30 days. Ten parts per million of GA applied at 10-50% colour may delay colour development by 10-15 days. Note: Late navel colour development is more sensitive to GA than other navels.

Apply GA to Imperial mandarins at three-quarter colour for the management of watermark.

Please read the label for important pH and temperature information to ensure effectiveness.

Internal maturation rates

Monitor maturation rates of fruit closely and ensure fruit meet the minimum Australian Citrus Quality Standards before harvest. Marketing of fruit that does not meet these standards places poor eating quality fruit into the mouths of consumers. The resultant consumer backlash has impacts on the entire citrus industry.

WA growers can send their fruit in for free pre-harvest testing as part of the WA Citrus quality program. Contact Bronwyn Walsh for more details, 0400 873 875.

Harvest timing

The timing of harvest can have a significant impact on the rind quality of the current crop and on flowering and fruit set for the 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.

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. Note: Copper can darken blemishes such as wind rub.

Copper foliar sprays can also be used for the management of snail populations, forcing them out of the canopy and onto the ground where baits await. Be careful not to contaminate ground applied snail baits with the copper spray as this will deter the snails from eating them.

Soil management

If your soil requires the addition of gypsum (for soil structure improvement in heavy soil types) or lime (to increase soil pH or make it more alkaline) now is the best time to apply.

Pests

- Copper sprays should be applied before autumn rains to reduce the incidence of Septoria spot, greasy spot, Phytophthora, brown rot and anthracnose.
- Monitor leaf miner and control with oil sprays when activity is detected.
- Monitor scale crawlers and apply oil spray to infested areas when crawlers are active.
- Continue to monitor fruit fly levels and control with bait sprays. Be prepared to increase baiting frequency and density if trap numbers indicate the need.
- Continue to manage snails. Snail activity will increase towards the break of season and now is the best time to bait. Autumn baiting will kill adult snails before they have a chance to lay eggs. Snails are also hungry after their summer hibernation.
- Keep an eye out for galls caused by citrus gall wasp. You can send in a report using My PestGuide Reporter.

Queensland

Climatic conditions

Mild temperatures have prevailed during April with both minimum and maximum temperatures being below average. This has been a welcome relief from the temperatures received during summer and most of autumn. Rainfall has been quite limited during the month, however after the deluge received during March this has been welcome as it has allowed the soil to dry out.

Location	Monthly Rainfall mm	Historical Avg Rainfall	AvgMax Temp °c	Historical Avg Max Temp	Avg Min Temp °c	Historical Avg Min Temp
Gayndah Airport	6.6	22.4	27.7	29.1	14.3	15.2
Mundubbera Post Office	10.0	40.2	N/A	N/A	N/A	N/A
Emerald Airport	0	30.0	28.9	29.9	15.4	17.0
Gin Gin Post Office	12.8	68.5	N/A	N/A	N/A	N/A

Phenology

The harvest of Lemons, Imperials, Navels and Grapefruit has been progressing for the past month. Nova and Freemont harvest has started in the past week as the external colour has allowed.

Internal qualities of the Imperials have been somewhat “bland” until the last few weeks, indicating that the fruit had low sugars and lower acid content. Flavour profiles of the fruit have now improved as the sugar content has increased.

External wind blemish levels are reported to be quite low giving growers an excellent Class 1 packout. The external appearance of the Imperials at retail level to date has been quite poor with many examples of bruising and ethylene burn which is appearing in the days after processing.



Figure 1: Imperials showing ethylene induced rind breakdown

Pests and diseases

Emperor brown spot levels have increased in some blocks following the rain event of late March. This has been further exacerbated by mornings of high fog levels. Growers are again reminded that late autumn and winter are the periods where higher levels of infection can occur.

Black spot levels have not increased since the initial symptom expression in February and at this stage the disease incidence looks to relatively minor this season.

Spined citrus bug and fruit spotting bug are occurring sporadically and some treatment is needed for these pests.

An interesting physiological disorder has appeared in recent weeks in a Lemon block. The disorder appears to be Rumble where the oil glands on the rind collapse. The incidence of Rumble is extremely rare and there does not appear to be any preventative measures that can be taken.



Figure 2: Lemon showing the symptoms of Rumble

Queensland fruit fly levels remain quite low and damage from this pest has been rare this season. Adult flies have been seen on maturing Murcott mandarins, therefore all growers should be including these blocks in their baiting program.

Oriental mite continues to be problematic in some blocks, although the populations are not exploding like they were during February and March.

Riverland, Murray Valley and Riverina

Climate

Mean daily maximum and minimum temperatures were at, or slightly above average for April. Mean maximum temperatures for the first half of May have been near average, however mean minimum temperatures have been one to two degrees below average. Moderate rain occurred in late April throughout the regions.

Phenology

The fruit are at colour break and maturing.

Management

Fruit development, size & harvest: Colour development has been accelerated in early May with low minimum temperatures. M7 harvest commenced in mid-May. Internal fruit maturity of varieties is progressing well. Navelina harvest is expected to commence towards the end of May followed by Lengs. Navel crop load is expected to be higher than last year, fruit size is lower than last year but mostly still within marketable ranges.

Disease Management – CRITICAL: It is **critical** to apply copper sprays (if not already) to protect fruit from fungal infection and reduce the incidence of Septoria spot, Phytophthora brown rot and greasy spot in the orchard (**Note: Copper will NOT protect against sour rot or blue/green mould**). Phytophthora is an export quarantine disease of concern and copper application is essential for export fruit. A second application might be required in the Riverina in early July for later hanging fruit.

Spread your harvest - GA: Spreading the harvest can assist in reducing mid-season supply pressures. If winter rains delay your harvest you could be left with over mature fruit that have a high susceptibility to rind breakdown and are unsuitable for export. The application of GA now can significantly assist in maintaining good rind quality. It can also help to reduce puffing of mandarins. GA application will provide benefits if harvest is delayed. Applying GA during the later colour development stage (i.e. half to three quarter colour) is considered to have some benefit, but a lesser effect as compared to the early colour break stages. Discuss GA options with your packer and/or advisor and check with your state authority. Always follow label recommendations.

Weed control & tree skirts: Maintaining high tree skirts is vital to ensure fruit are not contaminated with herbicide or become infected with Phytophthora (low hanging fruit are at high risk to Phytophthora). It is best to skirt and remove low hanging fruit than risk

export quarantine issues. Shrouded herbicide sprayer should be used throughout the season to ensure fruit are not contaminated with herbicide.

Cling sprays: The application of a cling spray is important to reduce premature fruit drop especially on susceptible varieties (Leng) and late hanging fruit. It also helps to maintain greener buttons on fruit. A second spray before bud burst (late June/early July) might be required to hang fruit longer. Sprays applied after bud swell (late July) might distort new growth. Fruit sprayed with cling spray have less button tears. Removed buttons are a possible site for disease infection. Refer the label if GA can be mixed with the cling spray.

Pruning: Pruning is an essential practice for fresh market fruit. It encourages higher quality wood development and reduces potential flowering sites. Pruning can commence straight after harvest and should be a serious consideration for early maturing varieties.

Snails & Fuller Rose Weevil: Autumn rains have begun and now is the time to apply snail baits to control snails before breeding occurs. This season is expected to have a higher snail pressure from the summer rains and increased vegetation. Spray copper for disease control and to deter snails entering the canopy. Ensure tree skirts are maintained and a good weed control program is implemented to reduce FRW risk and soil diseases affecting fruit.

Oleocellosis & Harvest Handbook: Some incidence of oleocellosis has occurred on semi coloured early navels. Younger/greener fruit are more susceptible to oleocellosis. Harvesting for degreening should be conducted with extra care. Familiarise yourself with optimum harvest practices to reduce oleocellosis damage. The “Australian Fresh Citrus Harvest Handbook” is available from the NSW DPI citrus web site ([click here](#)). It is also available from packers. It provides instructions to new pickers on how to handle fruit carefully. A few seconds of poor harvesting can ruin a season of fruit growing.

Export Protocols: Ensure that no split or damaged fruit are harvested. Insects that attack damaged fruit can cause quarantine problems. Continue with snail baiting if required and maintain tree skirts to reduce the ability of pests (FRW) to move into trees.

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