

ESSENTIAL OILS

MARKET REPORT



SUMMER 2022

SOAK UP THE SUN!

Ultra International B.V.

Essential Oils, Ingredients, F & F

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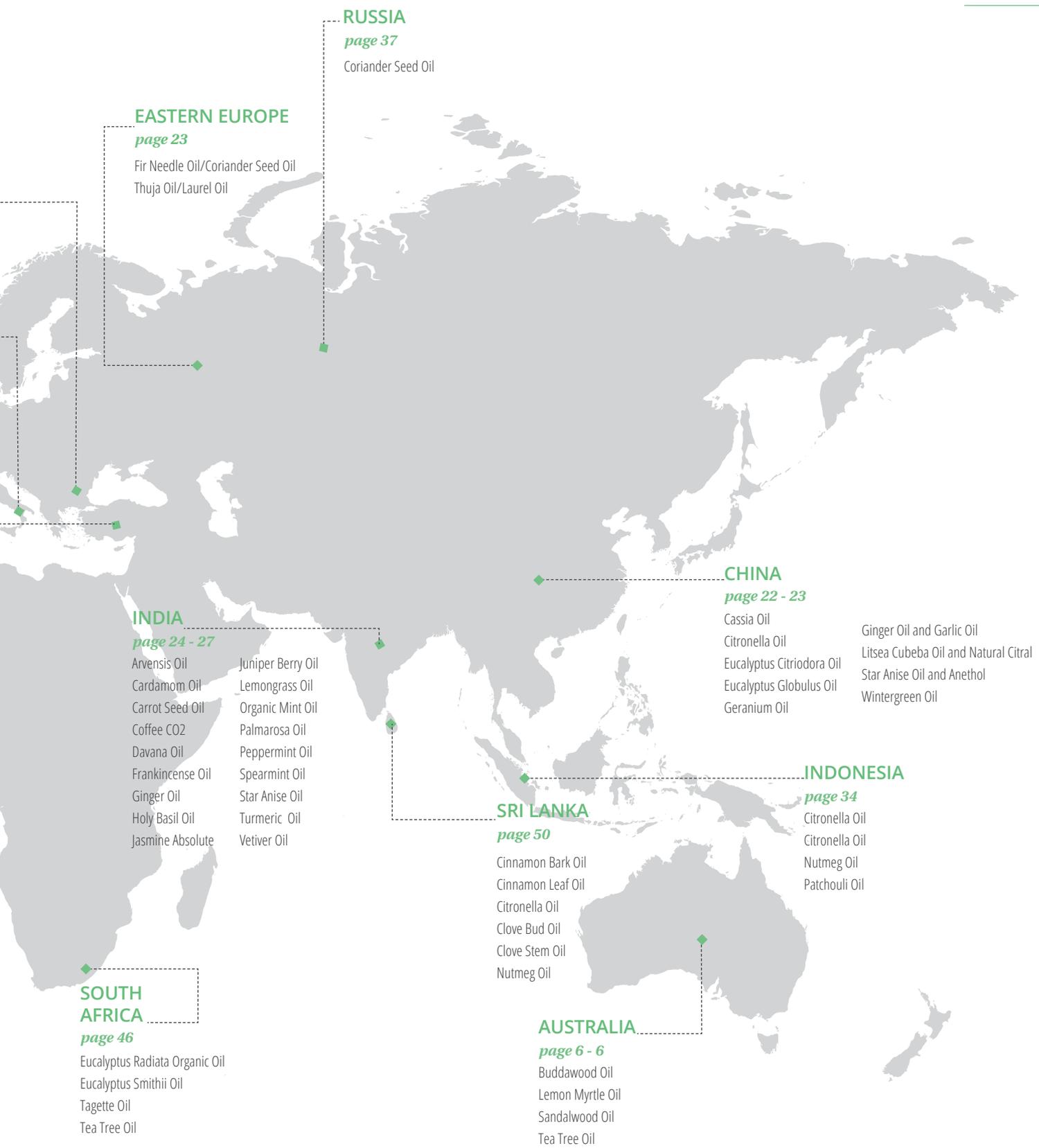
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As a radiant sun steps away from the spring's shadow, wrapping us in warmth and brightness, it echoes the sentiment of the world at large. Slowly, but steadily we have emerged from the grey clouds of the pandemic. The new normal has dawned. As the red carpet rolls out globally for travel, we are happy to hop on the flight. Business is heading back to normal, and we are ready for a busy season ahead.

Getting on the travel bandwagon, we commence our journey in the South of Italy, a treasure trove of well-manicured trees, bursting with citrus fruits. Here, experience blends with innovation to produce the purest range of nature's elixirs. To gain an intimate knowledge of the production and trading of essential oils in Sicily, our CEO, Mark Sewell and CPO, Gaëtan Bourdeau, embarked on a study tour. We reveal the knowledge learnt from their tour in this report.

From southern Italy to the south of the globe. We have sombre reports coming in from Australia. No place on earth is immune to natural disasters, and weather is a factor beyond our control. Golden Grove Naturals was hit by floods, resulting in damage of property and crops. But, tragedy gives us the opportunity to rebuild. With the courage and resilience of our workforce, we are getting back on our feet, and will soon be fully operational again.

It gives us immense joy to explore the versatility of one of our favourite products, nutmeg. The most commercially viable species of nutmeg, *Myristica fragrans* is native to the Moluccas, Indonesia. Its wide range of uses make nutmeg oil a popular product among the cosmetics, food and beverage, and pharmaceutical industries.

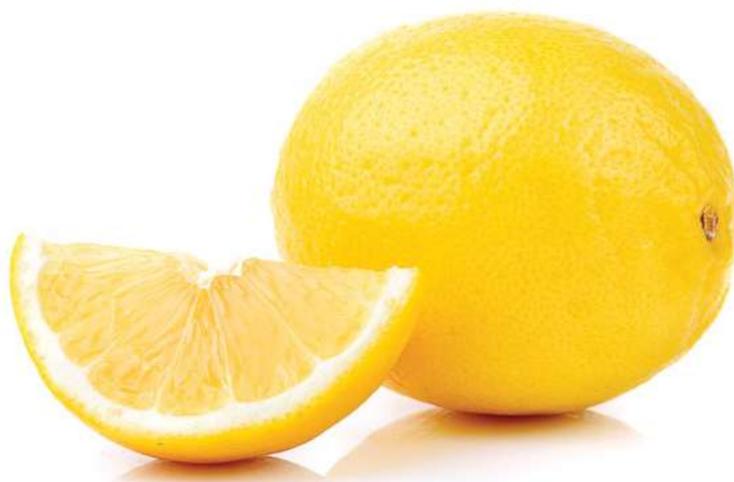
From one crowning jewel to another. Welcome to Atelier Ultra, an interactive workspace at our new facility in Chertsey, UK. It is a unique offering that lets ideas breathe, encourages creativity, and teaches the nuances of essential oils. One can borrow from historical connections, discuss with colleagues, create something new, and present it to the world. All under one roof. Atelier is the only space in the world where history, quality control, creation, presentation, library, conferences, and enjoying the process merge.

While we have embraced the virtual life for the past couple of years, it is a delight to engage with our peers and industry veterans personally. We are eagerly anticipating our participation in the upcoming IFEAT Conference in Vancouver in October 2022. The conference is a melting pot for ideators, and gives us the opportunity to connect with friends, customers, and suppliers.

As the world opens its doors to visitors again, I want to encourage the idea of staying cautious. While we have waited to meet and greet in person, we should not let our guard down. Stay safe everyone!

Priyamvada Sanganeria

Director, Ultra International BV



LEMON OIL

Citrus limon (L.) Burm. F. [Argentina](#)

The 2020/2021 crop ended at a much higher volume than originally projected. The fresh lemon production was revised upwards to 1.8 million metric tonnes (MMT) which was an increase of over 56% from the USDA original estimate. Because of severe drought during the spring of 2020/2021, the size of lemons was expected to be smaller, and volumes were expected to be 30% less than the previous crop because the lack of rain affected fruit setting and growth. However, timely rain falls during the summer allowed lemon trees to recuperate, and the new estimate for 2020/2021 production increased to 1.80 MMT from 1.03 MMT.

The USDA is reporting that the 2021/2022 fresh lemon production forecast is for 1.65 MMT, down 150,000 MT from the previous marketing year when production was estimated at unexpectedly high levels. A lower crop is expected because of an alternate bearing off season, which means that because last crop was a bumper crop, this year will be less. Lemon for processing will also be less because of lower production.

The first early exports figures of Argentinian lemons show 29.2% less fruit is certified compared to the same period in 2021, pointing to a clear delay in the beginning of the lemon campaign. Although there is an 88% increase to Europe, the stats show a drop of 25% in exports to Russia, 66% less to the USA, and 72% less to other destinations up to week 17 compared to the same time last season. Early lemon exports to Latin America increased by 42%. These first export statistics were released by the Citrus Growers Association of the Argentine Northwest (Acnoa), based in Tucuman.

📈 USD 13.5 /kilo

USDA ESTIMATED ARGENTINIAN LEMON PRODUCTION, SUPPLY AND DISTRIBUTION 2017/18 TO 2021/22 ('000 MT)

	2017/18	2018/19	2019/20	2020/21	Jan 2021/22
Production	1,770	1,780	1,491	1,800	1,650
Fresh Domestic Consumption	151	170	160	150	130
Processing	1,348	1,377	1,078	1,388	1,291
Total Exports	272	234	256	264	220



golden
grove
NATURALS

BUDDHA WOOD

Eremophila mitchellii 📍 Australia

There is low demand for this oil but supply is consistent. The fragrance industry is a major consumer of Buddha wood oil.

🏠 AUD 625.00 /kilo



LEMON MYRTLE OIL

Backhousia citriodora 🌍 Australia

The usage of this oil is growing considerably. A steady production and processing cycle is undertaken in Australia.

🏠 AUD 486.00 /kilo

SANDALWOOD OIL

Santalum spicatum 🌍 Australia

The market is stable. There has been reduced demand. However as travel restrictions have decreased, fine fragrance business is expected to pick up, thereby increasing demand for sandalwood oil.

🏠 USD 1350.00 /kilo

TEA TREE OIL

Melaleuca alternifolia 🌍 Australia

As mentioned in the detailed report on the floods in Australia this crop has been heavily affected. Almost 50 percent of the crop has been destroyed in NSW area. It can be assumed that out of the entire crop destroyed, around 30 percent of the farms may exit the tea tree plantation cycle and stop being a part of the tea tree oil business.

Shortage of tea tree production this year will consolidate the global tea tree oil market and will change the long-term market scenario.

🏠 AUD 49.00 /kilo

THE EXPANSION AND RESILIENCE OF **AUSTRALIAN ESSENTIAL OILS**

Climate change has had a dramatic impact on Australian agriculture. In the past four years record breaking droughts, bush fires, flood events, cyclones, and freak tides have hit large areas of Australia in rapid succession. The impact on communities has often been devastating, killing hundreds of people and millions of animals, and destroying crops - and the essential oil sector has not been immune from their impact.

Indigenous communities in Australia have been utilising essential oils for millennia. Commercial production of essential oils in Australia, beginning in the 18th century, has in the past few decades witnessed considerable investment to expand the production, processing, and trade in oils - in part reflecting Australia's diverse topography and climate. Today some 90% of Australian essential oil production, and approximately 20 different natural oils, are exported to a growing international market for natural oils. In addition, the government, universities, industry bodies and companies are undertaking considerable research and development to facilitate this continued growth in production and exports.

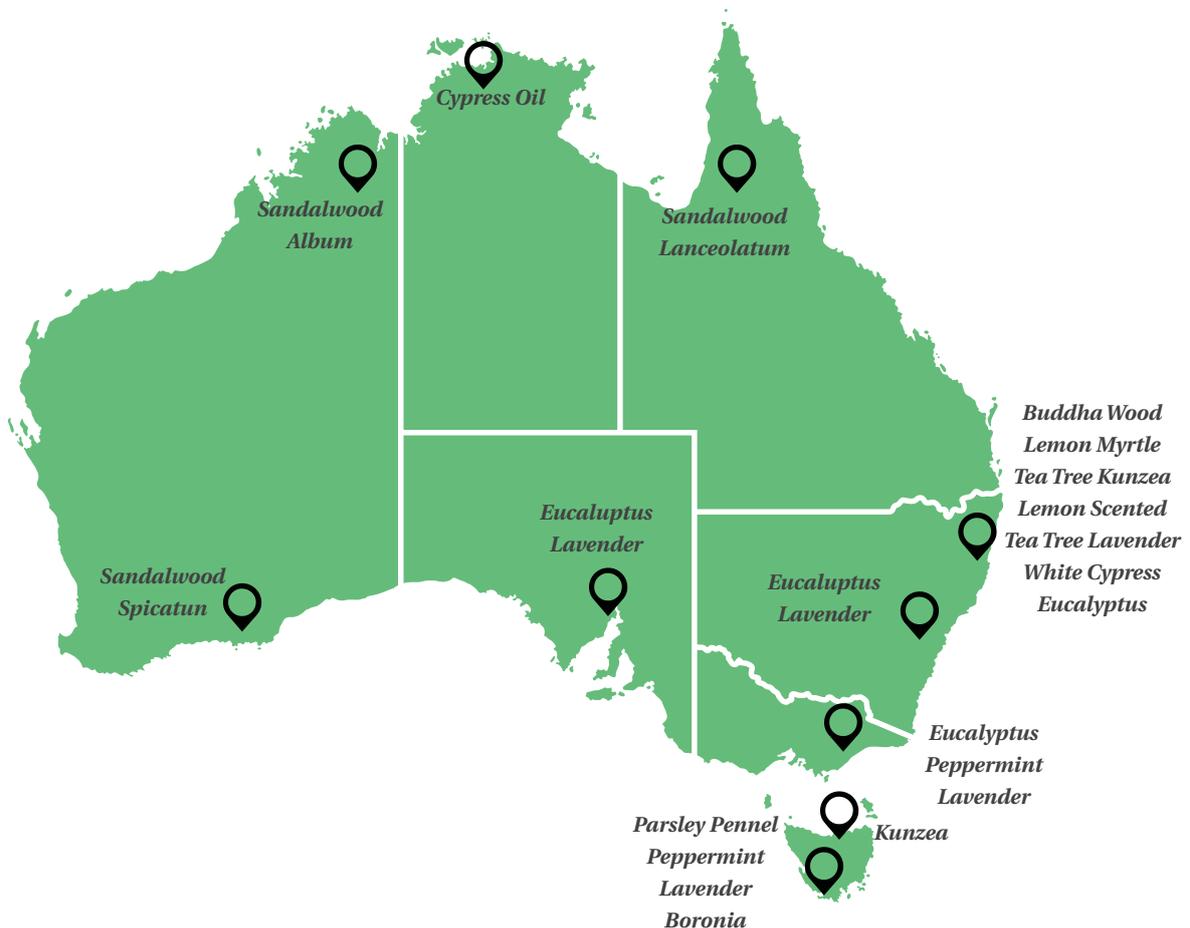


Essential oils and extracts currently produced on a commercial scale in Australia include:

- Eucalyptus oil (1,8-cineole type) (from *Eucalyptus polybractea*, *E. radiata*, etc.)
- Tea tree oil (from *Melaleuca alternifolia* and *M. linarifolia*)
- Lemon-scented tea tree oil (from *Leptospermum petersonii*)
- Western Australian sandalwood oil (from *Santalum spicatum*)
- Northern Australian sandalwood oil (from *Santalum lanceolatum*)
- Indian sandalwood oil (from *Santalum album*)
- Lemon myrtle oil (from *Backhousia citriodora*)
- Lavender oil (from *Lavandula angustifolia*)
- Peppermint oil (from *Mentha piperita*)
- Sweet fennel oil (from *Foeniculum vulgare*)
- Parsley oil (from *Petroselinum crispum*)
- Boronia absolute (from *Boronia megastigma*)
- Kunzea oil (from *Kunzea ambigua*)
- Rosalina oil (from *Melaleuca ericifolia*)
- Buddha wood oil (from *Eremophila mitchellii*)
- Cypress oil (from *Callitris intratropica*, *Callitris columellaris*, *Callitris glaucophylla*)

In addition, there are other essential oils, both from Australian natives as well as from introduced plant species, that are being produced on a pilot scale.

This article provides an overview and traces recent developments in Australian essential oil production, with particular emphasis on the impact of recent floods, fires, and droughts. In doing so, it will illustrate the resilience shown by the sector in the face of these unprecedented events and the optimistic future for Australian essential oil production.



***“In 2018 farmers across eastern Australia endured the worst drought in living memory, leading the governments of New South Wales (NSW) and Queensland to declare the states as drought affected.*”**



DROUGHT, FIRES AND FLOODS

Drought

In 2018 farmers across eastern Australia endured the worst drought in living memory, leading the governments of New South Wales (NSW) and Queensland to declare the states as drought affected. Many animals were destroyed and water for crop irrigation was at a minimum or non-existent. The droughts impacted all essential oil crops with the exception of tree species: sandalwoods, cypress and Buddha wood.

Fires

In 2019-20 Australia's Black Summer of bushfires ravaged through vast swathes of the country. The blazes in NSW and Queensland not only occurred very early in the fire season but also were on a scale never previously seen. The fires led to the setting up of a Royal Commission which made over 80 recommendations to government. These included detailed proposals to improve national response efforts, tools, climate data, and many other areas. Moreover, it reiterated that climate change had exacerbated the extreme conditions which caused the fires and, worryingly, it projected that future climate impacts could be even grimmer. This has certainly proved to be the case, since in the following year of 2021 many of the same areas that suffered severe fires endured the coldest, wettest November for over 120 years. All this on top of the ongoing COVID-19 pandemic, which saw severe lockdowns and bans on international travel, as well as plagues of mice in NSW that caused millions of dollars worth of crop damage. Essential oil production impacted by the bush fires included lavender, peppermint, eucalyptus, lemon myrtle and tea tree.



Floods

In late February-early March 2022 a “one-in-1000 year” flood created a wave of havoc and destruction through agricultural operations in the Northern Rivers of NSW including the tea tree and lemon-scented tea tree plantations. A few weeks later yet another extratropical cyclone created further havoc throughout the region. Even though many farms had planned for floods, the water rose to unimaginable levels some two metres above previously record flood levels. Prized for their alluvial soils rich in nutrients and minerals, flooding is one of the risks of farming in riparian zones. The water levels experienced in early 2022 were two metres above any levels previously recorded. The height of water of the second flood event was similar to the 1 in 100-year records.

Communities of the region were forced to evacuate from low-lying cities, towns, and rural lands and seek the safety of higher ground. Experts attributed the floods to a combination of La Niña and highly unusual weather events. The impact was massive. Many farmers lost their crops and cattle, and many residents lost their homes. In addition, the floods and fires caused devastation to Australian wildlife with native animals being displaced or killed by the floods and bush fires. As a result, koala bears are now listed as an endangered species. In response tea tree oil producers have rallied and are mounting major efforts to support their continued survival.

Despite irreparable damage and catastrophic loss, once safe, the affected communities, assisted by the State Emergency Service (SES) and the combined efforts of local government and many volunteers from far and wide, began the enormous task of cleaning up. The task was so large the government provided the assistance of the Australian Defence Force (over 4,000 troops were allocated) to support the recovery effort.

INSTITUTIONAL EFFORTS

In 2020, out of the 57 countries accounting for approximately 90% of greenhouse gas emissions, Australia was ranked last, reflecting the government's reluctance to adopt policies to combat climate change and reduce carbon emissions. However, in May 2022 a new government was elected with action on climate change and carbon emission reduction at the forefront of its policies. It is anticipated that future government policy initiatives will put climate change issues at the forefront along with policies aimed at benefitting agriculture, including the essential oil sector.

Successful industries world-wide invariably have strong institutional and research support from government and university organisations as well as trade associations. The Australian essential oil sector is no exception as in recent years organisations have developed to support the sector. As a result major strides in plant research and development, including essential oils, are now being achieved at Southern Cross University (SCU) where cutting edge research is being undertaken in environmental analysis, geoscience, plant genetics and plant chemistry. Supported by this science, a tea tree plantation of genetically improved trees has been established to facilitate ongoing research into the provision of commercial stock having improved essential oil quality and yields. SCU has also taken over the operations of the Australian Tea Tree Oil Research Institute (ATTORI) and has since developed a partnership with ATTIA (the Australian Tea Tree Industry Association), an association actively supported by the industry and the government. Research is being undertaken on genome analysis and DNA sequencing which is providing insights into characteristics such as pest and disease tolerance levels, root and shoot architecture, and terpene and methyl eugenol composition. These findings facilitate improved techniques for clonal propagation and the development of cultivars with better productivity, greater drought tolerance and superior oil quality. These research efforts, alongside the development of Australian Standards, cosmetic and other natural product formulations, have enabled tea tree to emerge as Australia's iconic export to the world.

In addition Aaron Pollack, Managing Director of Golden Grove Naturals (GGN), has been a champion of an Australian Government backed research project designed to equip farmers with tools and knowledge to grow consistent, sustainable, and high-quality lavender. Instigating this partnership between GGN, the Australian lavender industry, La Trobe University's Institute for Agriculture and Food (LIAF) and Larkman Nurseries has brought together LIAF experts in soil science, plant mineral nutrition, chemical analysis, field trials and data collection, curation and analyses, who are currently mapping the performance of different lavender varieties and farming practices to optimise growth and production. They will also assess soil characteristics and fertiliser regimes and develop future breeding strategies to optimise lavender quality and yield.

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Australia’s essential oil producers are increasingly putting sustainability at the core of their farming practices. For example, GGN is spreading spent distillation biomass (tea tree mulch) back to tea tree fields to improve the soil structure and microbe life and to assist in weed control. GGN’s agronomy practices also incorporate integrated pest management (IPM) and use of soft organic agrichemical products. The company is currently reviewing its farm plans and is keenly exploring deep-rooted perennial cropping systems, best water management practices, ecological diversity, habitat quality, soils and soil carbon, koala and wetland/riparian high conservation values to generate biologically based natural benefits. In recent years the company has collaborated with Lismore Council and SCU for research into increasing biodiversity within the soil and natural landscape to the benefit of the local lands, waterways, and the crops that they manage.

Another organisation aimed at promoting essential oil production is The Essential Oil Producers Association of Australia (EOPAA), established in 1994. EOPAA aims to bring together all stakeholders in the sector of essential oil-bearing crops, producers of essential oils, trading companies, researchers engaged in the chemical profiling of essential oils, the pharmacology of essential oils as well as persons or companies intending to enter this industry.

PLANT MECHANISMS TO ADAPT TO CLIMATE CHANGE

Many terrestrial plants have developed mechanisms to overcome the impact of fires, floods and drought. Thus, some Australian native plants seem to possess the ability to detect, signal and react to changes in weather. This has most likely evolved over many years of experience enduring extreme weather and climate change. Examples include:

- **Some native plants are pyrophytic**, that is they have adapted to be tolerant of fire. Some have unusual resistance to fire because of exceptionally thick bark, for example the ironbark (*E. sideroxylon*) and lemon ironbark (*Eucalyptus staigeriana*). Eucalyptus trees have specialised buds which are protected within their trunks. When the trees are burnt these buds emerge to produce new leaves and branches. Some species require fire or smoke to breakdown resin coatings or break seed dormancy e.g., eucalypts and *Pinus*. Some plants have evolved self-pruning mechanisms and readily remove their dead branches to eliminate potential sources of fuel – again eucalypts are an example.
- **Some terrestrial plants have adapted to frequent waterlogging.** Riparian zones are lands along creeks, streams, rivers, and wetlands and whilst this land can be high in nutrients, they tend to be harsh environments physiologically. Oxygen moves more slowly through water than does the air in-soil. When organic soils are flooded the available oxygen is depleted through metabolism by organisms that use this oxygen.

Australian riparian plant species, including *Leptospermum*, *Melaleuca*, *Callitris*, *Callistemon* and some eucalypts, have adapted to this environment.

Plant adaptations for riparian zones can be physiological or morphological, and include:

- the ability to rapidly elongate stems and stalks upon submergence allowing plants to emerge from low light conditions of flood waters.
 - tea tree exhibits advantageous root growth or initiates increased branching of lateral roots when flooding occurs.
 - similarly, tea tree has adapted by developing plant tissue containing enlarged gas spaces in the roots and shoots to assist with the effects of flooding.
 - A few other ways terrestrial plants have adapted to living in wetlands include:
 - the ability to switch to alternative metabolic pathways during flooding so respiration can occur in low oxygen environments.
 - rapid life cycles maximising opportunities for replenishment of the soil seed bank prior to flooding.
 - release seeds before or during flooding to allow dispersing by flood waters.
- **Adaption to drought conditions** include wax coating on leaves, thin leaves with less surface area, thick leaf tissue and fewer breathing pores in leaves. Having a covering of fine hairs over their leaves, which shade and restrict air flow close to the leaf surface therefore reducing water loss, is also a common adaptation. These are all evident in eucalyptus plants.

TEA TREE OIL TRENDS

Tea tree (*Melaleuca alternifolia*) oil production is undertaken on the east coast of Australia and there are three main growing areas: the Northern Rivers region, Port Macquarie and the Mid North Coast region and the Far North Queensland region. It was predominantly the Northern Rivers region that was impacted by the recent floods.



The Golden Grove Naturals (GGN) tea tree plantation is one of the first commercial tea tree plantations and is well established on the Richmond River flood plains of New South Wales. This crop has survived many a flood and already has a flush of new regrowth coppicing from the trees. The owners know that the plantation will recover; but the question is when? It is said that the crop is as resilient as the local community. Moreover, it is anticipated that some of the crop loss will be offset somewhat by the recent new plantings.

Due to sodden ground and the time needed for the crop to recover from flooding, it is expected there will be a late start to the harvest and a reduction in the total yield of the Australian tea tree sector. A shortage of Australian tea tree oil is foreseen over the next 12 months but some organic and conventional tea tree oil is still in stock.

SOME CONCLUSIONS

There is no doubt that evidence from the past two decades points to the dramatic impact of climatic factors on Australian agricultural production, including essential oils. Climate change – along with the cost of living – has now become a key concern for Australians, as was reflected in the recent election with the Labor Party putting climate change policies at the forefront of its election manifesto. The new Labor government, elected in late May 2022, has made the need to combat climate change a key policy in its new programme.

Several institutions are undertaking major research and development into various aspects of essential oil production and processing to facilitate the development, and greater resilience, of the sector. Meanwhile, companies are investing in ensuring greater sustainability of production, while the essential oil plants themselves continue to develop their own mechanisms to improve the sector's resilience.

The Australian essential oil industry has faced many recent setbacks due to the impact of climate change, as well as the COVID-19 pandemic. Nevertheless, Australia's wealth of capital, human resources, alongside excellent research facilities and land availability provide excellent opportunities for the continued growth in essential oil production and processing. Finally, overcoming adversity is part of the Australian psyche, as evidenced by the survival of its First Nation's people for over sixty thousand years. The resilience shown by Australians to the recent tragedies points to a thriving Australian essential oil industry in the future.

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EUCALYPTUS OIL

Eucalyptus citriodora 🌍 Brazil

High fuel prices have increased transportation costs. This in turn has impacted production costs, leading to an adjustment in the oil price.

📈 USD 18.00 /kilo



ORANGE OIL CP

Citrus sinensis 🌍 Brazil

The 2022-2023 initial orange crop forecast for the São Paulo and West-Southwest Minas Gerais citrus belt, published on May 26, 2022 by Fundecitrus and its partners, is 316.95 million boxes (M. boxes). The projected volume is 20.53% higher than the previous crop, which totalled 262.97 M. boxes.

Total orange production includes:

- 59.48 M. boxes of the Hamlin, Westin and Rubi varieties;
- 17.52 M. boxes of the Valencia Americana, Seleta, Pineapple and BRS Alvorada;
- 93.95 M. boxes of the Pera Rio variety;
- 106.78 M. boxes of the Valencia and Valencia Folha Murcha varieties;
- 39.22 M. boxes of the Natal variety.

Approximately 22.99 M. boxes are expected to be produced in the Triângulo Mineiro.

The prospect of a better crop indicated that groves could recover from adverse weather including the drought and frost that took place in 2020 and 2021 and caused two consecutive small crops, resulting in a discontinued biennial bearing cycle characterised by the yearly alternation of large and small crops.

Owing to better climate conditions, most orange trees in the citrus planted area show good fruit load and heavier oranges than those in the last crops, at the same development stage. This positive scenario as compared to the previous crop season should remain until this crop season ends. For that reason the projected orange weight at harvest is 158 grams, which is 10.5% above the average weight of 143 grams observed last crop season, and the final fruit size is projected at 258 fruits per 40.8 kilogram box.

Average yield this crop season is estimated at 920 boxes per hectare and 1.86 boxes per tree as compared to the 760 boxes per hectare and 1.58 boxes per tree harvested in the 2021-2022 crop. The average number of fruits per tree, without considering the drop that occurs throughout the season, is estimated at 668, which represents an increase of 4.5% in relation to the previous crop.

The projected average drop rate is 20%. The main reason for this projection is the increased incidence of orange trees with citrus greening symptoms. Other reasons include problems with fruit borers, fruit flies, black spot and leprosis.

Citrus greening has been found in 22% of Brazil's main producing regions, up from 17% four years earlier. The disease is expanding because of lack of crop treatments, weather and rising resistance from growers to cut down infected trees that are still producing.

Because of the increase in the crop size, the number of fruits for processing will increase.

▲ USD 18.00 - 20.00 /kilo

BRAZIL: CITRUS BELT ORANGE CROP FORECAST BY VARIETY

Variety group	Forecast components of May 2022		Crop forecast 2022-2023
	Fruit estimated per box (number)	Estimated drop rate (percentage)	Total (million boxes)
Hamlin, Westin and Rubi	300	11.5	59.48
Other early	260	12.0	17.52
Pera Rio	260	21.7	93.95
Valencia and Folha Murcha	237	23.5	106.78
Natal	240	23.5	39.22
Total	258	20.0	316.95

LAVENDER OIL

Lavandula angustifolia 🇧🇬 Bulgaria

The market is stable, but it is too early to predict the upcoming yield, though a lot of lavender fields have been replaced by wheat. The war in Ukraine has resulted in a significant rise in wheat price, and farmers are finding it a lucrative option. Lavender fields have gone down almost 45 percent in the last year. The oil price hitting a historical low in the last 30 months has resulted in farmers' interest dwindling. This will impact the supply, and with rising production costs, oil price is expected to rise.

🏠 EURO 55.00 /kilo

MELISSA OIL

Melissa officinalis L. 🇧🇬 Bulgaria

Majority of melissa fields have been terminated by farmers. Those with long-term contracts are the only ones still producing the crop. The market for the oil is slow.

🏠 EURO 1775.00 /kilo

ROSE OIL

Rosa damascena 🇧🇬 Bulgaria

In comparison to earlier years, the yield is significantly lower. Rose petal availability is also limited. Harvest season was delayed by 15 days, due to cold weather conditions. All these factors combined will bring down production levels. At the same time production costs will go up as a result of inflation, and rising expenses on fuel, electricity and wages. Price of rose blossoms has increased due to limited availability of field workers. Also, certain fields were neglected due to the low-price last year. The market has bounced back after COVID-19.

Chlorpyrifos residual in rose flowers impacts the quality of oil produced. EU and North America have banned the chemical. Thus, it renders any oil with chlorpyrifos unsellable. Sellers are conducting regular pesticide analysis on plants to negate the chemical impact.

🏠 EURO 9450.00 /kilo





CASSIA OIL

Cinnamomum cassia 🌍 China

The global economic recession could impact the demand for cassia oil in 2022-23. It is early to predict yield for the season, as the harvest commenced just a couple of weeks ago. Currently, the oil price is stable.

🏠 USD 47.00 /kilo



CITRONELLA OIL

Cymbopogon winterianus 🌍 China

Production has reduced as a result of declining domestic crude oil prices. Crude oil transactions in border areas have significantly gone down. This is because epidemic control measures have been enforced in the primary producing areas in Yunnan. Farmers are holding onto the stock, anticipating a rise in price.

🏠 USD 17.00 /kilo



EUCALYPTUS CITRIODORA OIL

Eucalyptus citriodora 🌍 China

Farmers are refusing to distil oil, due to the low-price trend in the market, though there are significant inquiries about the oil.

🏠 USD 19.00 /kilo



EUCALYPTUS GLOBULUS OIL

Eucalyptus globulus 🌍 China

Crude oil trade has now entered the off-season. Distillation in many areas was impacted by the forest fire prevention measures in Yunnan province. Crude oil price has gone down. Farmers are unwilling to sell small quantities produced at this low price.

🏠 USD 14.50 /kilo



GERANIUM OIL

Pelargonium graveolens 🌍 China

There is low demand for the oil in the market, resulting in limited turnover. The production season is about to commence.

🏠 USD 189.00 /kilo



GINGER OIL

Zingiber officinale 🌍 China

Constant rise in freight price, and epidemic control measures have impacted sales volumes to a certain extent, though oil supply remains stable.

🏠 USD 85.00 /kilo



LITSEA CUBEBA OIL AND NATURAL CITRAL

Litsea cubeba 🌍 China

Production volumes for Hunan province will only be known in July. On the other hand, afforestation in Yunnan, and strict control of mountain closure may impact fruit collections, reducing the output. Currently, stock of litsea cubeba has run out.

🏠 USD 65.00 /kilo

STAR ANISE OIL

Illicium verum 🌍 China

Oil supply has been hit by the epidemic. Leaves are also not available, and the production season has concluded. As a result, the oil price has fallen. Some stocks are available with farmers, but they are waiting for the price to go up.

🏠 USD 34.00 /kilo

WINTERGREEN OIL

Gaultheria procumbens 🌍 China

Strict measures are in place to prevent forest fires. While small quantities of new oil are accessible, large volumes of crude will become available gradually. At present, 500 kgs of oil are being produced weekly. The market is slow, and farmers are biding their time waiting for the price to increase.

🏠 USD 145.00 /kilo

The global economic crisis will impact production costs as energy has become expensive, though producers are working to ensure stable market conditions. Fields are looking good and a normal crop is expected. This despite the delay in spring by 2-3 weeks. As a result, the crops awoke later.

FIR NEEDLE OIL

Abies sibirica 🌍 Eastern Europe

Demand for the oils has remained consistent, though supplies have been hit due to the ongoing Russia-Ukraine war. This has resulted in a price escalation.

🏠 USD 74.00 /kilo

THUJA OIL

Thuja orientalis 🌍 Eastern Europe

Raw material cost has increased.

🏠 USD 62.00 /kilo



ARVENSIS OIL

Mentha arvensis 🌍 India

The crop should ideally reach the levels of 2021, or fall just marginally short. While sowing in some areas is expected to be lower than original information, farmers can cover the yield with proper irrigation. Hot weather conditions are prompting faster growth, and transplantation after wheat harvest should be able to make up for the shortage. The price could fluctuate both ways. A good harvest could see a reduction of USD 0.5/kg. But rising fuel costs could increase synthetic menthol price and in turn Indian arvensis.

🏠 Price on Request

CARDAMOM OIL

Elettaria cardamomum 🌍 India

At present the crop is looking good, though the best period for oil yield is between August and December. The crop season starts anywhere between June and July and culminates in February. During this period pods are plucked five times.

🏠 USD 163.00 /kilo

CARROT SEED OIL

Daucus carota 🌍 India

There was consistent demand last season, but an unstable crop. Unlike last season, there is a healthy and constant supply of crop. Harvest began in May and will conclude in August.

🏠 USD 62.00 /kilo



COFFEE CO2

Coffea arabica 🌍 India

The strong earthy and oriental notes of coffee have made it a popular product in the flavour and fragrance industry. The harvest season is over and the crop is healthy. The arabica variety was harvested between November and January, the robusta harvest began in December and concluded in April.

🏠 UDS 185.00 /kilo

DAVANA OIL

Artemisia pallens 🌍 India

The oil is mostly produced depending on confirmed orders. Low and constantly diminishing yield has resulted in extremely high prices in the last few years. As a result, farmer interest in the crop has reduced. The ketone content in davana has dropped from 50% to 30-35%. Currently, the harvest season is in progress, and the crop is stable.

🏠 USD 910.00 /kilo

FRANKINCENSE OIL

Boswellia serrata 🌍 India

There is a healthy demand for the oil in aromatherapy and home care industries. The resins and oil are both sought after by the pharmaceutical and fragrance industry. The crop was harvested in November, and the produce was good. Frankincense is generally grown in north, central and south-west parts of India.

🏠 USD 19.00 /kilo

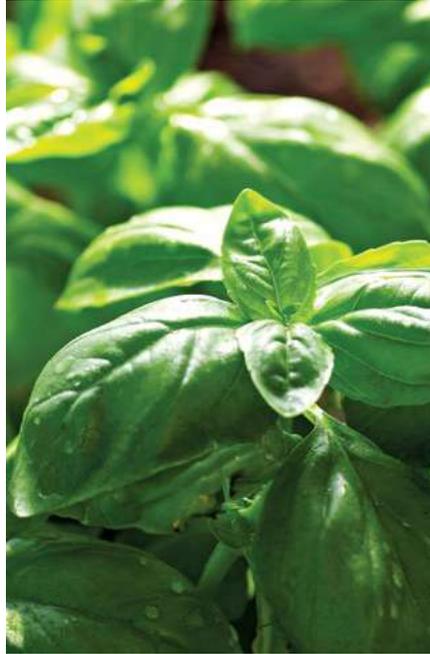


GINGER OIL

Zingiber officinale 🌍 India

Farmers are demanding higher prices and have halted selling dried new material. Even after a 20% increase in growing area, yield is low. Heavy rainfall in Karnataka has also adversely impacted the arrival of raw material in India. The prevailing conditions could lead to a rise in aflatoxin and black fungus in crops.

🏠 USD 55.00 /kilo



HOLY BASIL OIL

Ocimum basilicum 🌍 India

It is impossible to predict the quality of oil produced during the season. This is primarily because the herbage is dependent on various factors, which are difficult to control. The crop season is in winters between December and March.

🏠 USD (North) 29.00 (South) 116.00 /kilo



JASMINE OIL

Jasminum officinale 🌍 India

It has been a disappointing season with very low yield. This has massively impacted the price.

🏠 Jasmine Grandiflora - USD 4250.00/ kilo
🏠 Jasmine Sambac - USD 4450.00/ kilo

JUNIPER BERRY OIL

Juniperus communis 🌍 India

Traditionally, India has imported most of its juniper berry requirements from Pakistan. This has led to a fluctuating price cycle for the product. Himachal Pradesh is the only producer of juniper berry in India. Constant attempts have been made to increase production area and volume locally. It has started to yield results, and local supply has been boosted. The harvest season for juniper berry concludes in November. This year the produce was good.

🏠 USD 75.00 /kilo

LEMONGRASS OIL

Cymbopogon citratus 🌍 India

A good crop has resulted in a stable market for the oil. Every 60 days the product is harvested. The last cycle concluded in May, and the next is expected in July.

🏠 USD 24.00 /kilo

ORGANIC MINT OIL

Mentha piperita 🌍 India

In 2021, certification bodies in India faced bans and restrictions. This put the organic oil industry in turmoil. All products and producers had to undergo stringent tests and technical evaluations from scratch. As a result, the oils produced are expected to be safer and purer. Suppliers passing the tests are producing large volumes of organic mint oils.

🏠 Price on Request



PALMAROSA OIL

Cymbopogon Martini 🌍 India

The previous harvest cycle resulted in a promising crop. This has kept the price in check, and the trend is expected to continue.

🏠 USD 32.00 /kilo



PEPPERMINT OIL

Mentha piperita L. 🌍 India

There is a healthy crop and market for the oil is stable. This is the primary season for the crop, and it is currently in progress. Global demand for the oil is stable. Locally, demand is holding steady, even though buyers expect a rise in price. Sowing is expected to go down from the levels of last year. This has resulted in a 20% price rise from 2021. Till the end of the season, the price will hold, though it could go up once the season is over.

🏠 USD 22.00 /kilo



SPEARMINT OIL

Mentha spicata 🌍 India

With the market being busy with peppermint and *arvensis* purchases, it is a good time to accumulate spearmint stocks. The crop in 2022 was better than last year. This is expected to bring the price down.

🏠 USD 32.00 /kilo

STAR ANISE OIL

Illicium verum 🌍 India

Limited quantities of the oil are produced as per market demand. Star anise is grown in spring, though most requirements are imported from China. A large portion is consumed by the flavour industry, while some importers also further export the fruit. Star anise is native to southern China and northern Vietnam. The fruit is a major part of local cuisine in these regions. In India, only Arunachal Pradesh has a conducive climate and soil conditions to propagate star anise.

🏠 Price on Request

TURMERIC OIL

Curcuma longa 🌍 India

Raw materials with high curcumin levels will get exhausted by the end of June. In comparison to 2021, there has been a 5% increase in farm productivity, and 10% increase in cultivation area. Harvest season is in progress in India. While the activity has been completed in Karnataka, it is ongoing in Andhra Pradesh and Maharashtra. A global slowdown has resulted in decreasing export demand, and negatively impacted the price of turmeric. Though in comparison to last year, price of the product has risen.

🏠 USD 28.00 /kilo

VETIVER OIL

Vetiveria zizanioides 🌍 India

The varieties produced in the south of India enjoy heavier demand. The harvest season for the varieties in north and central India is between January and March. It has been a good crop season. Price depends on the demand of the different varieties by industries like tobacco, perfumery and flavour.

🏠 USD 235.00 /kilo



ATELIER ULTRA

OUR SERVICES BRANCH INTO
What we do

- GROWING
- SUSTAINABLE SOURCING
- RESEARCH & DEVELOPMENT
- PROCESSES
- EXTRACTION
- QUALITY TESTING
- DISTRIBUTING
- SMALL PACKAGES

HEART OF BOTANICALS
The Secret of Nature's Oil



ATELIER ULTRA WHERE CREATIVITY GERMINATES, BREATHES, AND PROSPERS

Atelier: the workshop for the imagination to thrive.

We brought an idea into existence with Atelier Ultra, it is a unique offering by us in the essential oils space. It is a place where ideas breathe, creativity is encouraged, and the nuances of essential oils are taught, and their limitlessness is tested. One can borrow from historical connects, discuss with colleagues, create something new, and present it to the world. Atelier Ultra is the niche where history, quality control, creation, presentation, archives, conferences and process merge.

The Ultra International site in Chertsey, London is home to Atelier Ultra. The need was to provide a multifunctional space for small and large clientele alike. It was established to entertain customers, hold meetings, and perform olfactive analysis on samples and products. Over the course of time, it has evolved into an educational gateway to history and literature. It is also a futuristic hub and possesses the ability to perform small tests and formulation development within it.

The space is a fragrance lover's paradise. It is equipped with a multimedia unit, conference table, multifunctional workbench, perfumer's organ, an interactive essential oil library, and a compelling collection of artefacts tracing Ultra's story and the history of essential oils. Atelier Ultra has emerged as a multi-functional apothecary, and become a source of delight for staff and visitors alike. Perfumers have revelled in its visual appeal and practical usage. As a bonus, our quality control officers have found a pleasant abode to carry out operations.



A WALK DOWN MEMORY LANE

Ultra International has a rich history and legacy. This wealth of knowledge and experience is now being shared with the world via Atelier Ultra's library. This section houses original 90-year-old recipes using ingredients like rose and jasmine. Original adverts and photographs dating back a century, and lovely antique ornate bottles line up in the cabinets here.

The essential oil library also has records of all current operations with a product list from our global sites. For research and knowledge purposes, the library also has documentation, draft formulations, and scientific articles. It also preserves photos and mementos from sites, with a special section dedicated to the Golden Grove Natural's koala reserve project.

WHERE CREATIVITY FLOURISHES

Atelier Ultra was designed as an abode that inspires and lets creativity flow. The idea was to aid the process of next generation aroma development. There are sections labelled and organised by olfactive family. To provide depth and context to our global operations, botanical photos and dried ingredients are mixed within the apothecary.

The scale of our global coverage is on show at the perfumer's compendium, which is home to 200+ product samples from 25+ countries we source and produce in. The fragrance creation section is well-equipped and fully stocked with scales, beakers, and pipettes. However, we are not all about the work alone. Atelier Ultra is a space for the ultimate essential oils joy. Our 'guess the oil' section does the job. Guests can test their nose ability by smelling fragrances.

On a regular basis the space is utilised for team meetings, and flavourist presentations for visitors. It is also well-equipped to handle regular smelling or olfactive checks on materials. Complying with all international and internal standards of operations, the perfumer's organ is designed to cross check essential oil batches. The workspace also allows creative blending. High air circulation prevents contamination of odours.

“Atelier Ultra was designed as an abode that inspires and lets creativity flow. The idea was to aid the process of next generation aroma development.”





THE LEARNING WING

Atelier Ultra has a dedicated learning area. The large workbench and conference centre can hold 10 people for a workshop, or training activity. It allows for the exchange of ideas to develop sustainable projects and innovative essential oil formulations. Students are provided with equipment to craft their own, unique formulations.

A couple of dedicated personnel help organise essential oil training workshops. The training sessions are designed with a focus on olfactive, safety, and allergen information on various essential oils. As part of the training, we discuss current fragrance trends, and highlight Ultra's efforts towards the upcycled range and biodegradable options. In order to meet allergen requirements and IFRA, the focus is on dosage levels. A brief introduction to olfactive families, bases and miscibility are all part of the training exercise. We work with participants to augment their knowledge. Sharing of ideas is encouraged; wherever required, we advise and physically solve problems. While the curriculum is currently focused on cosmetic manufacturers, we are in the process of adding flavour presentations. We tie-up with organisations and also offer the space to visitors for these training sessions.

Perfumer and flavourist presentations are less structured. It becomes a hub for trading ideas. Inventiveness flows, as participants pick and mix essential oils from shelves to craft mesmerising fragrances. We are highly organised with respect to shelf life, and trace products with a record of the full digital inventory of the materials.

The vision at Atelier Ultra is to engage and prosper as a community. Going forward, more workshops and training sessions will be organised. Anyone in the Ultra family is welcome to use the space and expand their knowledge on essential oils. Employees from other departments can undergo smell training, and further engage in the company's product range. These trainings will not be restricted to the organisation's workforce. We wish to invite outsiders without access to a perfumer's compendium, and aid their comprehension and growth in the industry.

Atelier Ultra is a germinating pod for innovation. It accomplishes the task by providing a haven to meet, create, educate, and share the passion for all things natural. Historical records and artefacts, latest technology, brightest minds, new research, all come together at Atelier Ultra to promote a sustainable future for the essential oils industry.



Ultra International UK Ltd.
Essential Oils, Ingredients, F & F

YOUR AROMATIC EXPERT

Botanical to bottle to buyer,
we take care of it all.





Essential oil prices are stable. But, price of raw material for clove derivatives is on the rise due to prolonged La Niña phenomenon. As per the weather department, La Niña is expected to last till the end of the year. More rainfall is predicted as well. On the supply side there are logical challenges due to prevailing uncertainty. This will lead to a rise in shipping freight rates too.

CITRONELLA OIL

Cymbopogon winterianus 🌐 Indonesia

Oil price has gone up due to a reduced supply.

📈 USD 17.00 /kilo

CLOVE BUD OIL

Eugenia caryophyllata 🌐 Indonesia

The oil price is stable.

📊 USD 20.00 /kilo (Clove Rectified)
 📊 USD 22.50 /kilo (Eugenol)

NUTMEG OIL

Myristica fragrans 🌐 Indonesia

There has been a reduction in oil supply. This has led to a rise in price.

📈 USD 75.00 /kilo

PATCHOULI OIL

Pogostemon cablin 🌐 Indonesia

The upcoming festival season in Indonesia could prompt farmers to prematurely harvest the crop. This will impact the quality of the oil produced. Increased expenses during the festival are the reason farmers could take this decision. Currently, the price of the oil is stable.

📊 USD 53.00 (Dark) /kilo
 📊 USD 54.00 (Light) /kilo
 📊 USD 56.00 (MD) /kilo





BERGAMOT OIL

Citrus bergamia 📍 Italy

There is heavy demand for the oil, and the available stock will be exhausted soon. A favourable summer, which is not too hot and dry, is essential for a good flowering season. Though decent, the earlier flowering period was delayed. The next crop cycle will commence in October. By September an idea on the upcoming crop size will be available.

📈 EURO 155.00 /kilo





BLUE TANSY OIL

Tanacetum annuum 📍 Morocco

There has been a decline in demand in the last few years. Lack of rains will likely impact the yield in 2022, and it is expected to be short. The market for the oil remains stable.

🏠 Price on Request

CEDARWOOD ATLAS OIL

Cedrus atlantica 📍 Morocco

There is significant demand for the oil. April to October is the season for the new crop. Currently, the market is stable.

🏠 USD 26.00 /kilo

NEROLI OIL

Citrus aurantium 📍 Morocco

The flowering period witnessed rain and cold weather conditions. Due to this, the 2022 yield has fallen by 20%.

🏠 USD 3550.00 /kilo

ROSEMARY OIL

Rosemarinus officinalis 📍 Morocco

Delayed rain and snowfall in growing areas will impact the upcoming crop. It could fall short by 30-40%.

🏠 USD 69.00 /kilo

WILD CHAMOMILE OIL

Ormenis multicaulis 📍 Morocco

Due to deficient rainfall, the crop is expected to be short. A fresh crop will be available between end of June and early July.

🏠 USD 1785.00 /kilo



CABREUVA OIL

Myrcarpus frondosus 🌐 Paraguay

Production volumes are capable of meeting current demand.

🏠 USD 49.00 /kilo



GUAIACWOOD OIL

Bulnesia sarmientoi 🌐 Paraguay

Between June and July the Cites export quota for 2022 will be fixed. The quota for 2021 is about to end. Concrete offers can only be made once the Cites export quota is released.

🏠 Price on Request



PETITGRAIN OIL

Citrus aurantium 🌐 Paraguay

There is limited oil stock. While the production volumes were good, high demand prevented accumulation of inventory. High freight prices and heavy internal demand has also impacted export prices. Since January there has been a weekly increase in oil prices locally.

🏠 USD 79.00 /kilo

CORIANDER SEED OIL

Coriandrum sativum 🌐 Russia

The Russian invasion of Ukraine has made it a high-risk proposition to secure oil from Russia. Several financial and logistical bottlenecks are in effect. But, overcoming the challenges, coriander oil has been successfully exported from Russia.

Whether they are distilled locally or outside the Russian borders, there is no alternative to Russian coriander seeds. It is a vital compounding ingredient in many flavours and fragrances. Thus, despite the political climate, Russian coriander seed oil continues to command significant demand in the market.

While export challenges are expected to persist for the coming months, sowing preparation for the upcoming crop are in place. Despite sanctions on Russia, exporters are formulating long-term plans with respect to oil prices.

In March, the falling value of the Russian ruble made it feasible for distillers looking to export oil. But, with control measures put in place, and countries in the European Union making ruble payments for gas and oil, the of the Russian currency has improved. This, in turn, has impacted coriander seed oil prices. They are at an all time high.

🏠 USD 135.00 /kilo



THE MAGIC OF NUTMEG: ITS HISTORY AND FUTURE

Eddie Bulliqi

Nutmeg trading is hotting up. According to the Food and Agriculture Organization of the United Nations, 9,000 tonnes of nutmeg are consumed annually, with world production of nutmeg oil hovering around 300 tonnes.¹ With rich flavour complexity and a broad spectrum of uses across food, fragrance, and wellness, nutmeg is poised to retain a top-tier position as an on-trend health-benefitting, delectably tasting addition to any F&F formula in the years to come. Carrying an almost anisic sharpness, almost gingery dustiness, and almost cinnamic warmth, teetering between hot and cold effects on the palette, its bitter zip and spicy zing fall into a category of flavour and scent profiles increasingly being associated with good-for-you blends and performance-enhancing ingredients.

Nutmeg's cultural connotations, as cultivated through distinct culinary traditions, reinforce its position as a potent F&F signifier, albeit one that has to be negotiated with care and consideration. In India, and the gastronomy from its surrounding nations, nutmeg's inclusion in savoury sauces, rubs, side dishes, and dips is a stalwart of main course flavour profiles. In America nutmeg's connotations speak of Christmas baked goods, holiday eggnog, and sweetened coffee, firmly in the sweet category. Given the worldwide appetite, particularly amongst younger Gen Z consumers, for hybridised formats and fusion cuisine, there is much potential for nutmeg to be applied in cutting-edge sweet-and-savoury formulas and on-trend marketing programmes. This article will review nutmeg's essential history, cultivation techniques, and modern-day functional uses, with hints as to its future to come.



HISTORY

Commonly called 'Jaiphal' in Hindi, the word nutmeg originates from the Latin 'nux' and 'muscada' (translating to 'musky nut').² The ingredient's history with humanity dates back to at least Hinduism's Vedas (c.1500–1200 BCE), in which nutmeg was recommended for "improved digestion and was prescribed for headache, neural problems, fevers from colds, bad breath, and digestive problems. Later Indian texts described nutmeg as an important medicine for cardiac complaints, consumption, asthma, toothaches, dysentery, flatulence, and rheumatism".³ In the 1st century AD Roman author Pliny describes trees bearing nuts with two flavours (nutmeg and mace).⁴

Endemic to the Banda Islands of Indonesia, nutmeg trading was cultivated by Arab merchants from the 6th century onwards, transporting stocks to Constantinople and beyond, before the Dutch invaded Indonesia to gain control over nutmeg production in the region. Peggy Trowbridge Filippone of The Spruce Eats tells us that "in the 14th century, half a kilogram of nutmeg cost as much as three sheep or a cow. In 1760 the price of nutmeg in London was 85 to 90 shillings per pound, a price kept artificially high by the Dutch voluntarily burning full warehouses of nutmegs in Amsterdam".⁵ Off the back of nutmeg, the Dutch East India Company became one of the globe's most profitable organisations by 1669, "sustaining 50,000 employees, 10,000 soldiers and around 200 ships, many armed".⁶ It was the British that then exported the trade to Mauritius, Singapore, India, Sri Lanka, the West Indies, particularly Grenada, to end the Dutch monopoly and create cultivation epicentres that still exist today. Ultra's supplies stem from Indonesia, where there is currently extremely high demand, Sri Lanka, and India.



CULTIVATION

Sourced from the dried seeds of the *Myristica fragrans* tree, which rises up to 20 metres and produces small yellow flowers, nutmeg's ideal growing conditions reflect those of Indonesia: 20 – 30 Celsius, high humidity, lots of rainfall, elevation up to 900 metres, along with clay or sandy loam soils.⁷ A fertile tree yields about 2,000 fruits annually on average, but the yield may vary from a few hundred to about 10,000.⁸ A male graft has to be planted for every 20 female grafts in the field, all protected from excessive sunlight in their early stages, and best efforts made to ensure adequate intercrop with coconut gardens for enriched soils.⁹

Initial harvest can only occur around seven years after seedlings are first planted. Subsequently, nutmeg trees offer fruit year-round for 10-20 years.¹⁰ After flowering occurs, fruits are ripe for harvest 9 months or so later, with peak seasons occurring during the summer months.¹¹ When picked, the nut and mace are dried separately in the sun for one to two months, with the kernels isolated and steam distilled for an essential oil.





USES

Excitement in the future of nutmeg as a flavour and fragrance agent lies in its multitude of nutritional and health benefits. WebMD lists vitamins A, C and E, manganese, magnesium, copper, phosphorus, zinc, and iron as innate compounds, contributing to anti-inflammatory, pain-relieving, antimicrobial, cleansing, and energising effects.¹² With an abundance of antioxidants, including cyanidins, phenylpropanoids, terpenes, protocatechuic, ferulic, and caffeic acids, one animal study showed that rats dosed with nutmeg and isoproterenol (known to induce severe oxidative stress) avoided cellular damage compared to those only treated with isoproterenol, reflecting the ingredient's strong anti-inflammatory properties.¹³

Other uses include:

- Stress management
- Pain relief
- Deodorisation
- Respiratory decongestion
- Digestive aid
- Libido enhancer

Many of these benefits stem from the anti-fungal and antioxidant potential of nutmeg's main constituents sabinene (responsible for alleviating muscle pain and easing flatulence, also contributing to the nutmeg's sharp spiciness), pinene (identified by its fern-fresh scent, and skin cleansing properties), and limonene (citrus-fruity, with anti-inflammatory characteristics).¹⁴ Recent insight by researchers Xiu-Wei Yang, Frank Gonzalez, Fei L, backed by the U.S.-China Program for Biomedical Collaborative Research, showed that nutmeg protected mice against liver damage by "restoring the mice to more healthy levels of various lipids and acylcarnitines. Gene expression studies showed that peroxisome proliferator-activated receptor alpha was modulated by nutmeg, and the spice didn't protect mice from liver injury if the proliferator-activated receptor alpha gene was deleted. In addition, the team found that a specific compound in nutmeg, myrislignan, had a strong protective effect against liver damage".¹⁵ Another landmark study by the same team also suggested that nutmeg had the potential to modulate the effect of colon cancer on the body, demonstrating that "nutmeg[s] ... antimicrobial activity...attenuated the levels of uremic toxins and decreased intestinal tumorigenesis".¹⁶



CONCLUSION

Industry demand for nutmeg can barely keep up with supply as things stand today. And for good reason – the functional turn within both food and beverage as well as perfumery is pushing brands and consumers to natural materials they can trust that have added wellness benefits, tackling common ailments such as stress, poor sleep, and chronic pain. Nutmeg’s comforting character and global footprint, found across a wide range of cuisines, cultures, and traditions, reflects flexible and broad potential for an oil that instantly hooks on both the tip of the tongue and nose.

¹<https://www.acs.org/content/acs/en/pressroom/presspacs/2018/acs-presspac-may-9-2018/nutmegs-hidden-power-helping-the-liver.html>; <https://www.treatt.com/news/ingredient-insight-nutmeg>

²<https://www.netmeds.com/health-library/post/nutmeg-essential-oil-this-fragrant-tincture-offers-astounding-benefits-for-health-and-beauty>; <https://www.newdirectionsaromatics.com/blog/products/an-essential-guide-to-nutmeg-oil-historys-mystical-spice.html>

³<https://www.worldhistory.org/article/1849/the-early-history-of-clove-nutmeg--mace/>

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⁵ibid.

⁶<https://www.theguardian.com/lifeandstyle/wordofmouth/2010/sep/14/consider-nutmeg>

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¹⁵<https://www.acs.org/content/acs/en/pressroom/presspacs/2018/acs-presspac-may-9-2018/nutmegs-hidden-power-helping-the-liver.html>

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CHECK OUT OUR SPICY SIDE

NUTMEG OIL

Myristica fragrans Houtt.

www.ultranl.com



EUCALYPTUS RADIATA ORGANIC OIL

Eucalyptus radiata 🌍 South Africa

Supply is expected to be in sync with demand. This even after crops being damaged by flooding in *radiata* producing areas. The first half of the year witnessed excessive rainfall.

📈 Price on Request

EUCALYPTUS SMITHII OIL

Eucalyptus smithii 🌍 South Africa

The second half of the year could see a rise in the demand for the oil. Currently, there is limited demand in the market.

📈 USD 15.50 /kilo

TAGETTE OIL

Tagetes erecta 🌍 South Africa

Supply is expected to meet the oil demand. Excessive rainfall has resulted in low crop yield in certain areas. This year the harvest period has been extended to late autumn-early winter due to varied weather patterns in the growing areas.

📈 USD 395.00 /kilo

TEA TREE OIL 🌍 South Africa

Melaleuca alternifolia

Demand fluctuations have been observed in the market post COVID. It is being monitored by growers as everyone adapts to these changes. For both varieties, organic and conventional, the supply is strong.

📈 USD 35.00 /kilo



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to all things citrus!

ORANGE OIL!







LEMON OIL

Citrus limon (L.) Burm. F. 🌍 Spain

The European lemon production forecast is for a 9% lower crop size compared to the last harvest because of unfavourable weather in the two main producing countries of Spain and Italy.

Lemon for processing will also be less because of the lower harvest.

Spain has slightly reduced its lemon production forecast for the 2021/2022 season, pushing it down even further from the levels of the previous season.

ALIMPO's third forecast of the season pegged total volumes at 990,000 metric tonnes (MT). That is down slightly from the original forecast of 1,035 million metric tonnes (MMT), and significantly lower than the final 2020-21 crop of 1,340 MMT.

Production forecasts of the predominant Fino variety were cut from 820,000 MT to 800,000 MT. In the previous season volumes reached 980,000 MT.

The Verna variety, meanwhile, is set to see production of 190,000 MT, compared to pre-season forecasts of 215,000 MT and last season's production of 360,000 MT.

"The Fino lemon season will continue to develop in the first four months of 2022, although with a progressive reduction in fruit availability," ALIMPO said.

"For Limon Verna, a native Spanish variety, the forecast finally points to a harvest of 190,000 MT in 2022, which will mean a sharp reduction compared to the volumes of 2021, with a planned start of marketing during the month of April."

Between 20% and 25% of the harvest is destined for processing, an industry in which Spain is the second largest producer, with a wide range of juices, essential oil and dehydrated peel.

🏠 USD 16.00 /kilo

SPAIN: FRESH LEMON PRODUCTION (MT)

	<i>1st forecast</i> 2021-2022	<i>Updated forecast</i> 2021-2022
FINO	820,000	800,000
VERNA	215,000	190,000
TOTAL	1,035,000	990,000



CINNAMON BARK OIL

Cinnamomum zeylanicum 🌍 Sri Lanka

Due to the chaotic situation in the country, hefty stocks of raw material are unavailable. In fact, raw material costs have gone up by 30% due to the rising inflation levels. This has massively impacted production and logistics. It is advisable to enter into long term contracts over spot purchases. Exports of all natural ingredients have been impacted. Fuel shortage, import restrictions, and limited vessel availability for exports have all resulted in long lead times. Cinnamon season though, kicked off in April.

🏠 USD 385.00 /kilo

CLOVE BUD OIL

Eugenia caryophyllata 🌍 Sri Lanka

New crop is not expected before December 2022. This will deter fall in oil price.

🏠 USD 85.00 /kilo

CINNAMON LEAF OIL

Cinnamomum zeylanicum 🌍 Sri Lanka

Logistical challenges and rising production costs have become a major bottleneck and made export unviable. The considerable depression of the Sri Lankan rupee is the only relief for exporters. Looking at the situation, spot purchases should be avoided, and buyers should either stock up or enter contractual agreements. Price of the oil in the local market has strengthened, even as the end of Q1 witnessed the usual fall in price.

🏠 USD 29.00 /kilo

CLOVE STEM OIL

Eugenia caryophyllata 🌍 Sri Lanka

Price is expected to remain firm, since fresh crop is only expected in December 2022.

🏠 Price on Request

CITRONELLA OIL

Cymbopogon nardus 🌍 Sri Lanka

Growing demand for Ceylon citronella, and a massive rise in inflation locally, has resulted in the oil price rising from previous quarter.

🏠 USD 46.00 /kilo

NUTMEG OIL

Myristica fragrans 🌍 Sri Lanka

New crop is only expected in the second half of the year. The yield in December was insignificant for BWP grade nutmeg. This quality is required for oil production, and thus prices have failed to come down.

🏠 Price on Request

LAUREL LEAF OIL

Laurus nobilis 🌍 Turkey

Turkish laurel leaf oil commands a heavy global demand. The crop is stable and harvest is expected to commence between September and November. There are no fluctuations in the demand and supply of the oil.

🏠 USD 60.00 /kilo

OREGANO OIL

Origanum vulgare 🌍 Turkey

It is an evergreen crop and grows through the year. Thus, the raw material supply has been constant and good. For the past three years Turkey has been the biggest exporter of oregano oil. It also holds the biggest market share among the flavour and seasoning companies in Europe and USA. In terms of price, there are no fluctuations in the market for the oil and raw material.

🏠 USD 65.00 /kilo

ROSE OIL

Rosa damascena 🌍 Turkey

Demand and supply of the oil are balanced. During winters the harvest is tricky and reduces in volume. Otherwise, there is a constant supply of the crop. In comparison to Bulgarian rose oil, the Turkish variety is cheaper. There is a significant demand for the oil from the Middle East and European cosmetic and fragrance industry.

🏠 USD 6800.00 /kilo





ITALY'S LUSH ESSENTIAL OILS CONNECT

Mark Sewell and Gaëtan Bourdeau

Southern Italy is a treasure trove of well-manicured trees, bursting with citrus fruits. Here, experience merges with innovation to produce the purest range of nature's elixirs. Being a major producer of essential oils in Europe, it has a wealth of knowledge and generations of experience to share. It is always an "essential" connect.

To gain an intimate knowledge of the production and trading of essential oils in southern Italy, we embarked on a 6 day study tour. The primary purpose of the tour was to visit citrus oil manufacturers and comprehend their challenges and deep dive into the market dynamics. This was our first such sourcing initiative in Italy. While we set out to assess suppliers and develop business relationships, during the course of these excursions, we also learnt a great deal about:

- product and processing innovations and extraction equipment upgrades
- technical advances in analysing essential oil constituents
- growing interest in organic essential oils and their required certification
- expanding scope of citrus speciality products
- agronomic techniques and traceability
- impact of EU health and safety regulations on production
- impact of EU subsidy reduction on citrus fruit market liberalisation
- growth of the fresh fruit market
- purchasing arrangements with local producers



ITALIAN CITRUS

As early as the 10th century, citrus fruits were introduced to Sicily. Over the years numerous varieties made their way to Sicily, and citrus production became one of the driving forces of the local economy. Today, Sicily is the leading producer of blood oranges globally, and a major contributor of lemons. Sicily also produces premium quality mandarins, clementines and oranges Amare. The climatic conditions, and geographical location of Sicily favours the production of citrus fruits.

A HANDS-ON EXPERIENCE AT PRODUCTION PLANTS

To understand product and processing in detail, we visited numerous family-owned organisations with decades of experience in the sector. During these visits we intimately understood the operation style.

We witnessed the oil extraction process starting from unloading and washing fruits. We also got a first-hand look at the equipment used in these operations. Most plants in the area used the rasping technique to obtain oil from the peel. This process is referred to as pelatrice, while removing oil after the juice is expressed is known as sfumatrice. During these visits, we quizzed producers on the chemical and organoleptic characteristics of oils obtained via different techniques. These conversations shed a light on the wide product range of lemon, blood and blond sweet orange, mandarin, and bergamot oils produced in Italy.

The visits also highlighted the increased quality control measures enforced at the production plants. We witnessed the intense scrutiny at every stage from growing, transport, arrival at factory to processing technology, production control, and sophisticated laboratory testing. Everywhere highly skilled staff was employed to oversee these operations. Most companies complied with international guidelines such as ISO 9001, HACCP, and Good Manufacturing Practice.



EXPLORING THE ITALIAN LANDSCAPE

Palermo

Our journey commenced in Palermo. A cultural melting pot at the edge of Europe, Palermo proudly wears the scars and glory days of its ancient past. Sicily's largest city offers the art lover the opportunity to scan youthful artisan studios. It is home to the third largest opera house in Europe, noisy streets with an abundance of food varieties, and historical relics with proud Arabesque domes and frescoed cupolas. Here we visited lemon and blood orange farms. One of the first stops in Palermo was an institution with a rich history and legacy. They specialise in processing and manufacturing citrus oils for perfumery, cosmetics, pharmaceuticals, and food and beverage industries.

Catania

Our next stop was Catania. Under the shadow of Mt. Etna is the vibrant and youthful city of Catania. It has a remarkable history and story of resilience. Rebuilt with lava after the devastation in the 17th century, today it has an earthy spirit and young vibe. We explored bergamot and blonde orange farms as well.

Messina

Next up on our itinerary was Messina. Located in close proximity to mainland Italy, Messina is a major transport hub and an important gateway to the island. It is home to one of Sicily's finest cathedrals and museums. We visited some processing plants in this area. Situated close to the beach, it was impressive how these plants overcame challenges of accessibility. It possessed the latest equipment, and sound-proofing for smooth operations.



“(In Reggio Calabria) We visited a plant where we were able to witness pelatrice extraction of citrus fruits.”

We also made a stopover at the University of Messina, Analytical Food Chemistry Group. The trip proved to be extremely beneficial in understanding the latest innovations in the European market. The EU has funded analytical laboratories at the university. They are constantly innovating to analyse essential oil constituents and detect adulterations and pesticide content.

Reggio Calabria

We concluded our Italian sojourn at Reggio Calabria with a short ferry ride. A seaside town popular for its cultural sights, Reggio Calabria is often referred to as the ‘jumping off point for Sicily.’ Buzzing with Greek history and relics, the seafront possesses remains of Roman baths and Greek walls. We visited a plant where we were able to witness pelatrice extraction of citrus fruits.

The short trip to the interior of Sicily was a fruitful, educational, and exhilarating experience. The beauty of the orchards and fields, the landscapes, and interactions with industry veterans, locals, and generations of family-owned businesses were enriching. Our understanding of essential oils in general, and the Italian market particularly, is sharper. With this knowledge we hope to service the Italian demographic better. It will also be our endeavour to market Italy’s rich product line globally.

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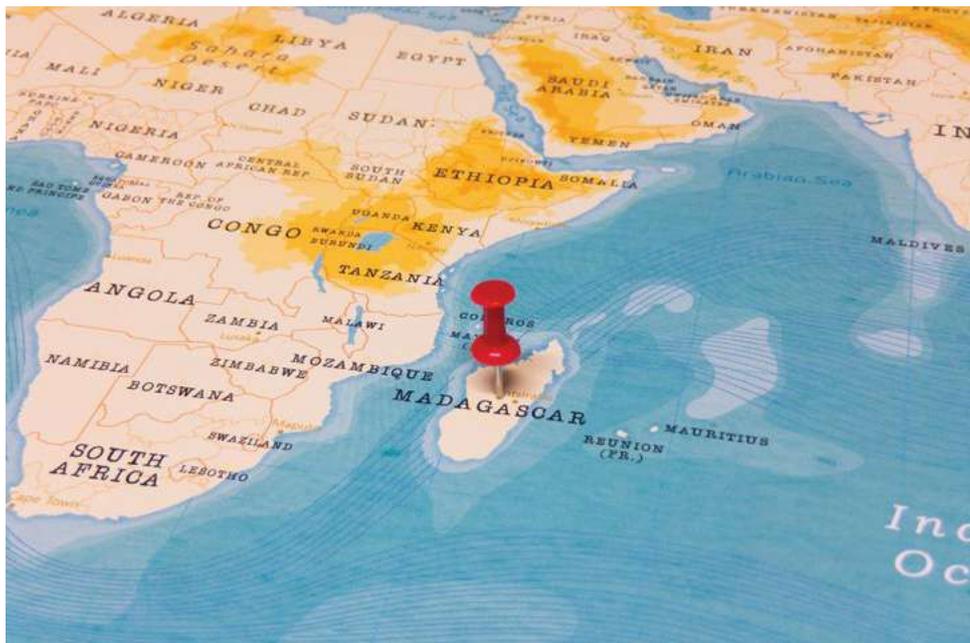
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VANILLA

Vanilla



MADAGASCAR

Natural vanilla remains one of the world's favourite flavouring (and to a lesser extent, fragrance) ingredients. It is one of the most complex of flavouring ingredients not only in terms of its complex flavour profile of approximately 250 compounds but also in terms of growing and processing. Climatic, political, and speculative activities add to this complexity. Natural vanilla is available in a variety of forms – beans, liquid, paste, powder. Beans are mainly used in bakery products, ice creams, desserts, smoothies but are also vital in cosmetic and personal care products, including anti-aging creams, moisturisers, and various ointments as well as being used in aromatherapy. Whole vanilla beans are expensive and are used in gourmet and premium food products, a segment that suffered during the pandemic. An estimated 18,000 global products contain natural vanilla.

The vanilla market remains as opaque as ever, mainly because of the lack of market transparency in Madagascar, which accounts for approximately three-quarters of global natural vanilla production. Vanilla is so important to Madagascar's economy in terms of employment and export earnings that the government is closely involved in the sector, which employs an estimated 70,000 farmers in the northeast SAVA region alone. The government currently has a "decret" which has fixed a minimum price for green beans of 75,000 ariary per kg (approximately US\$ 18.5/kg) both for the previous and coming season. The objective is to support growers' incomes but there is much doubt as to whether this price is being observed and enforced. Growers have the option of curing their own beans and going for the "vrac" price if they don't find buyers for their green beans.

In 2020 the government imposed a minimum export price of US \$250/kg and this is still in place. This price applies to cured beans but not to vanilla extracts produced by local manufacturers who are able to buy vanilla beans directly from collectors or vanilla associations at substantially less than the official export price. While export prices are below this official level various ingenious schemes appear to be operating enabling exporters not to breach this policy. Also, there is an issue relating to which companies will be granted export licences for the 2022 crop prior to the official opening of exports, which in 2021 was September 15th. Most vanilla is harvested in July and August.

Madagascar's vanilla crop in 2021 turned out to be a bumper crop. Initially thought to be between 2,000 and 2,300 MT, a recent estimate based on trade data suggests it was closer to 3,000 MT. Export data from the two major exporting ports of Sambava and Antalaha during the first 6.5 months of the vanilla export season (15th September 2021 to 31st March 2022) show exports totalled 1,551 MT to 40 separate export destinations. This implies that total exports from these two ports alone was almost 2,000 MT by the end of the export season on 31st May 2022. In addition, at least a further 500 MT of vanilla was either sea freighted from the ports of Tamatave and Diego Suarez or air freighted from Antananarivo. If estimated 2021 carryover stocks of at least 500 MT are correct then Madagascar's 2021 production approached 3,000 MT.

As regards the current 2022 crop there are conflicting estimates in part based on trying to assess the impact of erratic weather conditions. There is no doubt that global warming is increasingly impacting the vanilla growing areas of Madagascar. The closing months of 2021 saw weak flowering leading to predictions of a smaller crop and upward price pressure. Flowering peaked in October 2021 and the final two months of 2021 saw reduced rainfall, which arrived too late to avoid a significant flower drop. Some sources suggest a production shortfall of "several hundred tonnes" but even so the 2022 crop could still be substantial and more than 2,000 MT, especially if there is late flowering, alongside abundant rain and improved yields. As yet, it is too early to make a detailed assessment of the current quality of the 2022 crop.



COMOROS

The Comoros Islands in the Indian Ocean, just north of Madagascar, produce high quality bourbon vanilla. High vanilla prices since 2015 led to efforts to increase production, by both existing and new companies. As a result, output in 2022 could exceed 50 MT in 2022.



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. The continued import of PNG vanilla makes it difficult to estimate production but the high prices of recent years led to efforts to expand production and Indonesian output in 2022 should reach at least 300 MT. At the beginning of 2022 Indonesian prices were quite strong but have softened recently as buyers have turned their attention to Madagascar, whose export season officially ended on May 31st. Unlike Madagascar, Indonesia's vanilla market is a free market with minimal government interference.

PAPUA NEW GUINEA

PNG produces both *V. tahitensis* and *V. planifolia* vanilla beans in a diverse range of qualities. Overall, average quality has improved in recent years, but sizeable amounts of substandard *V. planifolia* are on the market. There are still no real quality standards and moisture and vanillin contents can be very inconsistent. On the ground little microbiological analysis and pesticide testing is undertaken. As food safety standards become more rigorous this lack of testing and quality standards will create greater challenges for PNG vanilla in the food formulation markets in the years ahead.

Between 50% to 75% of PNG vanilla production originates in the regions of East Sepik and Sandaun (formerly West Sepik), bordering the Indonesian province of Papua. Most of PNG's vanilla trade is done through informal channels through Indonesia, which is an important market. In 2020 the border with Indonesia was closed, reducing the amount of trade. Some vanilla is smuggled but there is a procedure for exporting legally and some vanilla imports are recorded in Indonesian trade statistics.

Transport logistics in PNG are notoriously difficult and the recent pandemic has further aggravated these problems. Air freight rates have risen three-fold and the transport system remains highly fragmented. Compared with many products, the high unit value of vanilla combined with its non-perishability, relatively easy transportability and PNG's suitable agro-ecological growing conditions have facilitated an expansion of production. While production and trade data are difficult to obtain, production in 2021 was estimated at 300 MT and a similar amount is predicted for 2022.



TANZANIA

While Uganda has been the dominant vanilla producer in East Africa for several decades, over the border in Tanzania vanilla production has been growing quickly in recent years. According to Tanzania's Ministry of Agriculture, vanilla production has increased significantly in the last five years, "rising from 229.8 tonnes per year in 2015 to 1,949 tonnes in 2020". However, these data probably relate to green beans rather than the usual cured vanilla. Some 5 to 7 kg of green beans are required to produce 1 kg of cured dried beans, through a skilled 4-step process of killing, sweating, drying and conditioning. With the relatively high prices of recent years, Tanzanian farmers have been reported to be switching from coffee and other cash crops into vanilla. The growing importance of Tanzania is reflected in the holding of an international vanilla conference in Tanzania in late 2019, just prior to the onset of the pandemic.



UGANDA

In recent years Uganda has successfully endeavoured to increase the yields, quantity and quality of vanilla production. It is estimated that production in 2021 reached 150 MT considerably higher than originally predicted. Growing conditions in 2022 have been good so production could exceed 200 MT but it is not clear if some production in neighbouring Tanzania is being traded through Uganda. In addition, there is some concern about maintaining quality standards, particularly with regard to moisture content, and this means that Uganda vanilla will sell at a discount to Madagascar.

CONCLUSIONS

The global vanilla market like many economies and sectors was severely impacted by the COVID-19 pandemic. Vanilla demand, prices and profitability fell significantly during 2020 and 2021 but as economies emerge from the pandemic, and demand for natural products continues to expand, so the vanilla market is predicted to grow over the coming years. The USA and the EU continue to be the dominant export markets, with both regions substantially increasing their imports in 2021, pointing to a growing demand for natural vanilla. The Asia Pacific vanilla market, although smaller than the EU and USA, is expected to witness the fastest growth driven by the growing demand for food and beverage agents as these economies emerge from the pandemic. Consumption of natural vanilla products is accelerating with strong demand from both the industrial and retail sectors, while the food service and institutional markets continue to recover from the impact of the pandemic. One source valued the global vanilla market at US\$ 1.44 billion in 2021 with an annual growth of 4.5% to reach US \$1.96 billion in 2028.

There are undoubted positive signs in the global vanilla market. Demand for natural vanilla continues to grow as the impact of the COVID pandemic appears to be receding, and demand from the leisure and tourist sectors continues to grow. Stricter standard and labelling enforcement will benefit some producers. However, there are dark clouds on the horizon ranging from more erratic weather patterns, disrupted supply chains, a major war in Europe, global inflation, rising interest rates, the probability of a severe economic downturn and an expansion of global vanilla stocks. There is some uncertainty regarding the trend of future prices. Some argue for an increase in prices compared to previous years, while others see the growing level of carryover stocks leading to downward price pressure. Barring a major climatic disaster, vanilla prices are likely to remain relatively stable in the short term but soften towards the end of 2022. However, if demand continues to expand as the pandemic recedes, then the market could remain relatively stable. But much will depend on the Madagascar government's vanilla policies and management of carryover stocks.



GRAPEFRUIT OIL

Citrus paradisi 🌐 USA

USA grapefruit production is expected to be 9.4 M. boxes. The forecast for all Florida grapefruit production is 3.30 M. boxes. The distribution comprises 2.8 M boxes of red and 500,000 boxes of white.

California grapefruit remains at 4.1 M. boxes, while the Texas grapefruit forecast tumbled from 2.4 M. boxes in 2020/2021 to 2.0 M. boxes in the June 2022 forecast.

📈 USD 45.00 /kilo

USA ESTIMATED GRAPEFRUIT PRODUCTION 2019/2020 TO JUNE 2022
FORECAST ('000 BOXES)

<i>Crop & State</i>	<i>2019/20</i>	<i>2020/21</i>	<i>June 2022</i>
Florida-All	4,850	4,100	3,300
Red	4,060	3,480	2,800
White	790	620	500
California	4,700	4,200	4,100
Texas	4,400	2,400	2,000
Total	13,950	10,700	9,400



LEMON OIL

Citrus limon (L.) Burm. F. 🌐 USA

Arizona lemon production is expected to increase. The June USDA forecast for 2021/22 stands at 1.5 M. boxes, up from 750,000 boxes final production in 2020/21. The forecast for California lemon production rose from 20.1 M. boxes in 2020/2021 season to 23 M. boxes. Because of the larger crop, lemons for processing are expected to be higher.

📈 USD 15.00 /kilo

USA ESTIMATED LEMON PRODUCTION 2019/2020 TO JUNE 2022 FORECAST ('000 BOXES)

<i>Crop and State</i>	<i>2019/20</i>	<i>2020/21</i>	<i>June 2022</i>
Arizona	1,800	750	1,500
California	25,300	20,100	23,000
USA	27,100	20,850	24,50



ORANGE OIL

Citrus sinensis 🌍 USA

According to the USDA June 2022 forecast, USA orange 2021-2022 production is forecast at 92.35 million boxes (M. boxes). The forecast consists of 40.7 M. boxes of Florida oranges, 24% down compared to last season's revised final production; 51.3 M. boxes of California oranges; and 350,000 boxes of Texas oranges.

The Florida orange total forecast is comprised of 18.2 M. boxes of non-Valencia oranges. The Navel forecast, included in the non-Valencia portion of the forecast, is 490,000 boxes, 3% of the non-Valencia total. The non-Valencia harvest is over for the season. The forecast for the Valencia orange production has been increased from the previous forecast to 22.5 M. boxes. The California orange total forecast is comprised of 43.0 M. boxes of non-Valencia oranges, and 8.3 M. boxes of Valencia oranges, while Texas accounts for 250,000 boxes of non-Valencia oranges and 100,000 boxes of Valencia oranges.

Florida's orange crop is about a quarter of what it was in 2005, when the plant disease known as citrus greening was found in the state's groves. The disease has steadily destroyed plantings and caused billions of dollars in losses including jobs. According to Judy Ganes, a consultant who has followed the industry for about three decades, Florida will face difficulties turning around its citrus production. Trees desperately need nutrients and yet fertiliser prices are rising quickly, and the upcoming hurricane season is expected to bring about average activity, increasing risks to farmers. It will be a tremendous challenge to bring back output.

The last hurricane to cause major, widespread damage to Florida's citrus industry was Irma five years ago, in September 2017. But growers should stay on alert this year, because Colorado State University (CSU) researchers are predicting an active Atlantic hurricane season in 2022. The team predicts that 2022 hurricane activity will be about 130% of the average season from 1991 to 2020.

Since Florida processes about 90% of their crop, the lower production volume will affect the supply of juice and orange oil and other by-products.

Particularly with the orange oil, the very small crop in Florida, a small crop in Brazil, combined with just average crops in many other producing regions has resulted in not enough orange oil to satisfy normal demand. These low volumes at source, combined with frequent delays in steamer shipments are pushing the prices for orange oil to historical highs.

📈 USD 18.00 /kilo

USA ESTIMATED ORANGE PRODUCTION 2019/2020 TO JUNE 2022 FORECAST ('000 BOXES)

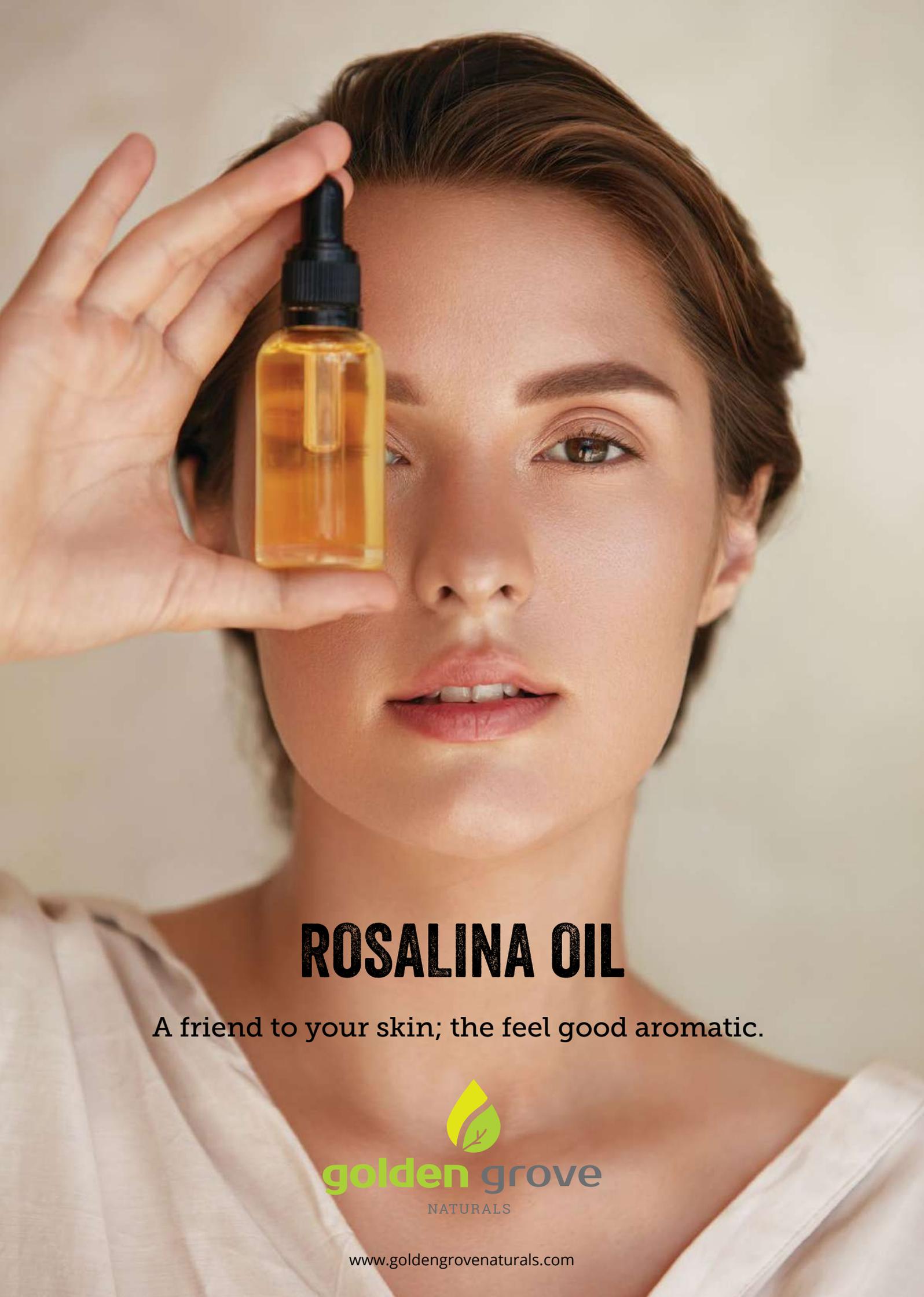
<i>Crop and State</i>	<i>2019/20</i>	<i>2020/21</i>	<i>June 2022</i>
Non-Valencia Oranges			
Florida	29,650	22,700	18,200
California	43,300	41,300	43,000
Texas	1,150	1,000	250
Total	74,100	65,000	61,450
Valencia Oranges			
Florida	37,750	30,250	22,500
California	10,800	7,700	8,300
Texas	190	50	100
Total	48,740	38,000	30,900
All Oranges			
Florida	67,400	52,950	40,700
California	54,100	49,000	51,300
Texas	1,340	1,050	350
Total	122,840	103,000	92,350

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