

The top section of the cover features a vibrant illustration of various citrus fruits, including whole lemons, orange slices, and pink blossoms with red centers, set against a dark teal background. The text is centered over this illustration.

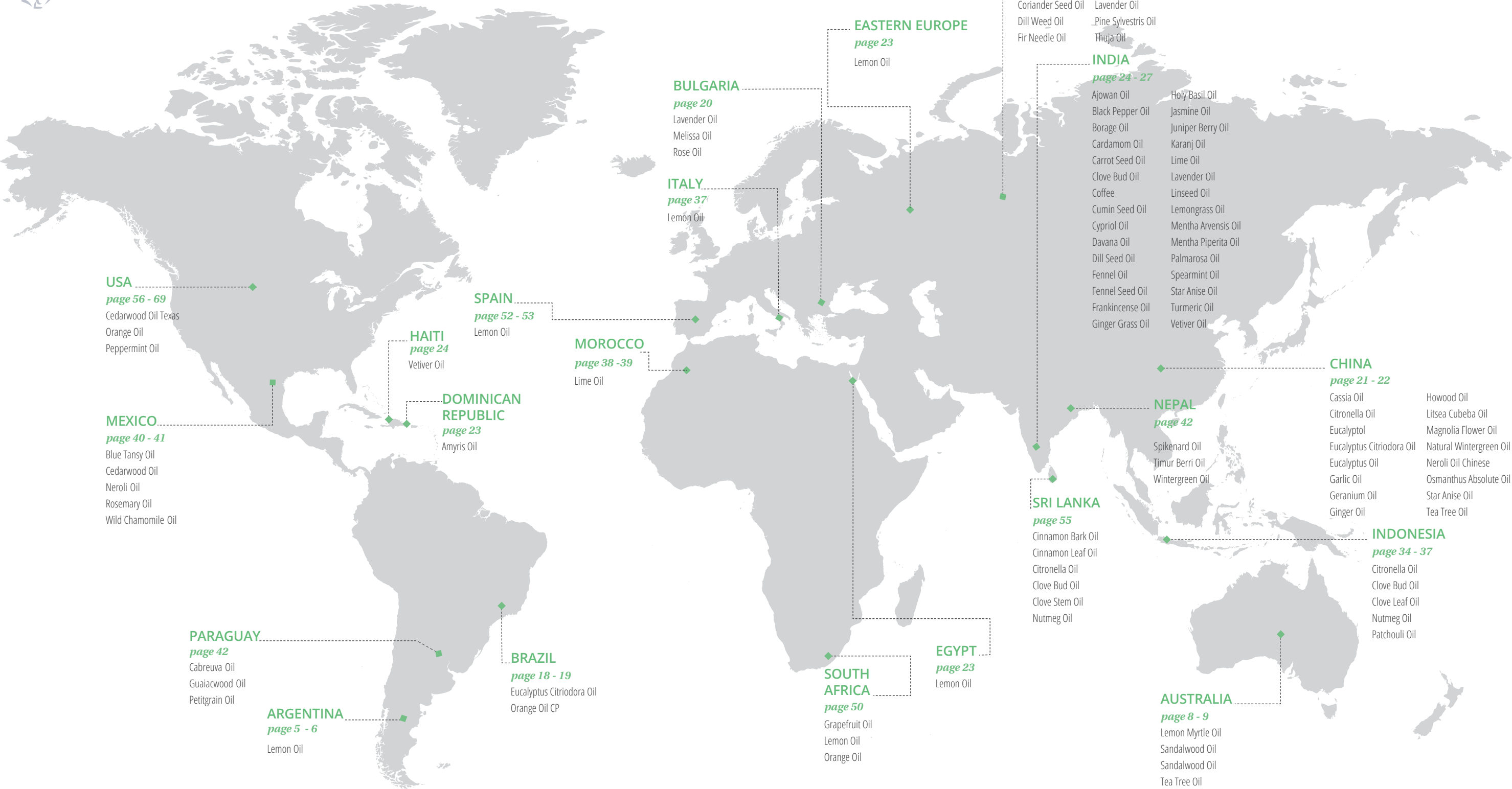
ESSENTIAL OILS
MARKET REPORT
SUMMER 2021

CITRUS BURST!

The bottom section of the cover continues the citrus theme with more illustrations of lemons, orange slices, and pink blossoms on a dark teal background.

Ultra International B.V.
Essential Oils, Ingredients, F & F

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Hello Summer!

Days stretching longer, and bright flowers are bursting into bloom everywhere. Drinks becoming colder and mango mania is catching up in tropical countries and beyond. But as you get fresh packs of sunscreen, don't dust those suitcases just yet. Happy frenzy of packing, last minute checking of belongings, the familiar chaos of sun-baked holidays may be still distant dreams for many of us.

Welcome summer with the Ultra Summer Market Report 2021.

In this edition we bring you interesting perspectives that may augur well for some age-old afflictions. As always, and true to our commitment, we bring you the latest roundup from the teams who work hard to bring you the Ultra wellness from soil to seal. Here are the highlights of this report.

For decades now the world's citrus industry has been reeling under the effects of the dreaded citrus greening Huanglongbing (HLB) disease. Many of the orchards have been wiped out and the overall sector has shrunk considerably. Recently, USA researchers used sniffer dogs to sniff out infected plants. The dog detectives identified the afflicted trees well before they showed any visible tell-tale signs of mottled leaves, scoring 95% accuracy. This could well prove to be a breakthrough in early detection and culling of diseased trees to prevent this plant pandemic.

Throwing some soothing light on the perpetual struggles of treating dementia, scientists have made headway with certain essential oils. Rosemary oil and its positive effects on cognitive functioning can play a pivotal role in addressing memory loss in patients. In addition, the somatic-soothing properties of lavender, bergamot, and lemon can facilitate calming aggression, agitation, and other psychotic symptoms in patients with active dementia.

If you love lavender, you're sure to love this sojourn. Not the purple pastures of France or cool climes of Bulgaria, but down under. Australian lavender from Golden Grove Naturals has been making quite the proverbial wave and has joined the ranks of the coveted lavender countries. Aaron Pollack, CEO of Golden Grove Naturals participated in a conference of The Australian Lavender Growers Association (TALGA). Turn the pages for perspectives from the industry.

In our ceaseless exploration of wellness, plants have played a significant role since time immemorial. Now, plant-based foods and beverages are slowly and steadily making their way into the dietary framework of modern life. We bring you glimpses of functional ingredients in everyday life.

For every door that closes, another one opens. We are experiencing this as never before. Mother Nature is testing us in various ways. These are reminders to not let our fight for mindfulness and sustainable living wane in any way. However, another year of staying home and virtual interaction are making us miss study tours, conferences, our time in the fields, and boardrooms. Let us pray for healing and hope that those days are returned to us.

I speak of healing but don't forget that prevention is better than cure.

Stay safe,

Priyamvada Sanganeria

Director, Ultra International BV



LEMON OIL

Citrus limon (L.) Burm. f. 🌍 Argentina

The lemon season in Argentina is progressing but facing some severe difficulties. The unstable weather conditions during the fruit's development, the workers' strikes, the harsh conditions imposed on exports to Europe and the growing competition with South Africa are some of the major obstacles faced by Argentinian lemons. This caused high pressure on volumes and prices in the market.

The weather has been one of the decisive factors. The lack of rainfall in Tucumán, the main producing area in Argentina, during the fruit setting and growth phases has taken its toll on production, reducing fruit size and harvest forecast in the province. However, timely summer rains facilitated a partial recovery in lemon production resulting in a larger than initially expected volume. Argentina's 2020/2021 fresh fruit production is estimated to be 1.15 million MT, up 12% from prior estimates.

The start of Argentina's lemon season has also been hit by a series of strikes in Tucumán. Self-organising workers blocked roads in different points of the province and prevented the passage of trucks transporting citrus. The blockades also took place at the access to farms and packing plants. These two factors have delayed the lemon harvest and created a shortage in volume.

The European Commission has lifted, as of 1 May 2021, its ban on citrus imports from Argentina. Trade was suspended last August following a number of interceptions of citrus black spot in shipments. Argentina's plant health authority, SENASA, agreed with the EU new product traceability requirements. These measures and conditions for the re-entry of citrus fruit to the EU include additional actions that must be carried out both by the different actors of the private and public sectors, which are so high that it is estimated that it will affect the quantities to be exported.

Moreover, the suspension of Argentinian citrus imports to Europe from August 2020 to May 2021 was beneficial for other global players, such as South Africa, which absorbed part of the import quota of the EU's main lemon supplier. The challenging domestic economic conditions in Argentina do not help, making Argentina less prepared to compete with other exporters from the southern hemispheres, mainly South Africa.

In this context, lemon exports are forecast to decrease to 180,000 MT, a decrease of 10,000 MT because of larger fruit supply in the northern hemisphere, the strong competition from South Africa, and the uncertainty about stringent EU sanitary measures restricting imports of fruit, as stated above. The fresh lemon export business remains profitable; however, with production costs, such as labour, inputs, energy, inland and ocean freight increasing, and high inflation rates, the competitiveness of the lemon sector has been affected. Furthermore, although the continuous depreciation of the Argentinian peso and the elimination of export taxes make exports more price-competitive in foreign markets, a decrease in export rebates and high interest rates, partially offset that advantage. Despite the tough situation faced by the lemon sector, growers and processors continue to invest in new production and technology, with 70%-75% of total production directed to exports.

Fresh lemons for processing are forecast to increase to 831,000 MT, up by 13.5% from the previous forecast, due to the increase in production and the decline in exports of fresh fruit. Nevertheless, this represents a decline of 23% in processing levels compared with last year.

The COVID-19 pandemic has not had a major impact on the activity of the citrus industry. Although the national government enacted a mandatory quarantine in 2020, which has continued in 2021 on an intermittent basis, the citrus harvest was declared an excepted activity, allowing the packing and processing industry to continue working under a stringent protocol to guarantee the safety of workers in the citrus sector, and prevent transmission of the virus.

Global demand for lemon oil is lower, in part because of COVID 19 and lower beverage consumption. Despite reduced Argentine production, supply appears to be in equilibrium with demand and price stable, with the anticipated price increase not having materialised. Nevertheless, the global shortages of reefer and dry containers are increasing transport costs for citrus oils and leading to shipment delays from many origins.

🏠 USD 23.00 /kilo

ARGENTINA: LEMON PRODUCTION, PROCESSING AND EXPORTS ('000 MT)

Market Year	2015	2016	2017	2018	2019	Forecast 2020/21
Production	1,350	1,450	1,770	1,780	1,471	1,151
Processing	1,004	1,122	1,348	1,377	1,078	831
Exports	279	241	272	234	256	180

A-LIVE AND LIMONY EXPERIENCE.



Organic Lemon Oil



LEMON MYRTLE OIL

Backhousia citriodora 🌐 Australia

Lemon myrtle has been a very successful product and has seen increased demand especially from the aromatherapy industry. Currently there is more demand than supply. Lemon myrtle prices will remain at a high level.

🏠 USD 455.00 /kilo

SANDALWOOD OIL

Santalum album 🌐 Australia

Australia has taken concrete steps towards increasing plantations. However, it will take about two years for these to mature and come into full production, so the raw material availability remains status quo. Prices too are at the same levels as before, and are predicted to remain so in the event of no major activity in the market.

🏠 USD 2,600.00 /kilo

SANDALWOOD OIL

Santalum spicatum 🌐 Australia

The COVID-19 pandemic did throw a spanner in the works for this oil. There were some production challenges due to a shortage of manpower and hands to work the fields. Demand remains good. Fortunately, this was fulfilled by the reasonably adequate availability of old stocks that buoyed the prices.

🏠 USD 1,350.00 /kilo

TEA TREE OIL

Melaleuca alternifolia 🌐 Australia

Tea tree oil was one of the best-selling essential oils during the pandemic due to its antibacterial properties. As a result of this most of the old season material from 2020 is sold out and there is no carryover left. Prices for material for part shipments is expensive due to logistic delays. New season seems to be good.

Organic farming of tea tree has increased and this year Australia will produce close to 40-50 tons of organic tea tree oil. The demand for tea tree oil is expected to increase over the next few years.

Golden Grove Naturals has made a lot of improvements and additions this year. Brand new state of the art distillation equipment has been installed replacing old ones with larger and better yield.

Use of pesticides has reduced considerably. GGN's in-house nursery is used to grow new saplings and replant old plantations.

🏠 AUD 59.00 /kilo



AUSTRALIA'S DRIVE FOR A SUSTAINABLE LAVENDER INDUSTRY

Slow and steady wins the race. That's essentially been Australia's mindset when it comes to lavender production. After being a fringe player in the lavender space for a long time, the country is now looking to broaden its horizons. From government-led research bodies, to private players entering the market, Australian lavender production is on course to make its mark in the global market.



THE GLOBAL MARKET AND AUSTRALIA

Europe has been the leading producer of lavender, but the last couple of decades have seen many changes in the market. The infestation of a bacterial disease in France witnessed a massive decline in lavender production. In fact, from 2005-2012 global production of lavender oil dropped drastically from 225 tonnes to just 90 tonnes. As a result, France was displaced as the global leader of lavender, and Bulgaria took its place with production peaking at around 500 tonnes in 2019.

Lavender is a highly sought-after product. From the food and beverage industry, to the essential oil sector, lavender has multiple uses. Commercially a number of varieties of lavender is harvested, including hybrids which form a major portion of lavender production. While hybrids produce the maximum quantity of oil, the quality of English lavender is unmatched. Australia has historically struggled with consistency when it comes to lavender oil production. The varieties have been a jigsaw puzzle, but piece by piece this mystery is getting solved. From being a primary importer of the oil, Australia now sees the potential to bridge these gaps.

WHERE IS AUSTRALIA CURRENTLY?

To promote sustainable growing of lavender in Australia The Australian Lavender Growers' Association was formed in 1995. It is a non-profit, which was started by a lavender estate owner from Victoria, Rosemary Holmes. Today, the membership of the association has grown many fold with participation from lavender growers in Australia and overseas.

Different varieties of lavender require diverse climatic conditions to prosper. While English or true lavender flourishes at higher altitudes, spike lavender and lavandin hybrids prefer lower altitudes and warm weather. In Australia lavender is produced in Tasmania, Victoria, south and west New South Wales, south-east Queensland, south-east South Australia, and the Margaret River region of Western Australia.

Currently, the lavender industry in Australia consists of small producers and a few commercial farms. From being a net importer of lavender oil, the growing strength of local producers has helped replace some imports with domestic production. But, lavender continues to be a boutique industry. "Farm to your home" is a popular concept among lavender growers. Producers prefer to market their product directly to the consumers. Either online portals, farm gates, or special markets, and stores sell these products.

But lavender fields in Australia have another massive draw. The tourism industry has tapped into the natural beauty of the fields. Several customised packages are being offered by various tour operators, and they are a major draw among tourists worldwide.



Gorgeous lavender field in Tasmania, Australia

“In order to position Australia as a leading player in the industry, research was required in the field. An understanding of soil science and agronomy, and strategies to increase yield and quality, all needed to be evaluated whilst keeping Australia’s climate and growing conditions in mind.”



AN EYE ON THE FUTURE

One can already smell the success story that the Australian lavender industry is scripting; a new partnership aims to accelerate this progress and give it a new dimension very soon. AgriFutures Australia and La Trobe University have joined hands to support a project to identify conditions and farming techniques to help augment the production of lavender in Australia. AgriFutures Australia works towards the long-term prosperity of Australian rural industries. It is mostly funded by an annual appropriation by the Australian government.

Under the New and Emerging Industries programme, La Trobe University leads a Research and Development project to build the capacity of the Australian lavender industry in a sustainable fashion.

This idea was born by Aaron Pollack CEO of Golden Grove Naturals (GGN) after seeing the unmet export demands of high-quality Australian lavender oil. Australia accounts for roughly 1% of global lavender production. While there is demand for the Australian product, production is unable to meet this demand. This showcases a vast potential for growth, and the need to encourage new producers. In order to position Australia as a leading player in the industry, research was required in the field. An understanding of soil science and agronomy, and strategies to increase yield and quality, all needed to be evaluated whilst keeping Australia’s climate and growing conditions in mind.

The project is working towards concrete solutions and is currently working on a plan. The idea is to:

- Encourage new growers to enter the market
- Provide knowledge and understanding to increase yield at similar input costs
- Increase production levels to meet global demand

The Australian lavender industry is essentially unorganised in terms of knowledge banks on growth and production. There is a massive need to plug these gaps to help the industry prosper. This study aims to understand the impact of soil, nutrition, biotic and abiotic stress, and water management on oil production. Trial plots have been established to study these factors. Market insights will also be tabulated with the help of producers and exporters. All factors influencing oil profiles will be evaluated, and appropriate future strategies will be laid out.

The research project aims to establish Australia as a global leader in lavender production. From growing to extraction it aims to investigate and disseminate best practice for the cultivation and processing of high quality lavender. Golden Grove Naturals (GGN) is a part of this project along with lavender producer Larkman Nurseries, The Australian Lavender Growers’ Association, and phenotyping technology company Scientific Instruments Australia. There is a second project, which is aimed at developing a five-year research and development plan.

Golden Grove Naturals has already achieved success in the area with the addition of four new lavender growers for oil. It has also secured the partnership of a premier wine producer, who is planning to dedicate 100 hectares to a project. This value could increase to 200 hectares depending on the success of the project.



GGN LEADS THE WAY

Golden Grove Naturals has actively been involved in aiding the growth of the Australian aromatic crops industry with particular focus on the lavender industry. Aaron Pollack, CEO of GGN recently attended the Australian Lavender conference, where he presented his ideas on the research project. Mr Pollack's suggestions were made keeping a sustainable approach towards increased lavender production in mind.

His first suggestion was to make Australian growers competitive in the global marketplace by enhancing production systems. He went on to elaborate that data sufficiency was the key. With that in mind, he suggested a database of all information related to the industry be collated.

Training was the next aspect of his plan. Mr Pollack pointed out that cultivators needed to be identified, and then trained. He went on to stress the importance of best practices for cultivation, irrigation, harvest and even post-harvest processes like extraction and storage. Mr Pollack noted it is imperative for Australian growers to broaden their horizons. They need to look beyond Australian producers as sources of information.

Quality was the next highlight of his future plan. Overseas markets are becoming stringent in terms of quality standards. To increase production, it is not advisable to go for varieties that deliver inferior quality oil. Mr Pollack also brought therapeutic properties of lavender into focus. He mentioned that a detailed study of the international market would be beneficial. It could help in identifying gaps that can be plugged by Australian lavender.

The time is ripe for Australia to take the next step in its lavender journey. The involvement of the Australian federal government, research projects lead by the University, and growing interest among local producers, will all help propel Australia toward its future as a major player in the global lavender market.

<https://agrifutures.com.au/about/>
<https://agrifutures.com.au/farm-diversity/lavender-oil/>
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<https://ausbizmedia.com/lavender-industry/>
<https://www.hunterandbligh.com.au/travel/the-12-best-lavender-farms-to-visit-around-australia/>



AUSTRALIAN LAVENDER

Contributing to increasing lavender fields in Australia
one sustainable step at a time.

Little drops of goodness brought to life.

www.goldengrovenaturals.com



EUCALYPTUS CITRIODORA OIL

Eucalyptus citriodora 🌐 Brazil

It has been a month since harvest is underway. Work is progressing well and harvesting will continue till the next rainy season. Processing too is progressing normally. Demand is steady, even during the lean season. Available, in-stock volumes are being used up to cater to the off-season demand. This has impacted prices which have moved up slightly but remain steady.

📊 USD 16.00 /kilo

ORANGE OIL CP

Citrus sinensis 🌐 Brazil

The total Brazilian orange crop for 2021/2022 (July/June) is forecast at 390.8 million boxes (40.8 kg), an increase of 7% relative to the current season. Although citrus trees are in the on-year of the production cycle, adverse weather affected the production potential for the upcoming season. An estimated 274 million boxes will be delivered to processors, an increase of almost 13%.

The commercial area of the state of São Paulo and the western part of Minas Gerais, which accounts for approximately three-quarters of Brazilian production, should produce 294.17 million boxes. This includes:

- 51.37 million boxes of Hamlin, Westin and Rubi
- 16.87 million boxes of Valencia Americana, Seleta and Pineapple
- 84.66 million boxes of Pera Rio
- 107.07 million boxes of Valencia and Valencia Folha Murcha
- 34.20 million boxes of Natal

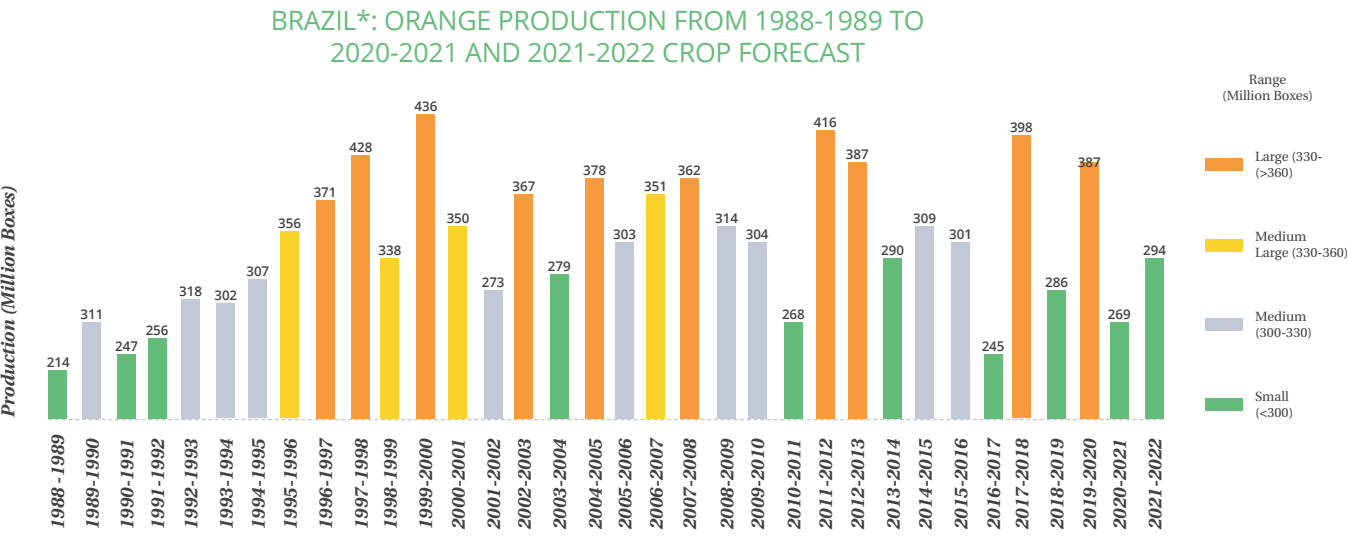
According to Fundecitrus, compared to the final forecast of 268.63 million boxes for the 2020/2021 (July/June) crop, the current projection for the São Paulo commercial citrus belt represents an increase of 9.5% although is still below the average of the last ten crop seasons (see graph). Production from other states is projected at 96.6 million boxes, up roughly 1 million boxes from the previous season.

Brazilian orange has 4 blooms per season, with each bloom representing a unique portion of the overall crop, with the first and second blooms being the most important for the crop. Brazil's third and fourth blooms tend to yield smaller fruit sizes, as well as reduced production per tree. For the 2020/2021 crop, the São Paulo commercial citrus belt faced erratic behaviour of the climate and poorly marked seasons, with prolonged droughts and high temperatures at a time critical to the two main blooms. There was a third bloom in many groves in December 2020 and January 2021, and a fourth bloom as of February 2021. This year, the third and fourth blooms stand out as accounting for greater percentages of the crop, due to the unfavourable climate conditions in the early post-flowering stage. Rains became scarce once again in April and May 2021, which was felt by orange trees, and evidenced by the small size of stripped fruits in this crop. The water deficit was significant and it was the major reason for the decrease in the 2020/2021 crop size. Rains are forecast to be scarce until October 2021, repeating the scenario observed last year.

The effects of these unfavourable climate conditions are already included in this crop forecast, with small weight of the oranges at harvest, and a projected average drop rate of 20.5%, distributed as follows: 12% for the early Hamlin, Westin and Rubi varieties; 12% for other early varieties; 22% for the mid-season Pera Rio variety; 24% for the late Valencia and Valencia Folha Murcha varieties; and 23.2% for the late Natal variety. This rate has been increasing in Brazil over recent years due to heightened greening rates as well as long-term drought effects. If the 2021/2022 drop rate is confirmed, with greening rates that went from 19.02% in 2019 to 20.87% in 2020, it will be the second highest drop rate in the historical series.

The lower 2020/2021 crop size, together with a limited supply (lower than expected) and with demand on the increase, has triggered price increases for orange oil, terpenes and d'limonene.

📊 USD 10.00/kilo



* São Paulo state and western Minas Gerais



BULGARIA

LAVENDER OIL

Lavandula angustifolia 🌍 Bulgaria

Low temperatures in March-April have delayed the harvest of the lavender crop till mid-July. Sources suggest that the yield is expected to be good. Currently, lavender prices are at an all-time low. Even though the demand has been stable this could be due to large quantities stockpiled and good production volumes.

Organic lavender is in stock, as the market for it has been slow. Most of the lavender oil is being exported. Thus, overproduced oil stock is being utilised.

🏠 EURO 44.00 /kilo

MELISSA OIL

Melissa officinalis 🌍 Bulgaria

Melissa fields with long term contracts are the only ones surviving in Bulgaria. The last couple of years have witnessed limited demand for the oil in the international market. This has drastically brought down the price. As a result, most of the melissa oil fields have been destroyed in Bulgaria.

🏠 EURO 1,020.00 /kilo

ROSE OIL

Rosa damascene 🌍 Bulgaria

Annual production of rose oil in Bulgaria is usually in the range of 3,000 kg. This year production is expected to be around just 1,200 kg. This is partly because demand for the oil has drastically reduced due to the pandemic. Carryover stock from last year is still available in the market. Thus, many producers have forgone rose oil production in 2021. This could lead to rose fields being eradicated in some areas. It will also impact the production of rose petals, and ultimately rose oil in the coming 3-5 years. Rose oil is also expected to witness a fall in price in the next 12 months.

Cold weather conditions can be suitable for a good crop, leading to a properly spaced supply of blossoms. However, the colder spring led to the harvest season being both delayed and the harvest length shortened by about a third. Another major problem was the shortage of rose pickers leading to labour shortages, increased picking prices, and some rose fields being unharvested. Field yields were lower, and substantially fewer rose petals were processed.

🏠 EURO 5,900.00 /kilo

CHINA

CASSIA OIL

Cinnamomum cassia 🌍 China

Since November last year the oil price has witnessed an upward trend. There is shortage in the market. The production in the 2020 autumn cycle was expected to be 400 tonnes. But only 100-150 tonnes were produced

🏠 USD 42.00 /kilo

CITRONELLA OIL

Cymbopogon winterlanus 🌍 China

Competition from the Indonesian market has affected demand. Domestic production has been falling annually. The main production areas of citronella are in Yuhuan, which is close to the border. A few of these border areas have been hit by the pandemic, making it difficult for the oil to flow into the Chinese market, though with volumes coming in from Burma the crop will still be in the range of 300 MT.

🏠 USD 15.00 /kilo

EUCALYPTOL

1,8-Cineole 🌍 China

With the sea freight prices going up, and the CNY exchange rate appreciating, the export price of eucalyptol has increased. This even after a fall in demand has brought raw material prices down.

🏠 USD 14.00 /kilo

EUCALYPTUS CITRIODORA OIL

Eucalyptus citriodora 🌍 China

The oil price has gone down. Most of the inventory has been exhausted too. The crop yield is expected to go up to 150-160 tonnes this year.

🏠 USD 22.00 /kilo

EUCALYPTUS OIL

Eucalyptus globulus 🌍 China

Due to the appreciation of the CNY exchange rate, along with high sea freight charges, the oil export price has gone up. Limited supply of raw materials has also increased their price. Local farmers are unwilling to distil at the current market price. Also, the interest of farmers in tobacco has reduced eucalyptus oil production. The majority of farmers are planting flue-cured tobacco.

🏠 USD 13.00 /kilo

GERANIUM OIL

Pelargonium graveolens 🌍 China

Carryover stock from last year has been exhausted. The next cycle is expected to produce in the range of 50-60 tonnes. The global economic downturn has shifted customer interest towards the Egyptian variety.

🏠 USD 144.00 /kilo

GINGER OIL

Zingiber officinale 🌍 China

There is a shortage of ginger oil, ginger powder, and fresh ginger in the market. Heavy rains in the summer of 2020 spoilt the crop, as most of the root was broken. In 2019 hardly any farmers grew the crop, since the price was at its lowest in 2017-18. Currently, due to the short supply, the price is rising.

🏠 USD 75.00 /kilo

GARLIC OIL

Allium sativum L. 🌍 China

The current oil supply is of many grades. To ensure pure and natural oil, farmers are distilling from their own farms. The demand and supply of the oil is balanced, and the market is stable.

🏠 USD 110.00 /kilo

HOWOOD OIL

Cinnamomum camphora 🌍 China

The market for the oil is stable. Production continues throughout the year, and supply is consistent. China has huge fields of howood.

🏠 USD 52.00 /kilo





CHINA

DOMINICAN
REPUBLIC
EGYPT
EUROPEAN
UNION

LITSEA CUBEBA OIL

Litsea cubeba 🌐 China

There has been a spurt in global demand for the oil. Production in 2020 wasn't up to the mark. As a result, the price has seen an upward curve since August last year. More information will be available once the new crop season commences in July.

🏠 USD 39.00 /kilo

MAGNOLIA FLOWER OIL

Michelia alba dc. flower oil 🌐 China

The oil is used in perfumes, fragrance, aromatherapy and flavouring. South China has huge fields of magnolia. The market for the oil is stable.

🏠 USD 1,393.00 /kilo

NATURAL WINTERGREEN OIL

Gaultheria procumbens 🌐 China

The new crop commenced in May, though the volumes are expected to shrink by one-third from 2020. Due to the risk of contamination, farmers are reluctant to distil the oil. Demand for the oil continues to be stable, but 100% natural and pure oil is available in limited supply. Most of the carryover stock from last year belongs to the adulterated variety.

🏠 Price on Request

NEROLI OIL CHINESE

Citrus aurantium 🌐 China

There is a consistent demand and supply of the oil. The new crop season has commenced, and 70-120 kgs in a year can be expected from producers.

🏠 USD 1,713.00 /kilo

OSMANTHUS ABSOLUTE OIL

Osmanthus fragrans 🌐 China

The oil market is stable. It is mostly produced in south China. It is used in aromatherapy, fragrance, flavour, and perfumes.

🏠 USD 3,655.00 /kilo

STAR ANISE OIL

Illicium verum 🌐 China

There is a shortage of raw material. Last season witnessed low yield, due to which the raw material price shot up.

🏠 USD 29.00 /kilo



TEA TREE OIL

Melaleuca alternifolia 🌐 China

Production and supply of the oil is stable but the price has gone up since February. The oil is produced year-round, and the market is expected to stabilise in the coming months.

🏠 USD 31.00 /kilo

AMYRIS OIL

Amyris balsamifera 🌐 Dominican Republic

Small distillers in Haiti that utilise fossil fuels have been shut down. Also, the government in the Dominican Republic has imposed a 50% increase in the minimum wage. Wood harvesting permits are also difficult to come by, even after amyris oil is distilled from dead wood. This has increased the cost of production. The oil demand from India is of high quality, though at a comparatively lower price. The Indian economy has been adversely impacted by the pandemic. Large volumes of unsold inventory are still available, as the oil demand is low. The price is also down 20%. Even after these adverse factors, the production of amyris oil is sustainable at previous price levels.

🏠 USD 67.00 /kilo

GERANIUM OIL

Pelargonium graveolens 🌐 Egypt

Egypt enjoys the leading position as the world's largest producer of geranium oil. Traditionally, the plant is inter-cropped with garlic and cultivated annually. The period of bulk distillation and before it hits the markets, that is, the time from June to mid-July, is the ideal time to procure. The oil continues to garner overwhelmingly high demand, even in the face of the pandemic. The season is about to begin. There is a significant decrease in volumes of the carryover stocks as compared to last year. Predictions for this year peg the carryover stock size at approximately 5% with an estimated crop size of 250 to 280 MT. This is close to the crop size for 2020. Prices have maintained their steady levels due to the deficiency of carryover stocks and is expected to remain unaffected for some time now. Market reports suggest that prices may surge after the next season in August.

🏠 USD 82.00 /kilo

LEMON OIL

Citrus limon (L.) 🌐 European Union

European Union lemon production is predicted at 1.6 million MT an increase of 11.7% compared to the last crop. This is because of better crop sizes in the main producing areas and also as a result of more area being planted especially in Spain. Lemon for processing is expected to increase to 362,000 MT for the current crop as compared to 288,000 MT from the last crop.

🏠 EURO 17.00 /kilo

EUROPEAN UNION - LEMON PRODUCTION, PROCESSING AND EXPORTS ('000 MT)

Market Year	2015	2016	2017	2018	2019	2020/21
Production	1,333	1,535	1,472	1,683	1,480	1,654
Processing	243	284	232	278	288	362
Exports	69	79	65	82	81	82

VETIVER OIL

Vetiveria zizanoides 🌐 Haiti

The demand for vetiver oil has plummeted in the last few months. Haiti exporters are facing immense challenges. There is civil anarchy in the capital as the country faces severe political unrest. In this situation distillery operations face disruption and production is erratic. Transportation of the oil drums to the airport or ports poses several hurdles.

🏠 USD 195.00 /kilo



AJOWAN OIL

Trachyspermum ammi L. 🌐 India

There is consistent demand for the product. In the short term supply of the crop will be stable. The oil price has seen a slight decrease. It is expected to reach its earlier levels by mid-term.

🏠 USD 14.00 /kilo

BLACK PEPPER OIL

Piper nigrum L. 🌐 India

It is advisable to stock up on raw materials; while the price of black pepper oil is stable, raw material availability is an issue. If the situation persists, the price could increase further.

🏠 USD 46.00 /kilo

BORAGE OIL

Borago officinalis L. 🌐 India

Currently the oil price is stable in the market, though there is a massive shortage of raw material. This can potentially increase the prevailing prices. Thus, it is advised to stock up on requirements.

🏠 Price on Request

CARDAMOM OIL

Elettaria cardamomum L. 🌐 India

Harvest is halted during the monsoon. The period between August and January gives the best oil yield. The crop season is primarily from June-July till February. During this period the pods are plucked five times.

The cardamom oil price is stable in the market, however raw material availability is an issue. This could lead to a spurt in the oil price. It is best to stock up on requirements. Pure cardamom oil is hard to come by.

🏠 USD 233.00 /kilo

CARROT SEED OIL

Daucus carota 🌐 India

Due to COVID-19 lockdowns, various parts of India are facing labour issues. This has affected harvest and plucking. The crop is harvested between May and August. Once the harvest is completed a clear picture of price will emerge. The USA is a major importer of carrot seed oil. It is also very popular in the flavour industry. Currently, the crop seems stable.

🏠 USD 96.00 /kilo

CLOVE BUD OIL

Eugenia caryophyllata 🌐 India

Consistent demand is expected in the coming months. The oil price has seen a significant increase from its current level. In the short term the price is expected to remain stable.

🏠 USD 32.00 /kilo

COFFEE

🌐 India

Coffea arabica L. / Coffea canephora

Two commercial varieties of coffee are harvested, arabica and robusta; the former is sweeter and the latter has a higher caffeine content. The robusta crop has been good, and the harvest season is over. While robusta is harvested from December to April, the arabica season is from November to January.

🏠 USD 180.00 /kilo

CUMIN SEED OIL

Cuminum cyminum L. 🌐 India

The oil price is in the same range as last year. With enough product in stock, the price is expected to remain stable.

🏠 USD 25.00 /kilo

CYPRIOL OIL

Cyperus scariosus 🌐 India

Once the domestic market opens up and restrictions are eased, demand is expected to increase. As of now, the export market is stable, and prices will remain firm in the short term. The supply chain has been hit, which has impacted the market scenario.

🏠 USD 300.00 /kilo

DAVANA OIL

Artemisia Pallens 🌐 India

Low yield has reduced the interest of farmers in davana oil. Thus, there is limited supply of the product in the market. The crop season has ended and there was a decent yield.

🏠 USD 645.00 /kilo

DILL SEED OIL

Anethum graveolens L. 🌐 India

Restrictions in most markets and growing areas have impacted the arrival of fresh crop.

🏠 Price on Request

FENNEL OIL

Foeniculum vulgare 🌐 India

The fennel oil price is at its lowest at the moment. It is a good time to stock up on the product. Supply is stable.

🏠 Price on Request

FENNEL SEED OIL

Foeniculum vulgare 🌐 India

The market is expected to remain strong in the near future. Limited availability of raw material has not affected the demand. This is primarily due to the demand from other countries. The price has recovered slightly, and will remain stable for the coming months.

🏠 Price on Request

FRANKINCENSE OIL

Boswellia serrata 🌐 India

The demand and price for the oil is stable. The harvest season has ended and the crop was good. The oil and crop's resins are both used by the fragrance and pharmaceutical industry. North, central and south-west India are home to this wild tree.

🏠 USD 30.00 /kilo

GINGER GRASS OIL

Zingiber officinale 🌐 India

Consistent high demand for the oil can be expected in the market. Last season saw a strong oil price. In the short term the price could increase, but will mostly remain stable. Once restrictions are lifted production will resume.

🏠 Price on Request



HOLY BASIL OIL

Ocimum sanctum 🌐 India

Two varieties of holy basil are harvested, wild, and cultivated. Large volumes of oil are produced from the wild variety, as compared to the cultivated one. Thus, the price is essentially determined by the quantity produced from the wild crop. If less oil is produced from the wild crop, then the oil from the cultivated variety becomes expensive. The wild crop is harvested from December to January or February, while the cultivated one can be distilled all through the year, except the monsoon season. It is difficult to predict the quantity of oil produced during the harvest season. Estimates are only available once the season is over.

🏠 USD 140.00 /kilo

KARANJ OIL

Millettia pinnata 🌐 India

There is an increase in the price of the oil. This price rise can be linked to a spurt in demand. Raw material is available in abundance.

🏠 Price on Request

LAVENDER OIL

Lavandula angustifolia 🌐 India

The oil is in stock, and the price is at its lowest level. It is a good time to stock up, as the price is starting to increase.

oil. This price rise can be linked to a spurt in demand. Raw material is available in abundance.

🏠 USD 167.00 /kilo

LEMONGRASS OIL

Cymbopogon citratus 🌐 India

Global demand for the product is consistent. This has led to a spurt in price compared to 2019. There is stable supply and price of the product from north and central India. The conventional variety found in south India has doubled in price over the past year. This is due to climate patterns. Climate change has altered the monsoon pattern and made it unpredictable. Constant rains hamper the harvest and distillation of lemongrass oil. It is either slow, or completely halts whenever it rains. This has lowered the yield. The monsoon has commenced in the south, and producers are waiting to see its impact on crop yield.

🏠 USD 24.00 /kilo

JASMINE

Jasminum officinale 🌐 India

During the harvest cycle flowers are used to produce concrete. Absolutes are produced as per market demand. The sambac crop is stable and harvested between March and August or September. The grandiflora crop is good too, and will be harvested from July till November.

🏠 *Jasminum grandiflorum* - USD 1,800.00/ kilo; *Jasmine sambac* - USD 2,465.00/ kilo

JUNIPER BERRY OIL

Juniperus communis 🌐 India

The majority of the demand for juniper berry is fulfilled by imports from Pakistan but currently the imports are affected. This has shifted consumer interest towards the Indian variety. This can improve the future of the crop in India, where the crop is mostly grown in Himachal Pradesh. Due to COVID-19 lockdowns, Himachal is witnessing labour problems. The harvest season will continue from April till November. Also, the crop has been good this year.

🏠 USD 115.00 /kilo

LIME OIL

Citrus aurantifolia 🌐 India

The oil is in stock and the price is at last year's levels. The market is stable, and fluctuations in price are not expected.

🏠 USD 33.00 /kilo

LINSEED OIL

Linum usitatissimum 🌐 India

There is huge demand for the oil in the market. This has led to a spurt in the price. Raw material availability is not an issue.

🏠 Price on Request



MENTHA ARVENSIS OIL

Mentha arvensis 🌐 India

There is constant domestic and international demand. For the oil produced from the 2020 mentha crop the demand is expected to be around 45,000 MT. Total production is expected to be 55,000 MT, along with a carryover stock of 10,000 MT. After meeting all the demand, the surplus to be carried over to 2021 will be in the range of 20,000 MT. There is no reduction in exports due to COVID-19. The quantities exported in the first half of the year are comparable to last year, though, surprisingly, India has imported a record 4,200 MT of synthetic menthol this year.

The price of *mentha arvensis* is low and stable in the market. The price is expected to pick up and could increase anywhere between 10%-15%. The crop in 2021 will determine the oil price from the second quarter onwards. If the yield is similar to last season, and supply of synthetic menthol is maintained, there will be a surplus in the market. This could see a drastic fall in price. Alternatively, if farmers decide to reduce the crop size, prices could firm 10-20% above current level.

🏠 USD 14.00 /kilo



PEPPERMINT OIL

Mentha piperita 🌐 India

The price is stable in the market. Though good quality oil is likely to be exhausted, and only limited quantities may be available in the future. It is advisable to stock up.

🏠 USD 34.00 /kilo

PALMAROSA OIL

Cymbopogon martini 🌐 India

The future of the crop depends primarily on the monsoon cycle. It propagates throughout the year, except during the monsoon. The monsoon season has commenced. Currently the supply and price of the oil is stable.

🏠 USD 26.00 /kilo

STAR ANISE OIL

Illicium verum 🌐 India

The tree is native to southern China and northern Vietnam. It is primarily used in these regions for cooking. In India, only Arunachal Pradesh has conditions conducive to growing star anise. It flourishes in spring. Supplies from China affected the price of the product a few months back. But now the price has stabilised. Star anise is an evergreen tree that can grow up to 26 feet. The fruit produced by the tree is a valuable spice and smells like liquorice.

🏠 Price on Request

TURMERIC OIL

Curcuma longa 🌐 India

The product is extremely popular in the flavour industry. It is utilised globally by the pharma and cosmetic industries. The demand and supply for turmeric oil is constant throughout the year. The crop was good this season, and harvest completed in February-March. Unfortunately, supply was affected for a couple of months in April and May due to the COVID-19 lockdown.

🏠 USD 21.00 /kilo

SPEARMINT OIL

Mentha spicata 🌐 India

Similar to last year, the oil prices are stable. Pure spearmint is difficult to procure in the market. Once the interest of farmers in planting a new crop is clear, the market will get a direction.

🏠 USD 30.00 /kilo

VETIVER OIL

Vetiveria zizanoides 🌐 India

Different varieties of vetiver have different customers and price. The oil is popular in the tobacco, perfumery and flavour industry. The varieties grown in north and central India are harvested between January and March. The product from south India is different.

🏠 USD 220 .00 /kilo

SNIFFING OUT CITRUS PEST

At the airport or while waiting for the train, on the bomb squad or crime scenes, they are a familiar sight. For some who are differently abled, they are not just a best friend but a lifeline.

For years, dogs have helped humans in myriad ways. From hunting game for sport to detecting underground mines, our canine friends are unrivalled in the roles they play in detection and law enforcement. Explosives, drugs, blood, currency, and even electronics are some of the things that are accurately sniffed out by dogs. In the unceasing crusade against animal product trafficking, dogs have helped identify poachers and helped bust illicit ferrying of contraband. Experiments have proved that dogs can smell the chemical change caused by diseases. Now, we wouldn't be barking up the wrong tree if we told you that dog detectives are helping citrus farmers identify trees with citrus greening infection.



CITRUS GREENING

Mottled yellow leaves on withered branches and sickly green, misshapen fruit is a sight that most citrus farmers have come to dread. Citrus greening or Huanglongbing (HLB) is a deadly and contagious bacterial infection that attacks citrus trees. Initially identified in the Guangdong province of China by researcher Lin Kung Hsiang, the infection is caused by the infestation of the bacteria *Candidatus Liberibacter asiaticus*. With scientists still awaiting a breakthrough in finding a cure, HLB could continue to wreak havoc on citrus growers for decades.

It is bewildering what one tiny flying insect can do. The Asian citrus psyllid has been responsible for ferrying the infection to healthy trees. Today plantations across 50 countries in the Americas, Africa, Europe, the Indian subcontinent and the Arabian Peninsula are grappling with this menace. Though it was only in 2005 that HLB was discovered in the key citrus producing regions of the USA, the contagion has spread to Florida, Texas, California, Georgia, and Louisiana. No cultivar or citrus hybrid seems to be immune. Sweet oranges, mandarins, tangerines and tangelos seem to be most vulnerable, though lemon, grapefruit, pomelos, Mexican lime, and orange trees were observed to be putting up some semblance of a feeble resistance but eventually lost the battle. The pathogen renders the tree totally unproductive and it eventually dies within two to five years of infection. Seed growth is aborted and fruit yield impacted and accompanied by the tell-tale splotchy yellowing of leaves. Heavy leaf drop is accompanied by considerably high fruit drop. What makes the infection devastating is that it is a silent and invisible enemy that doesn't show up until it is too late. It could take months, sometimes even a year, for the tree to display the symptoms. By then of course, the infection may have spread to other healthy trees. In Florida alone the orange crop plummeted by almost 70%. Like a cancer that has metastasised with no cure in sight, growers continue to fight citrus greening with the only option of early detection, isolation, and elimination of the infected tree. However, this too is proving time-consuming as the disease threatens to wipe out the USA's \$3.4 billion citrus industry.

SNIFFING OUT THE SOLUTION

Mutt of course, it seems that our canine friends have once again lent a helping paw. Agricultural research plant epidemiologist, Timothy R Gottwald working with the United States Horticultural Research Laboratory in Florida, conducted a simple experiment based on the age-old canine olfaction detection principle. Gottwald obtained 19 trained dogs of specific breeds that are known for their sharp abilities and drive. Similar to drug or explosives sniffer dogs, these animals were trained to home in on HLB-infected citrus trees by sitting next to it. They were then rewarded with play time and a treat.

A dog is endowed with 200 million olfactory receptor cells as compared with only 5 million for a human. Its sense of smell is unparalleled by any artificial or electronic nose or physio-chemical process that humans have been able to replicate to date. Gottwald's paw patrol was able to *diagnose* the presence of *Candidatus Liberibacter asiaticus* (CLa) pathogen which causes citrus greening. Subsequently, the dogs were teamed into pairs to help corroborate each other's findings. In the last lap, the researchers mixed infected trees with healthy ones and allowed the dogs to inspect them weekly. In just 1 month, the dogs were able to zero in on every single infected plant. This threw up some salient points and interesting observations:





- The dogs were able to identify diseased trees within two weeks of infestation
- There was a total of 4 to 15 false negatives and false positives on 950 to 1,000 trees per dog
- The animals distinguished the bacteria from among a host of other bacterial, viral, fungal, and spiroplasma pathogens
- The dogs detected the pathogen itself, not the tree's reaction to it
- The canine team had a success rate of 99% accuracy as compared with the department-approved DNA test

For over 200 years, the challenge has been to identify the infected trees before they can damage entire orchards. Since trees can be asymptomatic and not show any visible signs of infection, it would be a while before the disease is contained. Another method is the DNA-based test known as the polymerase chain reaction (PCR) test approved by the US Department of Agriculture. PCR testing is expensive and time-consuming. It requires substantial financial and human resources for sampling, processing, and laboratory work, where any suspicious sample of leaf is brought in and tested. The reliability of the tests is also in question since patchy distribution of the microbe in plant tissue renders inconsistent results, compared to the scorecard of less than 3% detection of contaminated trees. 17 months into the contamination, the PCR test was able to identify only one-third of the CLA-positive plants. The canines scored 99% accuracy within weeks into contamination.

The results of Gottwald's research experiment have been published in *Proceedings of the National Academy of Sciences*. Dog detection followed by removal of contaminated trees may just be the answer to this long-drawn combat against citrus greening. The studies also suggest that in addition to effectively containing the spread, the American citrus sector can beat the HLB bane to remain economically sustainable for the coming 10 years. Already it has garnered a favourable response from citrus growers. News from the fields in California and northern Florida report that canine teams have already been deployed for the last 9 months, trotting the citrus groves with their handlers. Other agricultural sectors, especially the grape and wine industry too are now exploring how dogs can help curtail diseases in the vineyards. If all goes well, this might just be the *ulti'mutt'* boon to the bane of the citrus world.

Whether it's citrus greening or other viruses like COVID-19, disease-detecting medical dogs will be a 'paw'some breakthrough in managing one of the most severe pandemics of modern times. And live up to their reputation for being humankind's best friend.

<https://www.weforum.org/agenda/2020/02/these-dogs-can-smell-tree-disease-helping-save-the-orange-groves/#:~:text=Now%2C%20scientists%20in%20the%20United,called%20the%20Asian%20citrus%20psyllid.>

<https://www.smithsonianmag.com/innovation/can-disease-sniffing-dogs-save-worlds-citrus-180974108/>

<https://www.ars.usda.gov/news-events/news/research-news/2020/trained-dogs-are-the-most-efficient-way-to-hunt-citrus-industrys-biggest-threat/>

<https://www.iisd.org/articles/these-detector-dogs-are-sniffing-out-disease-threatening-worlds-citrus-trees>



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Raw material stocks generally accumulate during the dry season, though the last 18 months have witnessed weather atypical of Indonesia. There is hope that July to September rain will cease. Raw material supplies have been hit due to the prevalent weather conditions. Cyclones and La Niña have extended the rainy season and kept the dry spell at bay. Start-stop rains during the dry season have negatively impacted raw material availability.

Earlier in the year, future price speculations led to a fall in price. These expectations were based on the predictions of a long, dry season. Processors also booked future orders on this low price, though farmers did not agree to these prices. Thus, the price rose as quickly as it had fallen. Since the change was quick and stark, it may have been missed by some, though those concentrating on export data were left confused.

Restrictions due to COVID-19 have also impacted raw material supply. Delays are being experienced in the shipping of dangerous goods. Transit time has also increased due to availability issues. Normal production and movement are also compromised due to the pandemic. Freight prices have jumped almost 3 times. The FCL price to Europe has increased from USD 3,000 per shipment to USD 10,000.

The next few months may see raw material prices going down. In the short term supply will be restricted and most of the processors are fully booked. The decision to buy needs to be based on current requirements.



CITRONELLA OIL

Cymbopogon winterianus 🌐 *Indonesia*

In the near future, the price of citronella oil is expected to remain stable. It has stayed slightly over the production cost for the last 18 months. Due to the efforts of government to promote citronella fields in deforested areas and abandoned mines, supply is not an issue, though demand may witness a slight fall. Over the years demand for citronella oil has peaked in the first two quarters and tapered thereafter. Last year saw a major spurt in the oil demand because of its use in sanitisers and other hygiene products.

🏠 USD 12.00 /kilo

CLOVE BUD OIL

Eugenia caryophyllata 🌐 *Indonesia*

The oil price remains stable with no significant change expected in the near future. An expansive product portfolio with a variety of CBO qualities has increased the market share of producers.

🏠 AUD 22.00 /kilo

CLOVE LEAF OIL

Eugenia caryophyllata 🌐 *Indonesia*

Since the beginning of 2021, the price of clove has significantly gone up. Heavy rainfall has badly impacted the crop, and farmers are not expecting a good yield.

🏠 USD 15.00 - 19.00 /kilo

NUTMEG OIL

Myristica fragrans 🌐 *Indonesia*

An increase in the price of nutmeg generally leads to inferior quality oil in the market. Distillers add terpenes from turpentine, which compromises the quality. Currently, the price has risen, due to a delayed crop. This was a result of wet conditions. These prices are likely to prevail till October, when the next crop season commences.

The price of nutmeg oil is mostly stable, and no major fluctuations are expected, though demand for the oil currently exceeds supply. Producers are working to identify new and reliable sources. Production capacity and sales have doubled in the first two quarters, and the trend is expected to continue. Maintaining the highest quality during distillation is the biggest challenge. Producers and distillers are working together to solve this issue.

🏠 USD 70.00 - 75.00 /kilo



PATCHOULI OIL

Pogostemon cablin 🌐 *Indonesia*

The new harvest season has commenced, and different grades of patchouli will be made available to customers. From patchouli 28%, patchouli 30%, patchouli 32%, iron free, non-iron free, and colour spectrum from light (Gardner 10-12) to dark (Gardner 13-16), are all part of the product range. Demand for the oil has seen a spurt since 2020. Production capacity has doubled to meet this demand. Since February major fluctuations were witnessed in the price of patchouli oil for over two months. Only large-scale exporters benefit from such oscillations. To bring stability to the market, and protect the interests of small stakeholders, major F&F players and representatives of the Association of Essential Oils stepped in. This helped curb price variations.

There is a trend of immature plants being harvested in certain areas. This produces low grade essential oil. To improve the quality further rectifications are required, which ultimately increase the price. Good quality raw materials are hard to come by. This has created a vast gap between entry level and premium quality oil. Farmers are also well versed with market scenarios. They ensure raw material prices don't drop drastically, even after a dry period. Regarding price, opinion is divided in the market. While some are expecting prices to fall, others are not inclined in that direction.

🏠 USD 50.00 - 55.00 /kilo

LEMON OIL

Citrus limon (L.) *Burm. F.* 🌐 *Italy*

Italy is Europe's third largest producer of lemons, behind Turkey and Spain. Approximately 85% of Italian lemons are grown in Sicily on about 23,000 ha of land, with most of the rest grown in Calabria and a small quantity in Amalfi. More lemons are produced in the winter season, which runs from November until January, while the summer season is from April until July. Sicily produces 86% of Italian lemons. The main varieties of lemons grown in Italy are *Femminello Commune* (53%), *Monachello* (10.2%), and *Zagara Bianca* (23.5%). The current crop of lemon production is predicted at 491,000 MT, an increase of 10.3% compared to the previous season. Lemon oil production is estimated to be approximately 650 MT.

🏠 EURO 25.00 /kilo



LIME OIL

Citrus aurantifolia – Key lime 📍 Mexico
Citrus latifolia – Persian lime

Lime production in Mexico is expected to increase as compared to the last crop because of improved weather conditions in the growing regions. Despite droughts that have been affecting citrus production, Mexican lime production has been growing year after year. Production is forecast to reach 2.87 million MT this year, a 6% increase from last year. While Mexico expects to increase lime production this year, the global market is seeing an overall decrease.

Limes for processing in Mexico are expected to be fewer than the last crop because of an increase in exports and fresh domestic production. Prices for the fresh fruit market have risen due to the high fresh fruit demand that continues limiting the availability for the industry. Although Persian lime has year-round seasonality, it experiences a low season from February to April. With this in mind many Mexican growers decided to wait to increase the volume and quality of their harvest resulting in lower quantity and quality of Persian limes and thus an increase in its global price. But with the low season coming to an end, the volume and quality of limes are improving, and growers have resumed production and export. Thus, the situation is looking to improve in the coming months with the beginning of the main season in Mexico, and it is expected to increase processing volumes in those months both for Key lime and Persian lime.

Another factor which may affect the supply this season is the container equipment shortage. This shortage, which is affecting transit and delivery times, is expected to remain until 2022. This global situation has led to an increase in sea freight charges by about 30% and extra charges for producers as their cargo is stuck at the ports.

On the market side, demand for lime juice and oils is likely to remain tight with very low inventories from previous seasons and expectations for the current season to remain firm, putting pressure on price levels. Prices for Persian and distilled lime oil are both on the increase.

🏠 Lime oil distilled USD 55.00 /kilo

MEXICO - LIME PRODUCTION AND DISTRIBUTION ('000 MT)

<i>Mexico Lemons/Limes, Fresh Market Begin Year</i>	<i>2018/2019 Nov 2018</i>	<i>2019/2020 Nov 2019</i>	<i>2020/2021 Nov 2020</i>
Production	2,686	2,717	2,870
Imports	4	3	3
Total Supply	2,690	2,720	2,872
Exports	751	801	852
Fresh Dom. Consumption	1,542	1,412	1,671
For Processing	397	507	350



BLUE TANSY OIL

Tanacetum annuum 🌍 Morocco

Initial reports indicate that the market is on track with regard to harvest and estimated quantities to be processed. Therefore prices are expected to remain at their previous levels. There are some volumes of organic blue tansy and conventional material available from last year's stocks.

🏠 EURO 245.00 /kilo

CEDARWOOD OIL

Cedrus deodara 🌍 Morocco

Cedarwood oil volumes are predicted to touch 50 to 60 MT this year. The industry has been insulated from major upheavals due to timely regulations put into place by the government. The cedarwood market continues to be stable and sustainable

🏠 EURO 22.00 /kilo

NEROLI OIL

Citrus aurantium 🌍 Morocco

There is some good news on this oil. Neroli essential oil yield is up by 1.85% compared to last year. The weather has been conducive and there is a slow semblance of stability returning to the fields, albeit with COVID-19 protocols. The harvest has been a good one with an increase in volumes of oil.

🏠 EURO 4,200.00 /kilo

ROSEMARY OIL

Salvia rosmarinus 🌍 Morocco

Rosemary oil continues to command steady prices. Though availability of raw materials continues to pose a challenge for distillers, there are adequate volumes of oil available in the market. There is not much change in the volumes and pricing.

🏠 EURO 48.00 /kilo

WILD CHAMOMILE OIL

Ormenis mixta 🌍 Morocco

Wild chamomile enjoys a good and steady demand. Weather and other conditions have improved considerably compared to last year. Although it is a tad early to comment on the harvest, initial estimates point towards a robust demand that will once again overtake supply.

🏠 EURO 1,900.00 /kilo





SPIKENARD OIL

Nardostachys grandiflora DC. 🌍 Nepal

The government of Nepal has extremely stringent rules for the collection of raw material for spikenard oil. Import of the oil is also banned in Europe, though spikenard oil continues to be available for export. The price of the oil is low, but stable.

🏠 Price on Request

TIMUR BERRI OIL

Zanthoxylum armatum 🌍 Nepal

Production and demand of the oil are in tune with last year.

🏠 Price on Request

WINTERGREEN OIL

Gaultheria procumbens 🌍 Nepal

High demand for the oil has exponentially raised the price. The crop was mostly spoilt due to the pandemic, and production is expected to be low this year.

🏠 Price on Request

CABREUVA OIL

Myrocarpus frondosus 🌍 Paraguay

There are sufficient volumes of the oil available in stock and prices remain steady.

🏠 USD 49.00 /kilo

PETITGRAIN OIL

Citrus aurantium ssp. 🌍 Paraguay

With the onset of warmer, winter months, petitgrain is facing some trouble. Prices are escalating as the availability comes under stress.

🏠 USD 75.00 /kilo

GUAIACWOOD OIL

Bulnesia sarmientoi 🌍 Paraguay

All the available volumes of guaiacwood oil have been depleted. At present, there are no stocks; the market is awaiting replenishment of stocks and new material to be available.

🏠 Price on Request



Labour costs and technical equipment prices have gone up in the market. Coronavirus cases are also witnessing a rise in certain areas like Russia. Weather too has a significant impact on yield. Due to all these uncertainties, it is not possible to anticipate the quantity and quality of the crop.

CLARY SAGE OIL

Salvia sclarea L. 🌍 Russia

Availability/demand is stable. Plants in the fields look okay but it's too early for a detailed forecast. Winter was okay but there was a late and cold spring. In case of hot temperatures in the following weeks it's not clear how this will affect the crop and the quality.

🏠 EURO 95.00 /kilo

CORIANDER SEED OIL

Coriandrum sativum L. 🌍 Russia

A good crop can ease the pressure on price, though farmers may be reluctant to lower the price, as crop sustainability is the responsibility of the entire supply chain. The political situation is gradually improving too. The build-up of Russian troops on the Ukraine border has eased, preventing any unforeseen supply disruptions. Currently, good quality seeds at a sustainable price for distilling are available in limited quantities. As stocks go down importers in the UK and EU are meeting customer demand. This has led to a price rise.

The new coriander crop is expected late July to mid-August, and the oil will be available only post mid-September, after which one can expect a fall in price. It is advisable to stock product to meet demand till December. Market conditions will take a few months to settle post the crop harvest.

🏠 USD 85.00 /kilo

DILL WEED OIL

Anethum graveolens L. 🌍 Russia

The cold and long spring could have an impact on the upcoming crop. It is too early to predict the outcome; the quantity and quality of oil produced is yet to be seen.

🏠 USD 48.00 /kilo

LAUREL LEAF OIL

Laurus nobilis 🌍 Russia

Market for laurel leaf oil remains the same. There aren't many changes.

🏠 USD 129.00 /kilo

PINE SYLVESTRIS OIL

Pinus sylvestris 🌍 Russia

Oil is produced depending on the consumer demand in the market. Demand and supply are stable at the moment.

🏠 USD 36.00 /kilo

FIR NEEDLE OIL

Abies sibirica Ledeb. 🌍 Russia

Coronavirus cases in Russia are expected to have an adverse impact. Cost of production has risen, and so has the demand. There is limited supply of the product. All these factors will increase the price further.

🏠 USD 55.00 /kilo

LAVENDER OIL

Lavandula angustifolia 🌍 Russia

Same weather conditions in Russia/ Moldova as described (normal winter, long & cold spring). In Bulgaria there was a dry spring and in June it was cold and rainy. This might cause a lower yield and increasing prices for this year's production. After the crop there should be a clear picture available.

🏠 USD 69.00 /kilo

THUJA OIL

Thuja occidentalis 🌍 Russia

The market for the oil is stable. It is procured from Asia.

🏠 USD 55.00 /kilo



THE SCENT OF HOPE: USING ESSENTIAL OILS TO TREAT DEMENTIA

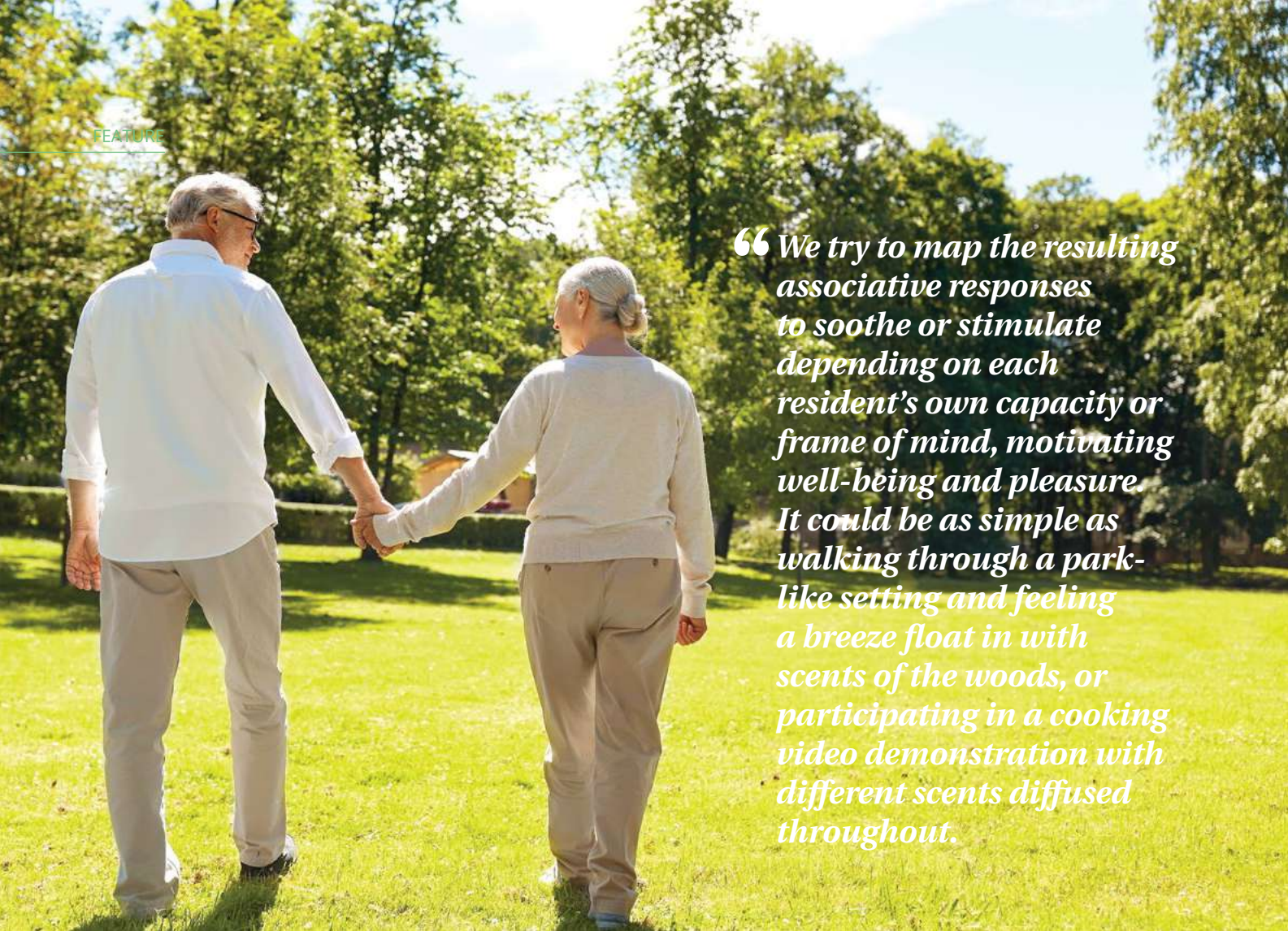
Eddie Bulliqi

AN INTERVIEW WITH MARIA MORATI



From its earliest inception, the aromatherapeutic tradition has sought to hone the potent cognitive imprint generated by olfactory experience, exploiting the sense of smell's capacity to stimulate beauty, emotion, memory, subjectivity and cross-modal cues such as texture, colour and haptics for visceral and intimate reactions. Driven by consumer desire for natural products as well as the contemporary turn towards mental health and holistic wellness, a new mass-market appetite for aromatherapeutic practice continues to bleed into non-traditional categories such as fine fragrance and medicine, spotlighting how fragrance can be used in a functional capacity to change mood, enhance focus or generate a sense of wellbeing. Our current global health crisis has only exacerbated appreciation of scent, air care and the optimisation of healthy environments, both in the physical and mental spheres, opening space for experimental and cutting-edge aromatherapy that targets biochemical goals with low-cost, high-impact interventions.

This issue's interview highlights the work of Maria Mortati, a San Francisco-based experience designer and educator creating multi-sensory experiences for people living with dementia. As part of a suite of approaches, she is using essential oils to create immersive and engaging experiences for dementia residents, representative of the wider innovation ecosystem seeking to establish symptom-relieving protocols with the principles of aromatherapy.



“We try to map the resulting associative responses to soothe or stimulate depending on each resident’s own capacity or frame of mind, motivating well-being and pleasure. It could be as simple as walking through a park-like setting and feeling a breeze float in with scents of the woods, or participating in a cooking video demonstration with different scents diffused throughout.”

Eddie Bulliqi [EB]: When working with dementia residents, what are your main goals?

Maria Mortati [MM]: Currently, I’m leading a new initiative creating an interactive, multi-sensory, mobile installation for people living with dementia at the San Francisco Campus for Jewish Living (SFCJL). The project is called the Experience Station, and our focus is creating a sense of pleasure for their residents so we can increase their quality of life and hopefully reduce their susceptibility for anxiety, falling, and wandering. The principle is that if you help those living with dementia to experience pleasure, joy, and delight, as generated by sensory stimulation, then they’ll function better and, by extension, their memory will function to the maximum capacity that they have.

We’re not specifically trying to target subjective and personal memories as we obviously don’t know each person’s history with specific smells (or any other type of sensory stimulation) and, in fact, it’s possible that those types of recalls might not engender the most pleasurable thoughts and sensations for residents. Instead, we know that people living with dementia often need great stimulation to be drawn out, and that they respond best when everything is “turned up to 11”. We are building prototypes to investigate what that can be like by crafting interactive and multi-sensory experiences. We try to map the resulting associative responses to soothe or stimulate depending on each resident’s own capacity or frame of mind, motivating well-being and pleasure.

EB: How are you using scent in these interactive installations?

MM: It could be as simple as walking through a park-like setting and feeling a breeze float in with scents of the woods, or participating in a cooking video demonstration with different scents diffused throughout. Scent is used as a cue to both soothe and stimulate, functioning as a stage-setting tool to underline what just took place in the activity or foreshadow what is to come. Scent is also used as a way of framing direction and orientation as people will often turn to where the scent is coming from. Behind the scenes, it’s all orchestrated through a computer that triggers actions at opportune moments. What’s most important is that these interactive experiences are bespoke for each resident category, manipulating temperature, air flow, visuals, scent, tactility and sound to optimise response.



EB: What activity are you currently producing?

MM: Right now, we’re running a cooking activity in which residents watch a video of a cooking lesson (how to make pizza, Rome-style). They meet a woman who establishes the scene in a Roman market. She pauses over a beautiful display of lemons whilst the camera zooms in on the fruit bowl and a lemon scent is diffused around the room. At the end, of course, they get to eat a pizza.

EB: How have residents reacted to the programme?

MM: Many turn their heads towards the scent, and the sensory combination can create a very potent experience for them in that moment. What I found last fall, when we were running our first prototype around natural landscapes, was that people closed their eyes and breathed in. One woman, who has late-stage dementia, really came to life. Another leaned back, closed her eyes, and smiled. She didn’t want to leave.

EB: What brought you to this line of work?

MM: I started out life as a drawing and painting major, aiming towards a career as a fine artist. After college, I began working in graphic arts and segued into media and interaction design in Silicon Valley, mainly focused on web-based projects. Just before the dot com bubble burst, I enrolled at Stanford in a design MFA programme that was mixed with mechanical engineers and ended up producing real-world interactive projects with a focus on physicality and tangibility. Next, museum exhibits made the most sense for me, and I polished my expertise in interactive museum design for about the next twenty years, also teaching at the California College of Art’s graduate interaction design programme as an adjunct professor. A year and a half ago my client, the SFCJL, was awarded a grant for me to work on this current project, using interaction design to enrich residential life for those living with dementia.

EB: Why did you gravitate towards natural essential oils?

MM: I wanted to use natural materials to be as authentic as possible. I don't know much about synthetics, but today we skew towards naturals as a culture, and I strive to work with olfactory ideas that are familiar and impactful. For example, cinnamon is such a potent and recognisable scent; when you open a jar, you can't help but exclaim "wow!" It's this kind of feeling I want to translate for those living with dementia.

EB: Which specific oils do you use?

MM: I've found that lemon is very evocative for residents, as well as eucalyptus, always designed into a thematic experience. We conducted a Presidio experience with a walk through a eucalyptus grove. Fans triggered to mimic the breezes on screen, and dispersed eucalyptus as they went deeper into the grove. I'd also like to explore the prospect of using multiple oils at once to conjure the experience of walking through a floral garden or something such as working in a wood shop.

EB: What's next for your work?

MM: Increasingly, I'm interested in figuring out how to create greater levels of interactivity with the Experience Station. One of those components includes getting better resolution on scents so I can tie them to broader aspects of everyday life and use them as triggers in the experience, using scent as an interaction device for immersion. We are working within an exciting new field. Those with dementia, their caregivers and families are always looking for new tools to improve quality of life; the problem is that technologies and institutional design haven't caught up yet. I hope that the type of sensory design I'm working on can be advanced, refined and proliferated to allow as many people as possible the chance of a more fulfilling life.



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GRAPEFRUIT OIL

Citrus paradisi 🌍 South Africa

According to USDA, production of grapefruit is estimated to increase by 8% to 373,000 MT in the 2020/21 MY, from 344,626 MT in the 2019/20 MY. This is based on normal weather conditions, good rainfall received in the main growing areas, and the increase in area planted, which now totals 8,700 hectares. Domestic consumption of grapefruit is very small, and an estimated 260,000 MT of fresh grapefruit will be exported, with the EU and Asia being the dominant markets. Citrus has seen a surge in demand due to the assumed benefits of vitamin C in boosting immunity against COVID-19. However, South Africa continues to face challenges in entering the EU market due to citrus black spot (CBS) and false codling moth (FCM).

Some 30% of grapefruit is processed into juice and concentrate, while the left-over pulp is an important source of grapefruit oil used to flavour soft drinks. Grapefruit peel oil is extracted from the peel and used in fragrances. Also extracted from the peel is the bitter tasting naringin, which is used to flavour tonic water. Increasing quantities of grapefruit are processed, with an estimated 105,000 MT processed in 2020/21 an increase of 12% on the previous year.

🏠 Grapefruit pink - USD 28.00 /kilo; Grapefruit white- USD 48.00 /kilo

LEMON OIL

Citrus limon (L.) Burm. f. 🌍 South Africa

According to USDA, the production of lemons is estimated to marginally increase by 1% to 625,000 MT in the 2020/21 MY, from 619,522 MT in the 2019/20 MY and this is because of an increase in the area planted. The increase was expected to be higher but drought in part of the growing region offset the increase.

Lemons and limes for processing will increase by 1% to 139,000 MT in the 2020/21 MY, from 138,000 MT in the 2019/20 MY, because of the increase in production.

The exports of lemons and limes is estimated to increase by 1% to 461,000 MT from 457,886 MT in the 2019/20 MY, based on the increase in production, and growth in demand from the Middle East and Asian markets.

🏠 USD 14.00 /kilo

ORANGE OIL

Citrus sinensis 🌍 South Africa

Orange is the largest citrus crop grown in South Africa, and the current 46,000 hectares under orange account for almost half the citrus area planted. The trend in plantings and production has been steadily upward over the past decade. Orange production in 2020/21 MY is estimated to increase by 2% to 1.65 million MT based on normal weather conditions, good rainfall in the main growing regions, the rise in area planted, better water management techniques by farmers, and new plantings of high yielding and late-maturing varieties. Nevertheless, drought conditions and hail damage have had an impact in some growing areas. Oranges are normally harvested between March and September, and, to date, the impact of COVID-19 on production, harvesting and labour has been minimal. South Africa prioritises fresh fruit exports and almost 80% of production is exported as fresh oranges. Fruit that does not meet export standards is processed and in 2020/21 MY estimated fresh fruit exports will be 1.28 million MT, (a 3% increase from 2019/20 MY), while 285,000 MT will be processed.

🏠 USD 9.00 /kilo

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LEMON OIL

Citrus limon (L.) Burm. F. 🌐 Spain

The AILIMPO lemon crop estimate for the 2020-2021 season forecasts a total production of 1.29 million MT, broken down into 947,000 tonnes of Fino lemons and 343,000 tonnes of Verna lemons.

Varieties	Forecast 2020/2021 (MT)
Fino	947,568
Verna	343,176
Total	1,290,744

The commercial supply of Fino lemons for the fresh market will be lower in the second part of the season, which could put pressure on the sales market, while the harvest of Verna lemons guarantees supply throughout the summer of 2021.

Spain will continue to consolidate its commercial position in Europe with its quality and phytosanitary guarantees. Following Argentina, Spain is the second largest lemon producer in the world but the first global exporter of lemons for fresh consumption. Spanish lemon production is concentrated in the regions of Murcia and Valencia, and the provinces of Malaga and Almeria in Andalucía. In recent years Spain increased its total planted area for lemons standing at around 46,000 ha in 2019.

In relation to processing, it is estimated that approximately 25% of the harvest is destined for processing, producing a wide range of juices, essential oils and dehydrated peel. Lemons for processing are expected to increase because of higher production and because there is less demand for fresh fruits because hotels and the tourism industry are operating at well below capacity.

Spain's organic lemon acreage has almost quadrupled in the past decade, reaching 8,300 ha last year. It now accounts for 17% of total planted area, producing 172,642 tonnes in 2020. The GlobalG.A.P. and GRASP certifications are key elements this season as part of the strategy to differentiate Spanish lemons and to promote sustainable production with a triple focus on economic, environmental, and social impact. AILIMPO predicts that, in the short term, organic lemons will make up a quarter of total acreage.

🏠 EURO 14.00 - 19.00 /kilo





CINNAMON BARK OIL

Elettaria cardamomum L. 🌿 Sri Lanka

The price of raw materials, and consequently the oil, remains stable. Large distillers and exporters generally keep stock of raw materials and oil during the off-season, but this year due to the COVID-19 pandemic, large volume of stocks isn't available.

🏠 USD 295.00 /kilo

CINNAMON LEAF OIL

Cinnamomum zeylanicum 🌿 Sri Lanka

Shortage of raw materials has impacted the supply of cinnamon leaf oil. Additionally, the oil price is also on the higher side. Harvest season has been put on hold due to the lockdown because of COVID-19.

Limited availability of raw materials has been offset by low demand. This has resulted in the easing of the price slightly from the previous quarter. The first quarter of 2019 witnessed cinnamon leaf oil being traded at record low prices.

🏠 USD 28.00 /kilo

CITRONELLA OIL

Cymbopogon nardus 🌿 Sri Lanka

Sri Lankan citronella oil has witnessed a spurt in demand since the end of February. This is reflected in an upward price trend from the previous quarter. Favourable weather also aided the production of the oil.

🏠 USD 24.00 /kilo

CLOVE BUD OIL

Eugenia caryophyllata 🌿 Sri Lanka

The oil is being sold at a high price in the market. This is primarily due to the high demand for the spice, which has reduced the availability of raw materials for oil distillation.

The crop harvested last year was available till February, but with no fresh raw materials in the market, the price is expected to stabilise at its current level.

🏠 USD 55 /kilo

CLOVE STEM OIL

Eugenia caryophyllata 🌿 Sri Lanka

The oil price is expected to solidify as fresh raw materials are no longer available in the market. The crop from the December 2020 harvest was being sold in the market till February.

🏠 USD 33.00 /kilo

NUTMEG OIL

Myristica fragrans 🌿 Sri Lanka

The local nutmeg industry has been adversely impacted due to the competition from Indonesia. Along with the abundant supply of raw material, oil price is expected to be low. Crop from the previous harvest is still available.

🏠 USD 62.00 /kilo

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CEDARWOOD OIL TEXAS

Juniperus mexicana 🌍 USA

The USA homes the three distilleries that contribute the lion's share of cedarwood oil Texas to the global market. The plants are undergoing repair and upgrading for capacity expansion. As a result, distillers are unable to work the plants to their optimum capacity. A bigger challenge, however, is the severe shortage of skilled and unskilled talent. There are strong political undercurrents which are impacting the trade. Employers are forced to double the minimum wage to induce people to return to work. The oil commands a robust demand which is soon reaching levels of desperation. Suppliers are working to produce adequate volumes but are unable to meet requirements. This has caused prices to skyrocket.

📈 Price on request

LEMON OIL

Citrus limon (L.) Burm. F. 🌐 USA

California dominates US lemon production, with the USDA forecasting Californian production in 2020-2021 of 21.5 million boxes out of US production of 23.8 million boxes, Arizona accounting for the remainder.

Price on request

USA: ESTIMATED LEMON PRODUCTION 2018/19 TO 2020/21 ('000 BOXES)

Crop and State	Production 2018-2019	Production 2019-2020	May Forecast 2020-2021	July Forecast 2020-2021
California	23,700	25,300	22,000	21,500
Arizona	1,350	1,800	1,800	1,500
USA Total	25,050	27,100	23,800	23,000

ORANGE OIL

Citrus sinensis 🌐 USA

Total USA orange production in 2020-21 is expected to be 105.75 million boxes. The forecast for non-Valencia oranges (early, midseason and navel varieties) in all USA production regions is 65.7 million boxes. This breaks down into Florida's production at 22.7 million boxes, California's remaining at 42 million boxes and Texas remaining at 1 million boxes. Regarding Valencia oranges, the forecast is a total of 40.05 million boxes, with Florida increasing 1 million boxes from the previous forecast to 30 million boxes, California remaining at 10 million boxes and Texas remaining at 50,000 boxes.

Orange production continues to decline in Florida because of greening and fruit drop has severely impacted orange yield. According to the USDA citrus crop forecast, the estimate of fruit drop for early/midseason and Valencia oranges was 43% and 34% respectively. Orange production in Texas was less because of a severe winter storm which damaged a good portion of the crop, while California is catching up with Florida's production and may surpass it in the new crop.

Consumption, exports, and fruit for processing are all forecast to be down with the drop in production, though imports are expected to be up. Orange juice production is forecast down 16% with the drop in available oranges for processing. Consumption and stocks are expected to be down because of lower production and despite higher imports. Thus, while supply is limited, demand is strong and prices are increasing.

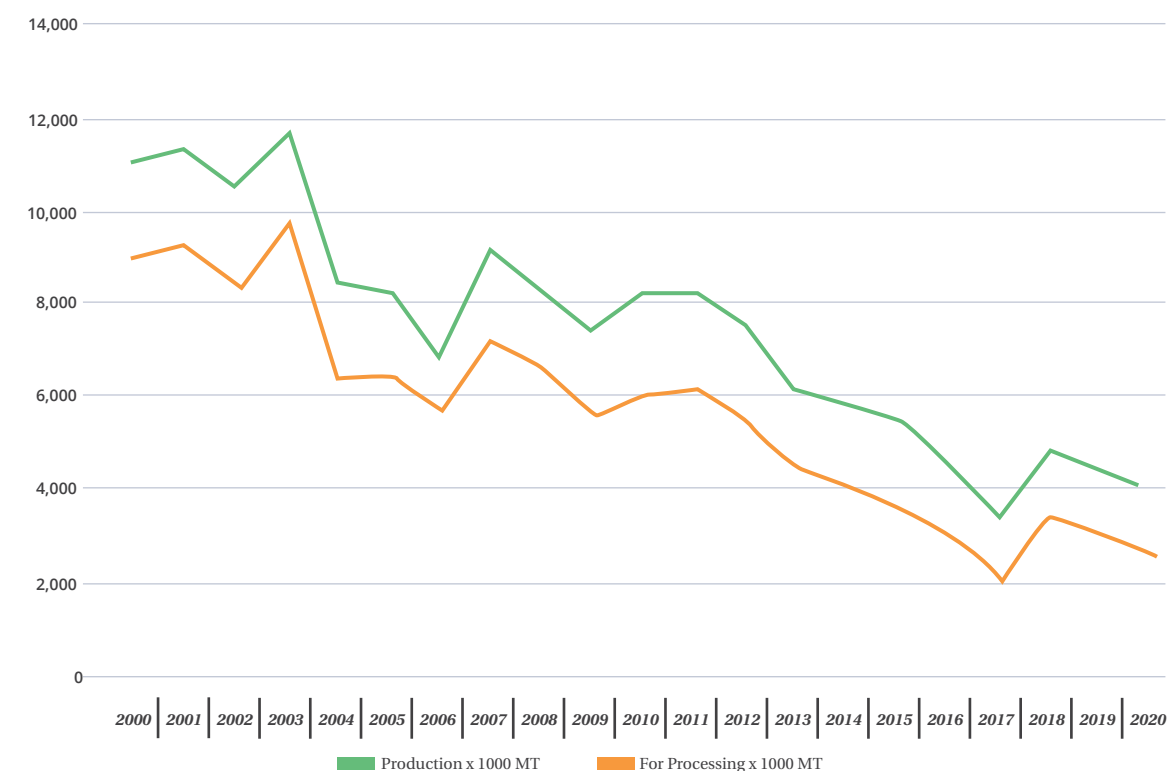
🏠 USD 10.00 /kilo



USA: ESTIMATED ORANGE PRODUCTION 2018/19 TO 2020/21 (MILLION OF 40.8 KG BOXES)

Countries	Production 2018-2019	Production 2019-2020	Forecast May 2020-2021	Forecast July 2020-2021
Florida	71.85	67.40	51.70	52.80
California	52.20	54.10	52.00	54.50
Texas	2.50	1.34	1.05	1.05
Total	126.55	122.84	104.75	108.35

USA: ORANGE PRODUCTION AND PROCESSING TREND



PEPPERMINT OIL

Mentha piperita 🌐 USA

Of late, the returns on peppermint and spearmint have been lower than expected. This has nudged farmers to turn to other options in corn, soybean, and wheat crop competing for plantation acreage. As a result, the total plantation area for peppermint and spearmint has gone down. Other crop harvests bring in better prices than mint and will tide the farmers over till the mint prices inch up to acceptable levels.

🏠 USD 59.00 /kilo



VANILLA NEWS FROM AROUND THE WORLD

Vanilla



COMOROS

The Comoros Islands in the Indian Ocean just northeast of Madagascar are known for the production of high quality bourbon vanilla, with annual production between 35 – 50 MT. Considerable efforts were made to expand production during the high prices of 2016 – 19 but, as yet, no additional output has appeared on the international market. This is probably the result of a combination of high production, lower vanilla prices, the pandemic and the severe logistical and shipping constraints faced by the country.

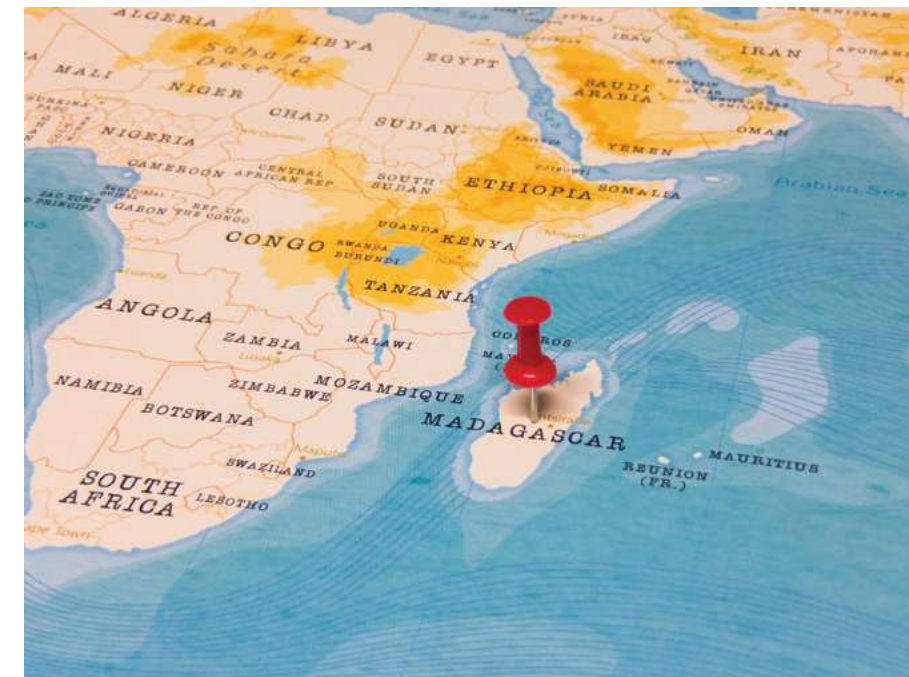


INDONESIA

Indonesian vanilla has different flavour and fragrance characteristics than Madagascar vanilla and its industrial grade is the preferred vanilla for blending with neighbouring PNG extraction grade. This is expected to be a significant season for Indonesian vanilla. Lots of farmers started plantations in 2017-

18 because of the high prices. While the volumes may be less this year, the quantity available could double next year. The quality is also expected to be good, as the beans are larger in size. In the crop cycle, the beans in the first years are big, which means until 2024, major volumes can be expected from the Indonesian market. Also with fewer players, most of the crop is expected to mature prior to harvesting. However, if the price falls under USD 50/kg, producers may get dejected, and stop working on the fields. Keeping government projections aside, 2021 will likely see around 150 MT of vanilla production.

Indonesia's vanilla market is a free market with minimal government interference. Traditionally, a high price in the market brings lots of traders into the mix. Some clove traders had stored vanilla beans from 2004, when prices were at rock bottom, until 2017. Thus, large volumes were traded in 2017-18, even though the fresh crop did not exceed 250 MT. Generally, 300-400 MT of vanilla is produced by Indonesia but the recent lower market price could bring production down by a half. Suppliers who had bought beans at a high price, preferred to keep the inventory rather than sell. These traders have now become more active with demand beginning to pick up.



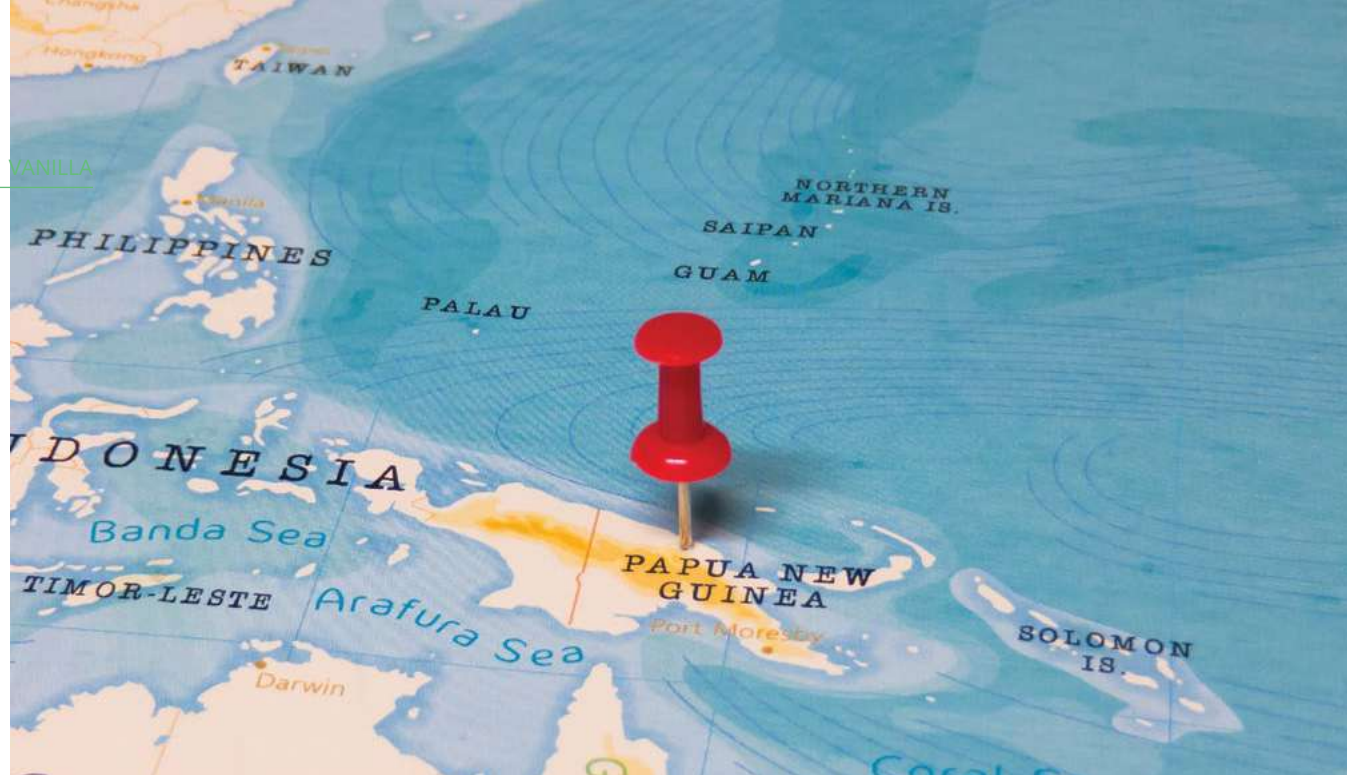
MADAGASCAR

The past year has seen a further substantial fall in vanilla prices. Some traders are hopeful that the increase in demand following the increased economic activity following the ending of lockdowns will lead to stabilisation of prices at current levels.

The opening of Madagascar exports in mid-September saw the government imposing a fixed minimum export price of US\$ 250/kg, which was substantially higher than ruling world market prices. This created some uncertainty in the market as some competing origins set prices at too high a level. The Madagascan government has again set a minimum export price of US\$ 250 /kg for the 2021 season, harvesting of which is undertaken in July and August. In an effort to support growers' incomes the government is endeavouring to impose a fixed minimum green vanilla purchase price of approximately US\$ 20/kg.

The high prices of recent years encouraged several countries to expand production, including Madagascar, Indonesia, Papua New Guinea (PNG), Comoros and Uganda. However, the recent sizeable fall in vanilla prices is likely to lead, at best, to their production stabilising despite increasing demand. In contrast to other vanilla producers, Madagascar's government undertakes greater regulation of the sector, in part reflecting vanilla's importance to the economy both as an employer of tens of thousands of smallholders and labourers and as an important source of export earnings, since almost all production is exported. Madagascar continues to account for a large proportion of global natural vanilla production, one of the world's favourite flavours. Production in Madagascar in 2021 is predicted at approximately 2,000 MT, a similar level to 2020.

It is predicted that demand for vanilla will increase not only because of the fall in vanilla prices but also because of the recovery of the food service and leisure sectors in major markets, particularly in North America and Europe, which have been badly affected by the impact of the COVID-19 pandemic. The latter should facilitate increased usage of higher priced gourmet and black vanilla. Rising demand, combined with stable lower levels of vanilla production should help to limit the price decline – although predicting vanilla price and production trends is never easy.



PAPUA NEW GUINEA

PNG produces both *V.tahitensis* and *V.planifolia* vanilla beans in a range of qualities with overall average quality having improved in recent years. PNG industrial vanilla is now readily accepted by major industrial users in North America, Europe, and Australia, while some of its higher quality black/gourmet vanilla is imported into neighbouring Indonesia for mixing with local production. In recent years vanilla production in PNG and particularly the Sepik regions has been expanding, encouraged by high global prices. Production is undertaken by subsistence farmers on small household plots of 0.1 ha. to 0.5 ha., with women and the young playing an important role, particularly in the labour-intensive activities of pollination and processing. However, knowledge is limited regarding growing techniques and the drying and curing of green beans. An estimated 50%-75% PNG vanilla originates from East Sepik and Sandaun (formerly West Sepik) regions and some 90% of the 90,000 households in the area are dependent on vanilla as a source of income. This area borders Papua province in Indonesia and the majority of trade is done through informal channels since Indonesia is an important market. In 2020 the border with Indonesia was closed, which reduced the amount of trade. While some vanilla is smuggled, there is a procedure for exporting legally and some vanilla imports are recorded in Indonesian trade statistics.

Logistics in PNG are notoriously difficult – the transport system is highly fragmented and the major commercial port is not linked by road to the capital city. The high unit value, non-perishability, suitable agro-ecological conditions for vanilla growing and its relatively easy transportability have led to the encouragement of vanilla production as a cash crop in rural areas by both government and international agencies. Over the past few years there has been an improvement in both the volume and value of vanilla production. Accurate production and trade data are difficult to obtain – and cross border trade makes it even more difficult - but current estimates suggest 2021 production could be more than 300 MT.



UGANDA

In recent years efforts have been made by Ugandan organisations and international companies to increase both the quantity and quality of production. These efforts seem to be bearing fruit with improved yields and quality. With two annual harvests it is estimated that production in 2021 will be between 100 – 120 MT, substantially higher than in recent years.



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KUDOS TO FUNCTIONAL FOOD AND BEVERAGES

Health is the real wealth. It is a known fact that the COVID-19 pandemic has prompted a shift in the customer mindset towards immunity-boosting and wellness foods. Functional foods and beverages have caught the attention of the consumer. End-users are increasingly conscious of what they and their families eat, and how it benefits the body. This is not a knee-jerk reaction, however. For a while now, functional foods have been enticing customers but what are these? Namely, products that have a positive impact on the body beyond the obvious nutrition they are being consumed for. The pandemic has only accelerated their popularity. The differentiating factor today is the demand for foods that cater to specific body requirements, rather than provide a holistic well-being experience.

NOT A NOVEL CONCEPT

It is not a new discovery that certain food items provide therapeutic benefits. In fact, it was propagated by the father of medicine, Hippocrates over 2,500 years ago. Then he said, *"Let food be thy medicine and medicine be thy food"*. Though over the years as focus shifted towards medical advancements, the importance of dietary intake took a backseat. But the current scenario has once again put food front and centre. And this has led to the surge in the functional food and beverage market. Food and beverages with documented health benefits comprise this functional segment. Everyone has heard about superfoods. They have been trending on customer lists for some time now. Products like kombucha, coconut water, matcha, goji, edamame, turmeric, black garlic, dragon fruit, are being selected regularly. On the grains front, we see a significant increase in the demand for farro, chia, quinoa, and millet.

There are several concerns for which consumers are searching for solutions in their food products. Sleep, energy, mood swings, concentration, skin and hair ailments, are all issues for which people are turning to the functional food and beverage market.

BOOSTER FOODS

Functional snacks are a major segment that is being targeted by brands. In tune with customer requirements, they are offering products that tap into specific needs. For instance, there are several who seek an instant boost of energy. For them US coffee major, the Whole Coffee Co, developed a range of products. It created easily consumable bars from coffee beans that provide an instant energy kick. Their product range featured chocolate replicas in nudge coffee bars, coffee bombs, and coffee butter.

When it comes to the common stress-related ailment, sleep difficulty, functional foods have increasingly been highlighted to target this concern. A couple of years ago, Nestlé-backed brand Goodnight launched dark chocolate products to aid in solving sleep difficulties. Another stress related issue is mood swings. Rather than popping pills, natural foods that can help relax are gaining traction. To cater for this segment, companies have launched products like calm mint, which help soothe the mind and encourage relaxation.

Functional foods also help cognitive focus, which can be crucial for improved performance in the workplace. One of the most popular products in this segment is chocolate. A few years ago, Japanese company Asahi launched Otshiku Tokeru Chocolat targeting office goers.

Apart from this, customers are also seeking answers for their beauty issues with functional foods. This segment has a vast scope and companies are offering a wide range of products to improve skin and hair quality. European confectionery major Katjes launched a sugar confectionery range in 2020, Wellsweet. These products contain biotin, Vitamin E and zinc, which improves hair quality.

Talking about food as medicine, two of the most common themes are immunity and gut health. Poor digestion has been a global concern, which has made probiotic drinks extremely popular. But it is not just a drink anymore. Snack bars too have probiotic concentrations. Nestlé was one of the first to tap into the market with its probiotic snack bar.



UPLIFTING BEVERAGES

Shifting focus onto the beverage market, the end-user is looking for more than hydration. Today's consumer wants beverages enhanced with minerals, vitamins, amino acids, and dietary fibres. Energy drinks were foremost in the functional beverage segment. Though they do not offer any nutritional benefit, and contain high levels of sugar and caffeine, they suited a certain segment looking for an energy burst. The normal consumer has shifted interest towards other drinks, and bottled water with added vitamins, to act as nutrition enhancers or for making up for a deficit in nutrition. And these non-sweetened functional beverages provide additional health benefits. Kombucha, aloe vera, coconut water, green tea, and moringa tea are popular for their immunity-boosting, stress relieving, antioxidant, and gut-cleaning properties.

SWEET CRAVINGS ANSWERED

The functional food industry is in evolution mode, and is no longer restricted to healthy snacks and beverages. Confectionery has been a major contributor to the segment lately. Functional chocolates along with gelato and baking mixes have been a rage, especially through the pandemic. Functional chewing gums have been in the market for a while. Primarily made from xylitol and baking soda, these are said to boost energy, cease smoke pangs, work as breath fresheners, help in tooth whitening and calcium fortification. Functional jellies with herbal extracts and vitamins have gained popularity as well. Imagine plant-based gelatos created from young coconut meat and carrying the goodness of matcha green tea, rosewater, and saffron. Picture soothing chocolate chip mixes with holy basil, reishi, and ashwagandha. And frozen yogurt with probiotics, and non-dairy ice creams with a boost of vitamins. All these sweet pleasures offer something extra, making them a proud and popular entrant into the functional foods space.

GOING NATURAL

Another major draw towards functional foods is their natural origins. Increased customer awareness has brought a shift in mindsets. Pills and supplements are considered artificial. A vast majority is looking to complete their nutrition requirements through natural sources. Euromonitor International Health and Nutrition Survey 2020 showed a remarkable trend towards natural sources of vitamins and nutrients. Over half of the global respondents preferred food over pills. Even the other half, who opted for supplements, accepted the importance of natural food and beverages.





MIND MATTERS

The uncertainty due to the pandemic has put mental health in focus. A recent international study noted that mental wellbeing was a common concern among all age groups. As apprehensions over coronavirus persist, the spotlight remains on health and wellness. The current consumer is interested in foods that provide personalised nutrition requirements. Generic health and wellness foods and beverages do not have enough takers these days. Though eating well is more than just the food on the table. The concept of eating socially is gathering steam, since it is considered a healthy practice. Ethically and sustainably sourced food and beverages are being preferred. Customers are conscious of what they eat, and how it is produced. Green and environment-friendly certifications have gained immense importance in the mind of the customer.

Customer behaviour has shifted the focus of the food and beverage industry towards natural, organic products. At this juncture essential oils make a compelling case as ingredients in product innovations. Being rich in proteins and vitamins, these oils lend health benefits to products; their antioxidant, antimicrobial, and antifungal properties aid in maintaining quality. Functional foods and beverages are not a trend. They mark a change of lifestyle, and one that is here to stay. Increasing customer awareness is only aiding their rise. And with health becoming the primary concern worldwide, this is a segment that is bound to grow exponentially.

**All information regarding findings of international studies, and specific product examples have been extracted from various sources. Reference links for the same can be found below.*

<https://trendincite.com/functional-food-and-beverage-are-the-latest-development-in-health-wellness/>

<https://www.ift.org/news-and-publications/food-technology-magazine/issues/2020/april/features/the-top-10-functional-food-trends>

<https://www.foodnavigator.com/Article/2021/03/24/Functional-food-is-no-COVID-fad-Consumers-have-fundamentally-changed-their-attitudes-to-health-and-wellness>

<https://academic.oup.com/jn/article/132/12/3772/4712139>

<https://www.naturalproductsinsider.com/foods/functional-food-holistic-approach-toward-health-and-wellness>

https://www.nutraceuticalsworld.com/issues/2011-03/view_features/functional-confectionery-finding-the-sweet-spot/#:~:text=An%20obsession%20with%20sweets%2C%20alongside,gum%20and%20fortified%2Ffunctional%20chocolate.

<https://www.beveragedaily.com/Article/2021/04/13/The-rise-of-functional-drinks-and-nootropics-What-are-consumers-looking-for>

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True Conviction



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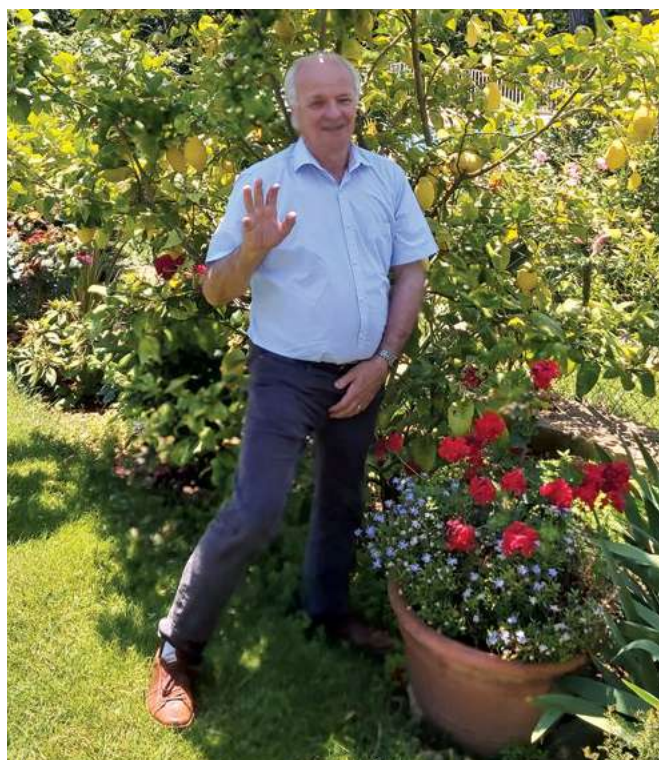
SPREADING OUR WINGS AROUND THE WORLD ULTRA'S NEW STRATEGIC PARTNERS



JAPAN BONDS: HOZUMI TAMURA

The Ultra Group has joined hands with Mr Hozumi Tamura in Japan. In order to service the Asian markets better, Mr Tamura will be our exclusive strategic and marketing partner in Japan. He will support and implement a business development strategy in Japan and South East Asia. We shall also liaise with him for sourcing natural Japanese products such as Hinoki and Yuzu.

As part of Cornes and Co. Ltd. in Japan, Mr Hozumi was responsible for collaborating with the British trading company, Stevenson and Howell. The company dealt in flavour, fragrance and natural raw materials. After a couple of years of this association, Mr Hozumi Tamura realised the need for a laboratory to enhance sales of flavour and fragrance products. He worked with International Flavour and Fragrance Japan for 15 years and he has also worked as Representative Director of Robertet Japan for almost two decades.



FRENCH CONNECTION: JEAN-MICHEL MOLIN

In France, The Ultra Group is collaborating with Mr Jean-Michel Molin. He is our new marketing consultant for sales and purchases. With a well-established background in the field and geographical proximity, Mr Molin will strengthen our French products sourcing. He is located in the Grasse region, not far from the lavandin, lavender, and clary sage farming areas. He also has strong business ties in Morocco. Mr Jean-Michel Molin will primarily be responsible for the regions of France, South Korea, Hong Kong and China.

Mr Molin has worked with major firms during the span of his career and was also the owner of Nice Aromatics. He spent 20 years in Agronomy and Management of Agriculture projects before embracing the world of essential oils. A passionate agriculturist, Mr Molin started his career in Africa, where he spent most of his time growing seeds. During his stint in Costa Rica and China, he was introduced to essential oils as a by-product of frozen concentrate orange juice. This is where his passion for the world of pure and natural essential oils, absolutes and resinoids was born. He is particularly fond of the Japanese, Korean, Chinese and Taiwanese markets.

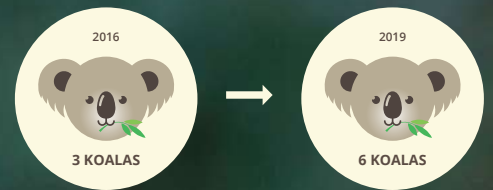

Ultra International B.V.
Essential Oils, Ingredients, F & F



From enigmatic Peru to vivacious Mexico;
carnavalesque Brazil to enthralling India,
We present lime oil from the world over,
directly to you.



PROTECTING OUR NATURAL ENVIRONMENT, A HOME FOR THE KOALA



Our Initiatives:

1. Planting/establishing additional koala food and shelter trees.
2. Policy of NO domesticated dogs and cats on the farmlands. GGN does not allow guard dogs on farms in Australia.
3. Reducing weeds in and around the koala food for healthier trees that support koalas and other native animals.