



MARKET

Intelligence



APRIL 2020

Citrus Oils • Essential Oils • Chemicals • HIC

Welcome

This issue, we bring you the latest insights from the industry to share our knowledge with the hope of supporting you and your business objectives.

Since our last report, we can say with confidence that the orange market has turned, with both demand and prices firming. There is cause for optimism as crop estimates are proving accurate, however the supply chain will need to work together if the benefits are to be felt by all. Those who held off replenishing while the market was falling or are working through high cost inventory and therefore delaying their re-entry into the market, may experience challenging times ahead.

In other origins and crops the landscape is looking more difficult. Last year's drought has had a marked impact on the citrus market in Mexico, with 50% forecasted orange crop reduction now a harsh reality. The impact of this is likely to be felt as we move through this season, and into the next. The record oversupply in the Argentinian lemon market also continues to daunt the industry worldwide, particularly as we expect this imbalance to last for months ahead. Unfavourable weather is making its mark on the fresh ginger harvest, with Indonesian nutmeg suffering similar issues.

CORONAVIRUS (COVID-19)

As each day passes, we are learning more about the coronavirus and its increasing impact on, seemingly, every aspect of life. Thousands of companies throughout the world have reacted to the COVID-19 threat by requesting employees work from home where possible, quarantine as necessary and social distance themselves. Several schools have been closed for an extended period of time as well as bars, restaurants, theatres, concerts and large gathering events. The pandemic has also caused understandable delays to shipments worldwide, though we know everyone is doing their best to keep products moving best they can. We do know there are sectors of fruit picking and processing that have just stopped completely for now. The protection of people is everyone's number one concern. It is too soon to tell the extent and longevity of the impact the coronavirus will have on anything, but it is clear that collaboration, open communication and trust will be key. It will take some time for our world to heal, both physically and economically. We want all of our colleagues, families and friends across the globe to stay safe and healthy. If you are looking for detail on how Treatt is responding to the COVID-19 crisis, please visit our website at www.treatt.com/coronavirus

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USDA Reports a **71 mbx** count for Florida orange **BOX COUNT**

“The cold pressed orange oil crop forecast for 19/20 remains consistent following Fundecitrus’ latest publication on the 11th February, which confirmed a 384 million box count.”

Orange - Brazil

Citrus Oils *key takeaways*

Orange

- Brazilian crop remains consistent with forecasts
- Slight drop in the forecasted Floridian box count
- Navel variety under pressure as demand for Clementine and Murcott increases
- Mexican crop down by 50%
- Demand for d-limonene, terpenes and orange oil is definitely increasing

Lemon

- Lemon peel demand is increasing with big consumers returning to the marketplace
- Forecasts suggest a 22% reduction in Spanish crop
- Spain and Italy devastated by coronavirus with a huge impact on all industries

Lime

- Challenges look to remain throughout 2020 for Mexico
- Significant increase in demand and prices for distilled lime
- Peru's forecasted reduction confirmed

Grapefruit

- Increase in USDA forecast
- White variety still scarce in Florida
- Hope for a more stable market going forward

Citrus Oils *the full story*

Orange

MARKET MOVEMENTS

Brazil

The cold pressed orange oil (CPOO) crop forecast for 19/20 remains consistent following Fundecitrus' latest publication on the 11th February, which confirmed a 384 million box count (mbx). It's still thought that the crop could be 10-15% down from the original estimate, however this may impact the new crop more than the current, but this is yet to be quantified.

The final crop forecast, will provide us with a firm picture for this season. Early thoughts suggest the 20/21 crop could be as much as 100 mbx lower than the current 19/20 crop and that processing may start two to three months later than normal.

It is evident that the market has turned and now appears to be incrementally rising. Market demand for oil remains firm and many will need to replenish stock as their inventory levels reduce. Those who took a position earlier in the year can offset against what's to come, but those who held off in anticipation of calling the bottom of the market, or are moving through high cost inventory before entering the market again will be challenged. Where the market will settle remains a pertinent question for all.

D-limonene and terpene movements seem to be tracking CPOO, increasing at the same speed, or even more quickly now as demand continues to firm, especially within the cleaning industries. This is a positive for those who concentrate and fractionate oil as it alleviates concerns about the gap between oil and terpenes widening too much, creating even more pressure and challenges for them to remain competitive.

Strong demand for both oil, d-limonene and terpenes, coupled with the potential for a reduced, late 20/21 crop, the 2nd and 3rd quarter of this calendar year could prove to be instrumental as markets find a sustainable level for all across the supply chain.

USA (Florida)

The 19/20 crop has continued on a positive note as the USDA reported a 74 mbx count on both the 10th December 2019 and 10th Jan 2020, though it has dropped slightly to 71 mbx. As we move closer towards the end of the season, let's hope this continues.

Florida processors have completed running early/mid varieties and have already begun processing Valencia's. Fruit size is proving to be bit larger than the 18/19 season, and processing is likely to finish earlier than year's past but overall the outlook is good.

SUSTAINABILITY

In our last issue, we reported that many in the supply chain secured medium to long term contracts with growers of oranges in other countries, as a result of the supply issues caused by Hurricane Irma. As Florida oranges are grown almost solely for processing there is now real pressure on some Floridian growers who may let crops go unharvested if they cannot secure deals with local processors. Let's hope there's a home for all of this season's fruit and the impact of those who went elsewhere is negligible.

Continued on next page



“As a result of the extreme cold snap during the winter in the northern region, a 20% forecasted reduction was confirmed”

Lime Distilled - Peru

Mother nature, on another note, has been kind of late. However, we are aware how quickly that can change as we move closer towards 1st June, the beginning of the hurricane season. Expert pre-season forecasts report slightly above average activity is expected, based on the prediction of average winds and marginally warmer than normal sea surface temperatures across the Atlantic and Pacific oceans.

HLB UPDATE

The positive work of Washington State University as well as several other universities towards finding a solution to Huanglongbing (HLB) continues. Growers are also taking proactive steps to reduce spread of the disease and improve health of their trees. Initiatives have included trips to Brazil to learn about HLB control methods, Floridian growers working with local universities to evaluate their current tree spraying strategies and vast improvements of containment.

Some growers are exploring if current spraying methods encourage the Psyllid to travel tree to tree across the crops. As many growers spray young and old trees indiscriminately, investigations are underway into changing that method to only spray the older trees. This new approach is thought to contain the Psyllid to a more concentrated area of the crop and limit where it reproduces. Time will tell, but we remain optimistic and in hope of a positive outcome.

USA (California)

The picture has continued its positive path here as the processing of the Valencia variety is now underway. However, this season, the Navel variety has come under pressure as demand for Clementine and Murcotts increases, to support certain brands from the fresh fruit market. We understand that Navel growers expect this trend to continue. Last season, Californian processors received more Navels than ever before, with this season looking likely to be similar.

Mexico

The impact of the extensive droughts between May and August has proved to be significant. The projection of a 50% reduction is unfortunately, now, a reality. This means a total fruit crop reduction to approximately 2.1 million tonnes from an average 4.2 million tonnes.

With a standard 50/50 split between the fresh fruit market and processing industry, this means approximately 1.05 million tonnes will be directed for processing this season. Working on a standard yield conversion of 2.6kg of oil recovered per 1mt of fruit, this would suggest this season could produce a total of 2,700 metric tonnes (mts) of CPOO and around 860 mts of d-limonene. Having given those indications, it is very unlikely that there will be the normal 50/50 split between processing and fresh fruit as whenever there is a crop shortage, the fresh market always takes precedence.

In addition to the significantly reduced crop processors are also experiencing both low juice ratios and aldehydes in comparison to what would normally be expected to see this time of the season. The combination of these factors will make this year significantly challenging for all in the supply chain. Strong relationships and collaboration will be key in navigating a path through to achieving all's objectives.

Lemon

Argentina

The global oversupply continued into 2020, with prices falling further to levels not seen for over 15 years. As some processors get ready to start their factories, the crop looks similar to the 2019 season, with early signs of more fruit per tree.

The question then comes, will all processors run at full capacity like the smaller and medium did last year, or could we expect a collective correction bringing annual demand and supply back into a healthy balance? Some processors may only process to service lemon oil contracts, which could limit juice and lemon peel quantities. If this proves the case, we could see overall less fruit processed this crop with fruit again hitting the ground, left on trees or discarded of. Positively, lemon peel demand is increasing with big consumers returning to the marketplace, coupled with new consumers, we feel prices will return to optimum sustainable levels at some point this year.

Oil seems to be moving at a slow but steady speed, although with a deliberate correction to process less fruit, as often seen with readjustment, we must be aware in the potential of a sudden upturn of prices in the near future.

Spain

The challenges have intensified for processors, as Alimpo's latest crop forecast suggests a further 22% reduction from last season's record 1,300,000 mts. Strong fresh fruit demand, coupled with smaller crop size, have already led to marginally increased fruit prices, which will adjust the number of lemons available for processing.

Italy/Sicily

Slow production continues at this origin. Reduced fruit availability and high fruit prices in comparison to the previous year are causing challenges for processors, as are balancing plant costs and remaining competitive for both juice, oil and peel in the global market place. Other citrus crops are also lower than last year's crop, hence the higher prices.

For both of these European producing countries more expensive fruit competing against, still, an over-abundance of lemon oil worldwide will all have an effect on the future outlook for both lemon juice and oil. However challenging, processors remain determined and agile to respond to current and future market needs.

We have all heard how incredibly badly both Italy and Spain have been hit by the coronavirus and do want to just pause here for just a moment to recognize the mass loss of lives in these countries. We encourage support for those we know there. Hoping the worst is now over.

USA/California

Lemon production has continued positively as processors have transitioned from the Lisbon onto the Eureka variety. There has been about 10% more fruit slated for the fresh fruit market recently, a clear demonstration of how market dynamics can change, particularly in a short period of time.

As many of you will recall, it was only two to three years ago that 90-93% of the total crop grown serviced the fresh fruit market. A contributing factor to this may have been in the planting of approximately 10,000 new acres of lemons, which came to fruition both last season and this season, creating a slight over supply for growers. This is good news for processors as, alongside the competition packing houses have experienced from other countries, their storage limitations have enabled more fruit to be directed for processing.

Lime (Expressed)

Mexico

Many processors received fruit on a start-stop basis throughout the main processing season of 2019. Fruit prices were high as a result of the short fall, coupled with intense competition from the fresh fruit market. Fruit was also smaller than previous seasons as well. The effect of last year's crop has also impacted the start of 2020, as some processors have started to run whatever they can from the smaller bloom just to have some oil to offer to the market. Consideration will be given to fruit availability, size and the price per mt. Challenges look to remain throughout 2020 for now, with most hoping for a good rainy spell to break the mould and see a positive change to the fruit, resulting in multiple blooms throughout the year.

Brazil

Some sizable processors have finished crushing the fruit that's been directed to the processing industry. However most, as you would expect, has been diverted to the fresh fruit market. Oil yields appear much lower this season, although demand has been high and continues to be as news spreads of Mexico's significant reduction this season due to an extreme drought during the summer months in 2019.

Lime (Distilled)

Mexico

As we moved into the new year, fruit volumes for processing returned to normal levels, with February even exceeding normal levels. This is encouraging for processors who have endured a consecutive shortfall in fruit volumes from July to December 2019.

Towards the end of 2019, processors were concerned that a 6-month shortfall of fruit reception might result in an overall lower annual production to previous year 2018. It would appear that this was the case as we've seen an estimated 45% reduction, taking inventory levels to the lowest seen in many years.

Although January and February were good months for processors with strong demand, the fresh fruit market also continued to be firm. Prices for industrial fruit remain around the \$140-\$150/mt level. For processors, this could represent an average weighted increase of up to 20% on 2019 prices.

We have seen a significant increase in both demand and prices for distilled lime oil, which we have felt has been coming for some time. As we have seen in the past, when distilled lime goes it can really go, therefore we advise you to keep close to this market.

Peru

As a result of the extreme cold snap during the winter in the northern regions, a 20% forecasted reduction was confirmed. Several processors began their main crop campaign during the middle of January as a result. In a market where 50% of the total crop is directed to the fresh fruit market and 50% to processing, the crop reduction comes with challenges and impacts.

For processors, fruit reception to cover capacities, whilst ensuring continuity of supply to meet customer demands, will be a tall order to say the least. Prices of industrial fruit have risen to around \$100/mt as demand remains firm with less fruit available. This may potentially reduce volumes for export further in, what is already, a market heavily weighted to domestic consumption.

Grapefruit

Florida

Florida is about halfway through its grapefruit processing season. The USDA forecast has increased to 5.4 mbx, which is up from the 4.6 mbx forecasted a few months ago. However, the increase in volume is just in the red/pink varieties, because the white is still not even 1 mbx.

Even though the processors have more fruit to process this season, grapefruit is still a challenging one for them. Due to greening and hurricanes, demand has been greater than supply for quite a few years. Now, due to de-listing or reformulation, there is more supply (of pink) than demand, but it does finally feel that the reduction of prices have flattened and we are all hoping for a more stable market going forward.

Processors can only get about half the price for their juice than they could just ten years ago. So, the question is, will the growers and processors have enough money or incentive to continue to grow and process grapefruit in the future or will we start to see an even higher percentage going to fresh fruit or possibly see some fruit being left on the trees?

LOOKING AHEAD

We are saddened to learn of the cancelling of September's ICBC (International Citrus and Beverage Conference) and now also IFEAT (International Federation of Essential Oils and Aroma Trades), but we intend to hold many of our own meetings in September whether they be in person or via technology so we can bring you our view of the marketplaces during these normally very volatile periods. Such a different year when social distancing is just what has to happen does bring about opportunity. Stay tuned into Treatt for our unique perspectives in the coming months. We will certainly look forward to seeing you all again at these events in 2021.

“The USDA forecast has increased to 5.4 mbx, which is up from the 4.6 mbx forecasted a few months ago”

Grapefruit - Florida



GINGER (CHINESE)



The 2019 September/October harvest of fresh ginger roots was reported to have been down by 20-30%, causing the price of ginger roots to rise by around 40%. Drought during the growing period in various production areas is to blame for this.

We have heard that China is aggressively buying fresh ginger from Nigeria and India but, inevitably, causing raw material prices in those origins to rise too.

Demand for fresh ginger is very strong, not leaving much for production of oil. That being said – the demand for oil in 2019 was weaker than usual. The reason for a softer market is unclear but we suspect that this was due to large beverage companies not buying their usual quantity as for drinks have shifted considerably throughout the years resulting in availability of carry over stock of oil. However, we are now seeing prices rise steadily as demand outstrips supply – it never seems to level out just perfectly.

CORIANDER (RUSSIAN)



The Coriander seed market remained weak throughout 2019, keeping prices of the oil surprisingly low. There is, however, a shift in the market and demand has strengthened considerably with many suppliers reporting numerous large enquiries as large buyers begin to enter the market again with heavier than usual demands.

The price of seeds has risen so growers are more inclined to plant in February/March for harvest August/September. We believe that distillers are sitting on low cost seeds but the volume being held is unknown. Seeds can be kept in good condition for a number of years and, in many cases, this actually improves the quality of the oil as the alpha-pinene content is naturally reduced which saves the distillers the job of having to reduce top fractions. Expectations are that the price of oil will rise as carryover stocks are depleted.

NUTMEG (INDONESIAN)



Heavy rains and flooding in the major growing area of Bogor in Indonesia have caused the nutmeg fruits to fall too early before being ready for collection. Nutmeg from this area is preferred as the quality is usually superior but, as the fruit has fallen early, they will not make a good quality oil. Demand for oil has strengthened so we expect that prices will rise, and availability could become an issue.

CASSIA (CHINESE)



As a result of the trade challenges between China and the USA, demand for Chinese cassia oil weakened. A lot of the natural benzaldehyde production – which is extracted from cassia oil – moved to Vietnam. The quality of the oil from Vietnam is somewhat different to that produced in China. Weak demand for the Chinese oil pushed prices to an unsustainable and historical low with some oil being sold at a loss.

Collectors and processors slowed due to the low prices being achieved and the expense of labour and production. The low levels of oil produced has had the predictable effect and prices have started rising again. The signing of the first phase of the trade agreement between USA and China is likely to cause a spike in demand, which could see prices rise further.

LITSEA CUBEBA (CHINESE)



We have now seen the third consecutive year of lower litsea cubeba berry harvests, resulting in lower volumes of oil produced – from around 900 mt in 2016 to between 600 mt and 700 mt in the most recent 2019 harvest.

Coupled with the reduced harvest, was the low yield of oil from the berries, which was caused by the lack of sunshine shortly before harvest. Weak demand, however, has allowed the price to remain stable in recent months but prices are expected to rise when regular demand resumes.

CHEMICAL *Ingredients*

As previously mentioned the Coronavirus pandemic is having an impact on shipments around the world, with airports and seaports both experiencing backlogs. This comes as a result of the reduced transport availability due to widespread travel restrictions and increased demand since China's operations have resumed and we await India's re-opening. There is also a spike in freight costs as space becomes a premium and goods reach a bottleneck. It's likely that many will encounter some delays over the coming weeks and months as businesses work hard to ensure continuity in their supply chain.

ETHANOL & ETHANOL DERIVATIVES SULFUROL

The rapid increase in demand for sanitisers has placed huge strain on producers and introduced longer lead times as material becomes scarce in the market. It is unclear at the moment if this will be a long-term issue, but for the time being availability remains tight.

Over the past couple of years Sulfurol, like many other aroma chemicals, has fallen victim to the vast number of factory closures in China. However, with the larger processors now fully operational, supply constraints are less frequent, and the markets are more buoyant resulting in some softening. Indications are that they should remain stable for the time being.

GUM TERPENTINE

Prices have remained stable for gum turpentine and derivatives for the past few months, and this is expected to continue until Q2. Factories have only just started to produce again after the Chinese New Year, and after being told they can begin manufacturing due to the Coronavirus outbreak. However, this longer delay does not seem to have had a knock-on effect to the market.

DIHYDROCOUMARIN

One of the main manufacturers of dihydrocoumarin has shut its factory for three months from January until April, owing to the restrictions imposed due to the Coronavirus. This has caused some shortages in the market which will impact on supply in the short term. It also remains to be seen the extent of the backlog of orders currently open, which will no doubt impact on supply. It is anticipated that this will be a short-term problem as factories begin to re-open.

EUGENOL

Eugenol has seen some softening over the past few months due to a good clove crop last year, however we are now seeing some movement in pricing due to heavy bouts of rainfall. It is too soon to predict what the crop might be for this year; however heavy rainfall was predicted going into March 2020, so for the time being at least we still expect prices to remain firm.

ETHYL BUTYRATE

It's believed that manufacturers are not currently producing at full capacity which is causing some supply issues. This is owing to the extended shutdown for Chinese New Year, coupled with the Coronavirus complications. As manufacturers ramp up production and goods are shipped more freely over the coming months, it is expected that availability should not be an issue.

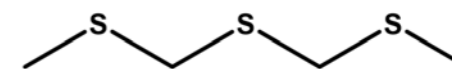
HIGH IMPACT *Chemicals*

RICH, ROASTED VEGETABLES AND MEAT

A steady rise in vegetarians/vegans plus omnivores choosing more meat-free days for health and environmental reasons equates to a rise in demand for flavours that make this choice easier. These more unique HICs provide the means to make meat-free foods taste authentic whilst also adding depth plus character to roasted vegetables formulations.

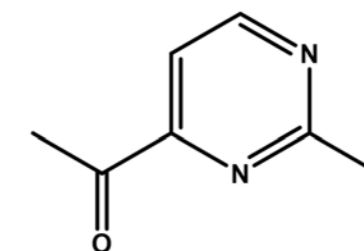
2,4,6-TRITHIAHEPTANE (FEMA 4214) CAS: 6540-86-9

Rich, roasted mushroom notes are accentuated by this less common truffle sulfide at levels of 0.05 to 0.5 ppm in broth. Nature identical in White Truffle.



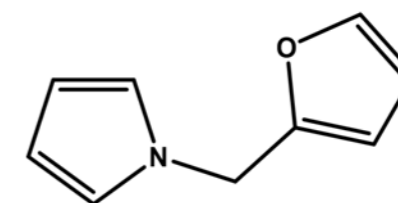
4-ACETYL-2-METHYL PYRIMIDINE (FEMA 3654) CAS: 67860-38-2

This unique pyrimidine provides a full body roasted top note to formulations for rich brown meat, nut and cereal formulations depending on the synergistic environment. Employed at levels of 0.1 to 0.3 ppm in gravies and up to 10 ppm in snack foods. Natural identical in various meat extracts.



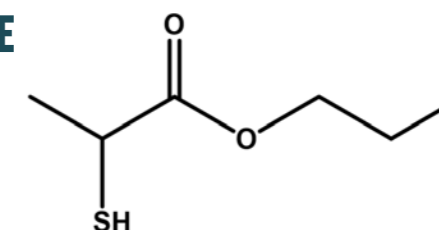
1-FURFURYLPIRROLE (FEMA 3284) CAS: 1438-94-4

Lightly roasted/stewed mushroom notes can be added to formulations when present at <0.5 ppm, whereas sharper, metallic horseradish and onion top notes are apparent at levels up to 2 ppm. Natural identical in a wide range of foods including wheat bread, Okra and roasted almonds.



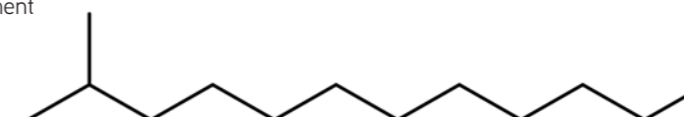
PROPYL-2-MERCAPTOPROPIONATE (FEMA 4207) CAS: 19788-50-2

Freshly baked potato skin and other earthy top notes such as roasted meat and peanuts are enhanced by levels as low as 0.05 ppm by this lesser known molecule.



12-METHYLTRIDECANAL 10% IN MCT OR TRIACETIN (FEMA 4005) CAS: 75853-46-5

Synonymous with beef tallow, rich meat broths and stews, this molecule not surprisingly works well in deep, rich, roasted vegetable formulations. Its inherent fattiness and hence soapiness also complement citrus and mango formulations. Nature identical in red deer, pork and beef.





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