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Season Update

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Western Australia

Seasonal outlook for September to November

The chances of a wetter or drier three months are roughly equal for most of WA. A wetter-than-average spring is likely in localised areas over northwest WA such as Kimberley region. There is an equal chance of above median maximum and minimum temperatures for September to November for southwest WA. Northern regions of WA have over 70% chance of exceeding the historic median daytime and night time temperatures.

Evaporation and irrigation

Average daily evaporation rates for the coming month of September are: Harvey 3.2 mm, Karnet 2.5 mm and Carnarvon 6.6 mm. A large citrus tree (14 metre square canopy area) will use an average of 31 litres of water each day during September in Harvey and 65 litres in Carnarvon.

Phenology

Bud break and most varieties have started to develop flower buds. We are now in the pre-bloom to flowering period which runs through to October. Most trees are past the bud break stage now.

Pre-bloom to flowering is a critical period for spring flush and flower development and is a high demand period for nutrients. The key management goal for this stage is to **ensure the trees are well supplied with all required nutrients** leading into flowering and 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. The buds that have burst (as shown in the photo) will form your spring flush.

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: 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: Check your orchards for signs of citrus gall wasps, a new pest in WA. You will see distinctive galls, or swollen woody areas along the last year's growth. Prune off any galls and destroy the material. Visit the DPIRD website for more information. 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.

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.

Queensland

Climatic conditions

Rainfall has generally been much lower than average (except for Gayndah) during August in all of the growing areas. Average maximum temperatures have been approximately 2 degrees above long term averages which seems to be a continuing trend. Average minimum temperatures have been consistent with historical 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	45.4	25.1	26.3	24.6	8.5	7.9
Mundubbera Post Office	6.4	26.0	N/A	N/A	N/A	N/A
Emerald Airport	7.4	22.4	28.0	25.3	10.7	10.0
Gin Gin Post Office	9.2	32.6	N/A	N/A	N/A	N/A

Phenology

Flowering is progressing in the early season varieties, although it does seem that the flowering is somewhat drawn out given the warm days and cool nights. The protracted flowering has been apparent over the past few seasons and it seems that this season will be no different.

Early signs of inflorescence are starting to show in the Murcott blocks.

Large degree of variability in flowering in a block of Imperial mandarins.

Grower feedback

The Murcott packing season has finished for most growers with all growers reporting an excellent result this season. Fruit quality has generally been very good with smooth skin to satisfy their customers. Albedo breakdown has not been an issue this season, improving the pack outs compared to last season.

Management

Pruning of blocks continues with most of the early season varieties being completed by now. Pruning of the late season varieties will follow.

Fertilizer applications will have been started across most orchards with most of the basal applications to be completed by the end of September.

Those lemon blocks that have advanced petal fall have already received their first fungicide and it is predicted that the majority of blocks will have received their first spray towards the end of September.

Pests and diseases

Aphids may become a problem on the spring flush, and if allowed to build up in numbers they may cause honeydew and subsequent sooty mould.

Broad mite and thrips are already showing up in numbers that require control in lemons. It is expected that this pressure will continue throughout September and October.

Queensland fruit fly levels have been relatively low with no reports of any damage to the late season varieties. Any remaining Murcotts should be baited for QFF twice per week. In addition to this, growers should be installing the MAT's that have been so useful in reducing the QFF population.

Emporer brown spot pressure is low given the dry conditions, however the spring flush may be susceptible if showery conditions return.

Although the past season has been much improved for Black spot, everyone should maintain vigilance on this disease and follow a thorough preventative fungicide program.

Riverland, Murray Valley and Riverina

Climate

August mean daily minimum and maximum temperatures were near average. Dry conditions still persist, growers are advised to carefully monitor sub soil moisture levels. A minor frost did occur in early September, but were below fruit damaging temperatures.

Phenology

Budburst and subsequent shoot growth is about one week earlier than the long term average for Sunraysia and the Riverina, but consistent with flowering in recent years. The trees are at the late white bud stage (petals formed and ready to start opening). Shoot growth and flower density is good. Bud burst has been highly variable in the Riverina. Within the block some trees have shoots at about 3 cm whilst other trees are still at bud swell. This will result in a very long, or second flowering. Growers are advised to make note of their blocks shoot growth. It is probable that the frosts that occurred during winter have stresses trees resulting in delayed budburst of some branches and tress. Leafy inflorescence (pictured) tends to set a higher percentage of fruit than leafless. Check you orchard for the level of flowering and ratio of leafless to leafy inflorescences.

Management

Flowering & Crop regulation: This season cropped above average. It is difficult to predict district-wide cropping levels however individual blocks flowering could be an early indicator. If very low levels of flowers are observed then a low cropping year is expected. If a medium to high level of flowers are observed then there is a potential for a high crop load however it is difficult to predict because temperatures during the fruit setting stage can significantly impact on fruit set. Do not be fooled by medium levels of flowers especially if they are leafy inflorescence. Leafy inflorescence flowers have a significantly higher level of set than leafless inflorescence. Often a high level of leafless inflorescence may result in a low fruit set and crop load.

Nutrition: Traditionally a single micro nutrient spray is applied when leaves are two thirds expanded at about mid to late October, however for blocks with persistent micro nutrient issues a pre flowering spray should be applied when leaves are about 2cm long in early/mid September. The new leaves need to be at least 1.5 cm long so there is enough surface area to absorb the micronutrients (very little micronutrients move from old leaves to new leaves, need to target the young leaves). Early bud burst means this optional early

timing is NOW. Early September is the time to commence applying ground nitrogen. Nitrate forms of nitrogen (i.e. calcium nitrate, potassium nitrate) are thought to be more available in the colder soil temperatures of early spring because of the slow conversion of ammonium to nitrate.

Pruning & hedging: Pruning after harvest will encourage new growth that bears bigger fruit. It also assists in reducing crop load in an "on" year. Hedging is discussed in the flowering section. Pruning guide is available from your local citrus organisation. Note: pruning late navel varieties from flowering to fruit set has been known to result in an excessive fruit drop.

Pests & Diseases & Issues

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. The time to focus on Light brown apple moth, Katydid and thrips will start are the end of petal fall.

LBAM mating disruption: 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.

Harvest

Majority of Washington harvest is had completed by mid-August, some reports of albedo breakdown were noted and this facilitated Washington harvest. Late navel harvest is occurring and is about two thirds of the way through. A proportion of late navel blocks in the Riverina were not harvested for export due to frost damage. Due to the higher crop load and unusual late flowering fruit size has been very variable. Fruit have also had slightly higher than ususal acid levels. There is still a good demand at export markets, however the variable fruit size might impact on per ton returns on some blocks.

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 adequate 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.

Events calendar

October 17	Export and domestic committee meetings, VIC
October 18	Citrus Australia Board meeting, VIC

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