



# MARKET *Intelligence*



**DECEMBER 2019**

Citrus Oils • Essential Oils • Chemicals • HIC



# Welcome

After one of the most challenging years in recent history, some citrus markets are firming but the broader outlook still remains uncertain. The uncommonly fast softening of the cold processed orange oil (CPOO) and lemon oil markets made a dramatic mark on the industry, with many facing continued challenges ahead.

Many markets have reached their bottom and some are now showing strong signs of an upturn, with reduced crop volumes having an impact on the direction of pricing. While some crop forecasts look positive, there are also concerning stories coming out of Mexico. Droughts have had a marked effect on crop volumes and time will tell what the longer term impact will be.

Elsewhere, there is a mixed picture across a number of other essential oil raw material markets. Poor weather, increasing processing costs and fluctuating supply levels are all coming in to play. However, many markets remain stable as supply and demand appear to be balancing out. We also look at the importance of localising formulations to suit local market preferences in our High Impact Chemicals feature.

As always, facilitating and driving good communication within our industry is of paramount importance to our team of global buyers. By working in close collaboration with our suppliers and customers, we are best placed to navigate this industry and deliver success for all.

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**“The Brazilian crop could be 10-15% lower than originally estimated due to an extremely dry 10-day spell in October”**

Florida orange  
**2.3mbx**  
Increase on USDA's  
July estimate  
of 71.7 mbx

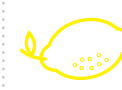
**BOX  
COUNT**

## Citrus Oils *key takeaways*



### Orange

- Brazilian orange crop could be 10 - 15% lower than forecast
- CPOO, d-limonene and terpenes have all seen an uplift
- Floridian orange forecast adjusted up to 74 mbx
- HLB breakthrough at Washington State University



### Lemon

- Record 335,000 mt of lemon processed in Spain
- Argentinian 2020 crop looking consistent with 2019
- Positive stories coming from the USA
- Volumes are down by 10% in Sicily due to Malcecco



### Lime

- Mexican markets remain challenging as prices trend upwards
- Peruvian crop may be down by approximately 20%
- Droughts have impacted Mexican Expressed Lime



### Grapefruit

- Florida looking positive this year
- Mexico showing smaller volumes due to drought

**CRAIG LANDES (MCIPS)**  
Global Lead Citrus Buyer



## Citrus Oils *the full story*

### Orange

#### MARKET MOVEMENTS

##### Brazil

It has certainly been an interesting few months since our last issue. The cold pressed orange oil (CPOO) crop forecast continued to look consistent with Fundecitrus' 10th September 2019 publication, which suggested a 388 million box count (mbx). ICBC and IFEAT (the two major global conferences) came and went the same month which saw very little change to the marketplace other than heavy speculation, adding further uncertainty.

However, news spread shortly after that the Brazilian crop could be 10 - 15% lower than originally estimated due to an extremely dry 10-day spell during October. The latest Fundecitrus publication released on the 10th December 2019 suggests a slight downward adjustment to 385 mbx for the current season, although losses to next season's crop are yet to be quantified.

As we moved into the last quarter of 2019, the bottom of the market arrived with a sudden up turn. Clearly demand was a driver, coupled with a smaller projection for season 2019 - 2020 ahead. Key global market indicators appeared to suggest a market attempting to find its sustainable level once again.

Some buyers took a position whilst others couldn't as they continue to work through high value inventory before being readily able to enter the market again. The question on all our minds now is, 'At what level will the market stabilise?'.

Refreshingly, d-limonene and terpenes also found the bottom, as we witnessed a similar sudden uplift to that of CPOO. This was encouraging for those who concentrate and fractionate oil who have been challenged with a minimum USD 2.0/kg gap between oil and terpenes for several months throughout the year. The prices of d-limonene and terpenes fell to levels that attracted large buyers away from alternatives products, such as pine derivatives, and back to d-limonene. This strong demand resulted with many large processors selling sizable proportions of their annual volumes.

With demand continuing to remain firm, the market is no longer static. Both orange oil, d-limonene and terpenes continue to rise in search of an equilibrium between global supply and demand. For many it's critical that as these markets rise, they rise at the same speed, arriving at levels where the gap is sensible, and prices are suitable for all in the supply chain.

##### USA (Florida)

As we moved into Q4, the USDA's 8th November 2019 update suggested a slight adjustment upwards of 74 mbx from July's estimate, which quoted 71.7 mbx. Looking back over the last four seasons (excluding the 2017 - 2018 seasons), it's encouraging to see some consistency in crops size.

However, it was only 10 years ago that this crop was reliably around the 240 mbx mark. The change in weather patterns, as well as changes brought about by disease, over the past decade has undoubtedly reshaped our industry and the lives of those dependent on it. Hurricane Dorian struck the Abaco Islands on the 1st September 2019, peaking as a category five storm with winds reaching 185mph. It caused devastating damage in Grand Bahama with 70,000 people left homeless as countless buildings were washed out to sea.

Continued on next page





**“A team of Washington State University researchers have made a significant breakthrough in their work with HLB”**

Just a few days later, Dorian began to move north westward, almost parallel to the east coast of Florida. It thankfully continued this course, staying offshore weakening in strength, before finally dissipating near Greenland.

Hurricanes can develop quickly, causing significant damage in a short period of time. The reality of our climate means that Dorian could have easily had the same impact on the Floridian crop as Irma, which had serious implications for us all.

### HLB BREAKTHROUGH

As a key concern for all in the citrus industry, extensive research into finding a cure to Huanglongbing (HLB) continues on a global scale. We are delighted to report that a team of Washington State University researchers have made a significant breakthrough in their work. The team has successfully grown the bacteria that causes greening in their laboratory for the first time. In being able to grow this elusive bacterium, researchers are in a much stronger place to develop effective treatments for this devastating disease.

### SUSTAINABILITY CONCERN

As a result of the supply issues caused by Irma and the concerns around the region's ability to bounce back, many in the supply chain have secured medium to longer term contracts with alternative growers in other countries.

As a result, some Floridian growers may have to let crops hit the ground without being harvested as the demand has gone elsewhere. This asks the question, what does the sustainable future of the region look like?

### USA (California)

The new season is off to a positive start. Reportedly, growers have not experienced the challenges of puff increases beyond the norm as they did last season. The market dynamics seem to have returned to what we would expect, with projections anticipating that 70% of fruit will go to the fresh fruit market and the remaining 30% to processing.

### Mexico

Rounding up on 2018 - 2019 season, we believe the total figure of oranges harvested was close to 4.2 million metric tonnes (mmt), of which approximately 50% (2.1 mmt) was directed to the processing industry. In our last issue, we quoted a forecast figure of 4.6 mmt, with 55% set for processing.

The short fall came as a result of fruit size being smaller than originally expected during the middle part of the processing season. Coupled with lower juice and oil yields, this made processing on a larger scale less commercially viable for some processors.

Due to the lower volume, this amount of fruit processed generated approximately 5,500 mt of CPOO and 1,700 mt of d-limonene, rather than the 7,000 mt of CPOO and 2,500 mt of d-limonene as hoped.

As we moved closer towards the 2019 - 2020 season, the picture remains bleak on an unprecedented level. Severe droughts between May and August had a significant impact on crop volumes with a 50% reduction looking possible. As a fresh fruit nation, this could have an impact on fruit reception. Some will have started processing in November 2019 as opposed to last season when they began in September or early October. This season is set to be a very challenging one and although is underway, it's off to a slow start.

## Lemon

### Argentina

Moving towards the end of the season, the oversupply imbalance continued to have an impact as prices fell dramatically to levels unsustainable for many processors.

It became a market of win or lose for many as some buyers negotiated at very low price levels. This will only serve in adding pressure to the supply chain when crops are at the other end of the scale and significantly reduced. It's estimated that 200,000 mt of lemons from the total crop were either left on trees or discarded by packing houses without being processed.

Prices for concentrated lemon juice also took a downturn without a validated reason as to why.

Looking towards next season's crop volume, it's thought 2020 will be like 2019, but perhaps a bit smaller. We expect around 1.3 mmt for processing, with similar capacities accessible. No weather challenges are envisaged at this stage, however the new season is still far enough away for this to change.

### Spain

The drive continued as we entered Q4. We have had confirmation that a record 355,000 mt of lemons was processed this season. A particularly incredible figure when considering the start to the season for the industry.

Looking over the previous two seasons, this represents an approximate average increase of 40%. For the new season, 2019 - 2020 Alimpo's September publication suggests a smaller crop by around 15%.

Fruit prices for processors are expected to remain in line with last year, ensuring there's a minimum price paid to farmers to cover picking and transportation costs to the industry. However, with fresh fruit demands, a smaller crop and oil prices at rock bottom, this could result in the industry only receiving 250,000 - 270,000 mt of fruit for processing this year.

### USA/California

Lemon is also looking very promising at the outset, particularly for processing with projections of fruit allocations for the industry anticipated to be very similar to 2019. This would represent an approximate 60/40 split in favour of processing.

The larger volumes of fruit for processing will flow between the months of February to April, with the main Lisbon and Eureka varieties being split evenly. There is early talk amongst growers of a potentially cold and dry winter, although it's too early in the season to validate this.

### Italy/Sicily

As we approach the new season, projections suggest volumes to be down by 10 - 15% due to the discovery of Malcecco (a fungal disease) also found in the bergamot crop. As growers reach out for financial government support, heavy inventories of juice and oils remain with processors.

Production is off to a slow start as fruit prices remain high for processors and not commercially viable. With such heavy inventories, fruit prices may soften as we move into early 2020. We are pleased to report there have been no significant weather challenges to date, and fruit size also looks to be in line with what is considered normal.

## Lime (Distilled)

### Mexico

We have seen no short term changes in distilled lime due to the heavy stresses being felt in the supply chain. In general, the fruit prices are trending up to approximately USD 130/mt. This year is proving to be a challenge as fruit reception between August and October is down. November marked the fifth consecutive month where fruit volumes for processing were significantly below levels during the same period in the previous year.

This raises concerns as November historically marks the start of the fall/winter crop. The outlook for the forthcoming weeks suggests a slight recovery, however looking back over the last five months, year on year, not enough to avoid a deficit position year to date. Fresh fruit prices remain around 2.5 times higher than industrial fruit for processing.

Unless the gap closes, competition for fruit will continue to present a challenge to processors. It's thought inventories of both oil, juice and peel may be at a critical level, lower than we have seen in many years. With oil demand remaining firm and peel showing positive signs of recovery, this will potentially further intensify the challenges to the sustainability within the supply chain.

### Peru

The northern regions experienced a very cold winter, reaching some of the lowest temperatures ever recorded in these areas. This resulted in many blooms falling to the ground which may reduce the crop by 20% this season overall.

October's picking and processing run is only expected to commence at the beginning of December as a result. All eyes are now on the main crop as we look towards the end of December, and we consider the challenges ahead of potential fruit cost increases and production capacity decreases.

## Lime (Expressed)

### Mexico

The drought has had a marked impact on the crop, with final estimates suggesting volumes around 50% down from last season. Towards the latter part of August, fruit supply thinned out to levels where some processors could only run once or twice per week - a clear illustration of the challenges caused by unfavourable weather.

September and October continued with little change, with some processors operating well below full daily capacities. It was also estimated that due to the drought, the yields of downstream products (such as juice and oil) from the fruit were 7 - 10% down from last season.

As fresh fruit demand remained strong during the summer months, processors were left to compete with the fresh market on pricing for fruit reception, at a time when there was already substantial pressure from the market on peel and oil costs.



# Tangerine

## Clementine (California)

One would think with the numerous wildfires that California has experienced this year, that the citrus crops surely would have been affected. Thankfully, the citrus growing areas were spared from these fires and the clementine crop, for one, looks good.

California has just started to process and it is anticipated that the same amount of fruit will be processed this year as last year. About 70% of total volumes will go to the fresh fruit market and 30% to processing.

The split used to be closer to 80/20, but in order to keep up with the increased demand for the fresh fruit, the number of trees producing fruit has gone up exponentially in the past three years. As a result, even though demand has increased, so too has production.

## Dancy (Mexico)

Dancy tangerine is processed in Mexico for about two or three weeks in December. Processors had hoped to extend that to three to four weeks this year, but do not know if they will have the fruit to run that long.

It is hard to predict how much fruit they will be able to obtain as parts of Mexico have been experiencing one of the worst droughts in seventy years. A lot of the citrus growing areas are being affected by this drought. There have been a few days of light rain very recently, but we doubt it was enough to have a significant effect on any of the fruit.

# Grapefruit

## Florida

Florida is expected to have a decent grapefruit crop this year. Processing has already started and will go through till April or May, depending on how much fruit is available. The USDA has forecasted 4.6 mbx of grapefruit this season, with white grapefruit not even reaching 1 mbx.

We have all heard the saying, “the cure for high prices is, high prices”. The grapefruit market may be a perfect example of that philosophy. Over the past few years, prices soared to record levels for both white and pink grapefruit. The prices got so high, that many of the buyers or consumers of grapefruit derivatives decided they had enough and reformulated.

Now, the market seems to be in an adjusting phase with prices continuing to fluctuate. There is still strong demand for good quality white grapefruit oil but with very little available, at high prices but lower than in recent years. Demand for average to low quality pink oil seems to have decreased substantially, with large volumes available at very low prices. Yet there seems to still be a demand for higher quality pink grapefruit oil, with not so much of that quality available, at prices to reflect that.

It seems this settling or adjusting period will continue for some time. Grapefruit is still highly desired for both flavour and fragrance applications, so it is not going anywhere, just maybe not so fast or so high for the near future.

## Mexico

Mexico started processing pink grapefruit in October and usually continues until the end of November. As the volume for white grapefruit is much smaller, processing is not started until the beginning of November and usually lasts until the same time. However, the processors have been getting small volumes of fruit every day because of the drought. It is still too early to tell how short the grapefruit season will be in Mexico, but as each day passes we have a clearer picture.

“The USDA has forecasted 4.6 mbx of grapefruit this season, with white grapefruit not even reaching 1 mbx”



# ESSENTIAL *Oils*

## LITSEA CUBEBA (CHINESE)



This year’s production was down by 30 to 40% but, up to now, the market hasn’t felt the impact. We believe this is a result of the low cost of citrus oils and hence the lack of necessity to find cheaper, Citral alternatives for citrus type products. However, as the next harvest is a long way off, we are yet to see what effect the reduced volumes will have. With demand still strong relative to supply, there remains an expectation that prices could still rise.

## GINGER (CHINESE)



With the remaining carryover stock from last year working its way through the supply chain, prices are relatively stable. It is unlikely that this will remain the case for much longer as many factories have decreased production for environmental protection reasons. New material costs are likely to be higher as producers now need to cover the higher costs of running their factories according to the environmental protection policies.

## ANISEED/ANETHOL (CHINESE)



We have heard some reports which suggest that this year’s production was down by approximately 40%. This fall has made the current market quite challenging as supply is tight while prices are high. Demand for the fresh spice has increased considerably and with the high returns being achieved here this is encouraging farmers to sell into this market rather than to industrial processing.

Many farmers chose not to harvest the leaves and twigs for oil production in the hope of having a better fruit harvest next season. With the next harvest not due until August next year, we could face a challenging period with regards to availability of downstream products.

## EUCALYPTUS GLOBULUS (CHINESE)



Prices took a sharp dip but are expected to bounce back just as swiftly. Collectors and crude oil producers have seemingly lost interest in collecting leaves and producing crude oil, due to the low return. It is believed that the crude oil producers may still have stock but are unwilling to sell at these current low prices. Many factories are said to be running low on the crude oil, so we see a potential gap in availability on the horizon.

## GARLIC (CHINESE)



The price of fresh garlic bulbs continues to rise. We have heard that no new oil will be produced this year as a result. Thankfully it appears there is a large volume of carryover stock which is keeping the price stable for now. If availability should change and new oil must be produced using the extremely high-priced fresh garlic bulbs, the cost of the oil could be very high. A very similar scenario to that seen repeatedly over the last decade.



# CHEMICAL *Ingredients*

## CINNAMIC ALDEHYDE NATURAL ETHYL BUTYRATE

The price of cinnamic aldehyde natural has dropped in recent weeks due to news of an exceptionally good cassia crop, the raw material for this product. The strong cassia output has led to prices dropping to a new low. As a result, its derivative products are considerably cheaper and readily available.

## METHYLCYCLOPENTENOLONE

In our last issue, we spoke about the methylcyclopentenolone (MCP) prices rising due to limited supply and an increase in processing costs. This resulted in prices doubling over a short period of time. In spite of this, over the last few weeks we have seen prices coming back down.

We believe this is due to the number of new producers entering the market. This has resulted in an abundance of supply with the new producers offering favourable pricing to buy their way in. In turn this has driven existing producers to drop their price to maintain business. It is not yet known if this product has reached the bottom of the market or if it will continue to drop further.

## MALTOL AND ETHYL MALTOL

Identifying how this market will change in the coming months is challenging. Prices have been falling for the same reasons as MCP. New producers have entered the market, leading to an excess of supply. However, this could all change with ongoing environmental inspections happening in China, the result of which could adversely influence pricing and availability should production be curtailed as a result of these checks.

## VANILLIN AND ETHYL VANILLIN

This is a market which has remained relatively stable over the last few years in comparison with many other aroma chemicals. We believe this is expected to change as the biggest producer recently experienced an incident which has halted manufacturing completely. We await to see the full extent of the impact on the market but at the moment it seems to have affected the latter first as we see availability issues becoming more common.

## ETHYL BUTYRATE

Supply of ethyl butyrate is now much more stable, with many producers back up to full production, although it may be a few months before the backlog of orders are fulfilled. Many of the non-compliant factories are no longer able to produce this product due to issues with their environmental checks, but we believe we are over the worst with no more significant issues with supply expected in the short to medium term.

## DIHYDROMYRCENOL

The price of dihydromyrcenol has dropped considerably since this time 12 months ago, due to a large increase in supply into the market. A large manufacturer of this product ceased production a little over 12 months ago which cause a shortage. However, it is now understood production is back underway and as a result of this, prices are expected to remain low for the foreseeable future.

## CIS-3-HEXENOL

Production for the Cis-3 products is just beginning to get back underway, and material is expected to come back into the market during H1 2020. Production had stopped for many months due to an over run of planned maintenance following complications, but we are seeing the slow return of some volumes in the market. We believe supply into the spot market will remain low until at least Q2 or even Q3 of the new year.

## GUM TURPENTINE

The market has remained stable for several weeks, which has created some much-needed consistency for downstream products like alpha and beta pinene, terpineol, and terpinyl acetate. Despite some recent softening, prices are still relatively high and are some way off reaching former levels.

## LACTONES

The last few months have seen some much-needed softening in pricing from the record highs we saw in early 2017. Some materials in this category have fallen below where they were before the sharp increases over 2017 - 2018. For example, Aldehyde C-14 is currently at the lowest it has been for many years.

This is a result of strong supply competition, causing a pricing battle. We continue to watch this market as we drift towards some producers' manufacturing cost.

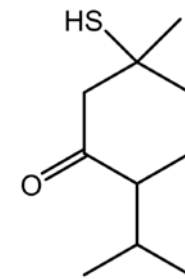
# HIGH IMPACT *Chemicals*

## GLOBAL PRODUCTS WITH A LOCAL TASTE

Fine tuning formulations to fit individual market preferences is a key factor when globalising products, as each region has its preferred profile. Our range of high impact chemicals provide the necessary toolbox for tweaking formulations and pushing them in the required direction to satisfy a global audience.

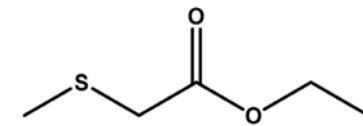
### MERCAPTO-P-MENTHANE (FEMA 4300) CAS: 29725-66-4

An interesting molecule that hasn't yet achieved widespread commercial application, this remarkable molecule adds depth to citrus and a rich roasted character to pumpkin, sesame and peanut flavours. It has a unique ability to increase headspace diffusion of formulations it is part of. Typical usage 0.1-0.5 ppm.



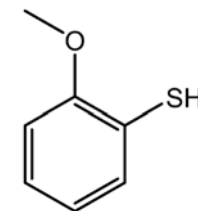
### ETHYL-2-METHYLTHIO ACETATE (FEMA 3835) CAS: 4455-13-4

A complex ester that works well in a whole host of applications, imparting a distinctive fruity green tropical note when employed at levels of 0.1-1.0 ppm enhancing the overall fresh character. Nature identical in durian, plum and cantaloupe.



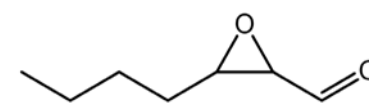
### ORTHO-THIOGUAIACOL (FEMA 4159) CAS: 7217-59-6

A distinctively meaty garlic note is imparted to formulations at 1.0 ppm and a smoky, earthiness at 0.1 ppm which is ideal for coffee, soups plus a whole range of savoury snacks. Nature identical in coffee.



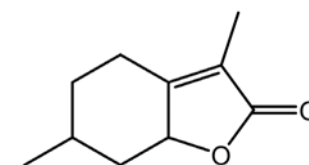
### 2,3-EPOXYHEPTANAL 10% IN TEC (FEMA 4658) CAS: 58936-30-4

A key molecule for a well-rounded fatty profile, applications include citrus varieties, soft cheeses, ghee and fatty meats such as lamb. Contributing a much stronger flavour profile than odour, typical usage ranges from 0.1-1.0 ppm.



### MINT LACTONE 1% IN TEC (FEMA 3764) CAS: 13341-72-5

A remarkable molecule, it adds a refined coconut note to fruit beverages at 0.5-1.0 ppm whereas its coumaric, minty character is prevalent at 0.1 ppm and lower – excellent for smoothing mentha piperita and arvensis blends. Nature identical in peppermint.





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