

ESSENTIAL OILS
MARKET REPORT
SPRING 2020



VINTAGE BLOOMS!



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Essential Oils, Ingredients, F & F

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Hello! Though celebrations may be over, and life has quietened down, it's still not too late to wish you all a Happy New Year 2020.

But while your resolutions have been flying out the window, *we* have been across continents to gather the latest from the fields. With bushfire updates from Australia, citrus tidings from Europe and the Americas, minty fresh headlines from Asia, and of course the cynosure of all eyes - China. We are here again, with the inside story of what's happening in the essential oil cosmos.

I look back anew, with a sense of pride. It is remarkable that despite the odds our company has reached a milestone that marks our foray into hitherto uncharted territory. Now having reached Her Majesty's shores and widened our repertoire, I welcome you to Ultra UK. You will find glimpses in the report of some fascinating vegetable oils among its myriad offerings.

The ever-increasing popularity of sustainably sourced wellness products ensures that demand for naturals has not dimmed in any way. Citrus, which had lost its zest, and its sunny cheer considerably dulled after historic lows last year, is looking up with a positive outlook on improving prices.

Ornamenting landscapes across Australia and these pages, you'll find the exquisitely gorgeous, slender-leaved *Leptospermum petersonii*. Let us be the bearer of good news from the land down-under; it is much needed post the tragic loss of animals and forests. We give you the first whiffs of our newest product, lemon-scented tea tree oil. Australia's hold over our olfactory and culinary experiences is getting firmer. We bring you the bulletin on the array of Australian naturals that are quietly fuelling an entire revolution.

If that's not enough to satiate your thirst for information, we take you to far-off, exotic Indonesia on a study tour to Sulawesi. This study tour by Van Aroma imparted first-hand experience of landmark botanicals patchouli, clove, and citronella.

On a serious note, the coronavirus epidemic sweeping China is extremely distressing. As the world, and China, struggles to contain the alarming situation, our unflinching support and thoughts lie with our partners and colleagues there and all those affected. It is a national emergency, and obviously there are grave repercussions. Most factories have halted production, existing stocks are fast depleting and supplies are desperately constrained. Production, at a standstill in Yunnan, Sichuan, Hubei, Guangdong and Henan provinces and other production areas, may not resume until March. With the reins tightened over public transport, logistics are drastically affected. Some distilleries are slowly resuming operations on marginal scales; however, capacities are yet to be restored. China is a major source and, in far-reaching consequences, supplies are immensely impacted and price escalation is unavoidable.

With hope in our hearts for speedy healing, and looking forward to exploring more electrifying naturals, I wish everyone a great start to 2020.

Thank you,

Priyamvada Sanganeria

Director, Ultra International BV

LEMON OIL

Citrus limon (L.) Burm. F. 🇦🇷 Argentina

Global lemon production has gone down, and Argentina has fared badly. This is primarily due to the weather playing truant and impacting the overall crop. This year's predictions estimate a decline of 11% from 1.8 MT in 2018/19 to 1.6 MMT of fruit in 2019/20. Naturally, consumption and quantities earmarked for distilling are inevitably greatly reduced. India, Vietnam and China have opened up as new export markets for Argentina, in addition to its foremost market, the European Union, which accounts for two-thirds of exports. With these, this year's export figure is projected to touch its zenith at 300,000 MT. However, with the decline in crop and large quantities of fruit earmarked for exports, the volumes of fruit channelled into processing is anticipated to be significantly reduced at 1.15 MMT, compared with 1.41 MMT in 2018/19.

🏠 USD 16.00 /kilo

ESTIMATED GLOBAL LEMON PRODUCTION AND PROCESSING FOR SELECTED COUNTRIES (X 1,000 MT)

Countries	2016/17		2017/18		2018/19		Forecast 2019/20	
	Production	Processing	Production	Processing	Production	Processing	Production	Processing
Argentina	1,450	1,122	1,700	1,348	1,800	1,410	1,600	1,150
European Union	1,535	284	1,472	232	1,684	253	1,470	224
Turkey	850	40	1,000	50	1,100	50	1,000	50
USA	800	164	806	189	876	238	740	185
South Africa	430	115	446	113	498	135	530	139
Israel	67	4	65	4	68	6	75	4
Other	99	4	91	4	92	6	96	4
Total	5,231	1,733	5,580	1,940	6,118	2,098	5,511	1,756



Floriade - Australia's biggest celebration of Spring, Canberra, Australia.

ANISE MYRTLE OIL

Syzygium anisatum 🌍 Australia

Anise myrtle still remains in restricted production with inflated prices. Efforts are on to increase production. Severe drought resulted in a low yield in 2020. Efforts are on to expand the areas of cultivation and increase production.

🏠 AUD 470.00 /kilo

BUDDAWOOD OIL

Eremophila mitchellii 🌍 Australia

Supply has been negatively affected by fires over the previous three months. Timber is being collected and production is ramping up again. However, there is low supply of timber due to adverse weather conditions. The good news is that demand is increasing significantly. There is increased usage in the fragrance industry due to the magnificent earthy notes of buddawood oil.

🏠 AUD 600.00 /kilo

EUCALYPTUS DIVES OIL

Eucalyptus dives 🌍 Australia

A rising demand for this oil has placed it in the cynosure of the producers. The crop has borne the brunt of the drought which resulted in a low yield of oil. Plantations are being added, even as production continues at a modest scale with around 180 kgs of available oil. Working towards achieving greater production volumes in 2021, the producer aims to deliver 5 MT of oil with augmented capacities in 2022.

📈 AUD 34.00 /kilo

LEMON MYRTLE OIL

Backhousia citriodora 🌍 Australia

The quantities of natural oil available at the moment are quite insignificant. This is because the dry leaf, a coveted ingredient in culinary curation, fetches premium returns. This has been the impetus for several plantations to favour culinary dry leaf production over oil production. However, most of the numerous grades of lemon myrtle available in the market have tested positive for synthetic adulterations under the C14 scan. What is alarming is that the market is flooded with substantial volumes of this synthetic oil. In the backdrop of this situation, around 60 hectares of new plantation is being set up by one of the big names in the industry to solely focus on oil production. Production continues in full swing as the plantations come into operation. Stocks of superior grade lemon myrtle, however, are limited.

📈 AUD 469.00 /kilo

EUCALYPTUS HORISTES OIL

Eucalyptus kochii 🌍 Australia

Most of the established players are producing this oil by following continual crop rotation. The transportation of the biomass to the distilling units poses a huge challenge. This logistical hurdle is one of the important factors impeding endeavours to increase production of *E. horistes*. Though production remains steady, this logistical issue pushes up input expenses. Producers are unable to increase production; the available supply is just adequate to meet existing demands. The eucalyptol content may go down and average out to 80%. There are decent volumes in stock.

📈 AUD 32.00 /kilo

LEMON SCENTED TEA TREE OIL

Leptospermum petersonii 🌍 Australia

Lemon scented tea tree oil is native to and flourishes in the northern part of NSW. The producer is trying to increase the area under tea tree cultivation which will enable them to look at larger volumes of production. Modest volumes of about 350 kgs of oil are held by the producer at source, though production remains on a limited scale.

📈 AUD 160.00 /kilo

EUCALYPTUS STAIGERIANA OIL

Eucalyptus staigeriana 🌍 Australia

This is another oil that is on a demand upsurge but is being produced on a rather humble scale. The oil output this year is rather disappointing because much of the crop growth was impaired by extreme aridity. The biggest essential oil producer in Australia is working towards increasing cultivation areas by adding more plantations to boost existing production. The yield from these is anticipated to come into the market by 2021.

📈 AUD 64.00 /kilo

KUNZEA AMBIGUA OIL

Kunzea ambigua 🌍 Australia

The production of kunzea is a cottage industry restricted to the remotest parts of the continent. The plant is wild harvested; and sometimes in adverse weather there are negligible quantities of oil produced. However, one of the renowned players has taken it upon itself to promote the cultivation of kunzea via sustainable plantations; and is working to standardise the product. It is hoped that 2020 will witness more of this material coming into the market.

📈 AUD 560.00 /kilo

SANDALWOOD N. QUEENSLAND

Santalum lanceolatum 🌐 Australia

Surprisingly, this botanical is widely considered a weed across Australian pastoral regions. It yields a unique, floral-sweet yet spicy, woody aroma quite different from the other grades of sandalwood oils. This species is wild harvested in a sustainable manner, though the availability of wood for processing is currently at a low. At the moment, production remains secure and is sufficient to meet existing demands. A wood-harvesting agreement by the producer is expected to iron out difficulties in procuring the wood for processing and increase supplies. The new harvest of stock is scheduled to come in in early 2020.

🏠 USD 1050.00 /kilo

SANDALWOOD OIL VANUATU

Santalum austrocaledonicum 🌐 Australia

At present, the supply just fulfils the demand. The producer is working on procuring more stock so that a steady and secure supply can be established to meet the ever-growing demand for this oil. In keeping with the same strategy plantations are added and all efforts are being made to standardise the quality of oil.

🏠 USD 1900.00 /kilo

SANDALWOOD W. AUSTRALIA OIL

Santalum spicatum 🌐 Australia

There is a healthy demand which is adequately matched by the existing stock levels on hand and steady supply. The production of this oil is set to be increased in 2020.

🏠 USD 1350.00 /kilo

ROSALINA OIL

Melaleuca ericifolia 🌐 Australia

There are two distinct types of rosalina oil produced in Australia. The wild harvested botanical from the southern geographical origin shows improved genetics with marginal linalool content and higher cineole content; while its northern, plantation-produced oil shows vice versa characteristics. The southern rosalina also reveals a variegated chemical composition. Both these varieties are produced by one of the biggest names and the world's largest suppliers of rosalina. The producer has successfully established additional plantations which have now started producing oil, and follows strict compliances for producing the northern (linalool type) oil. The growing areas were reeling under the effects of drought which hindered the procurement of biomass. Production this year is significantly lowered by the drought with only 300 kgs available in stock with the producer.

🏠 AUD 320.00 /kilo

TEA TREE OIL

Melaleuca alternifolia 🌐 Australia

It has been a catastrophic time for the tea tree industry. Not just tea tree but growth of almost all crops has been adversely impacted. Severe drought continues to negatively affect crop growth. Furthermore, bush fires have affected many tea tree farms in northern New South Wales. Several farms have been struggling to deal with the situation. Adding to this, floods have also affected most crops on the northern coast. The negative effects of the drought and fire mean the industry may see a reduction in crop this year. Golden Grove Naturals plantations have not been negatively affected by bush fires.

Demand for stock is starting to pick up after a six month period of low stock movements. The existing stock is limited. GGN has implemented irrigation on plantations under management. The production in the coming months is projected to increase.

🏠 AUD 60.00 /kilo

WHITE CYPRESS OIL

Callitris intratropica 🌐 Australia

Australia has been grappling with the far-reaching, disastrous effects of prolonged bushfires which has ravaged homes and plantations alike. Producers are still in the process of taking stock and trying to gauge where they stand, hoping that the wild harvested material earmarked for distilling is not too damaged. White cypress is garnering enough attention from the market; and so, demand has been on the rise. With sustained efforts to expand and augment the processing of this oil, a consistent and secure flow has been established. The oil is now ready to be offered to clients on a long term basis and negotiable pricing.

🏠 AUD 200.00 /kilo



ALL EYES ON AUSTRALIA SIX REASONS WHY AUSTRALIAN NATURALS ARE ON THE RISE

Eddie Bulliqi

Summary: The soft cultural power of Australian natural essential oils is set to deliver on the most challenging consumer demands of our time. This article reviews why there is no better time to invest in Australian naturals for your next product launch.

Australia is poised to occupy the foremost pedestal of trust and dependability in the global natural essential oils market and cement the meaning of “brand Australia” in the F&F industry with its ever natural-conscious consumers. The country has been a long-time exporter of essential oils; currently, around 90 per cent of its naturals are shipped overseas.¹ The key differential today is our shifting emotional and cultural climate centred around environmentalism, sustainability, personal health, land usage, education, transparency, diplomacy and a renewed call-to-action from the young activist generation for rehabilitated investment into long-term prosperity.

Australia has the potential to deliver against all of our most pressing contemporary geo-political issues, holding a massive opportunity for agricultural innovation through earnest sustainability programmes bedrocked on a stable economy, bountiful tech sector, world-class agricultural schooling, strong social ethics, a fair and honest supply chain and the richest of natural landscapes. The result: a full stock of consistently high-quality, responsibly sourced, cutting-edge natural products to fill (almost) the entire natural palette for buyers.

The recent bushfires were a tragedy, and the world is thinking of Australia right now. For that reason, there is no better time to invest in Australian essential oils to support the regeneration of a landscape that holds such promise for ecological conservation, phytochemistry R&D as well as flourishing future business. This article puts forward the top six reasons why you should keep your eye on Australian naturals and includes a dedicated mini interview with Aaron Pollack, CEO of Golden Grove Naturals based in New South Wales.

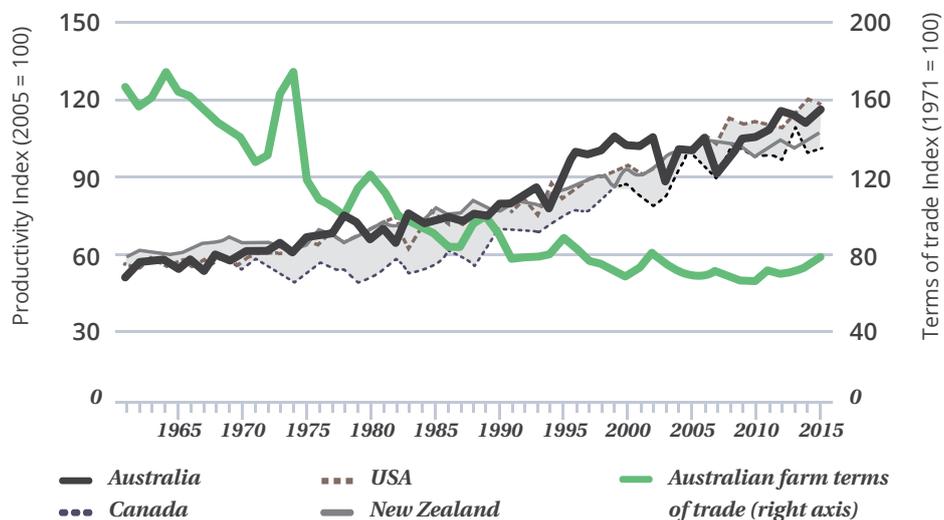
SOIL

It is well known that Australia's soils are some of the most nutrient poor in the world due to "the country's geological stability ... and a lack of significant seismic activity", as confirmed by the Australian Government Agriculture Office who expand that "only six per cent of the Australian landmass is arable. Large volumes of water are required from both surface and groundwater supplies. Australian soils are highly dependent upon vegetation cover to generate nutrients and for stability".²

What the soil lacks is made up for in farmer knowledge and responsible upkeep of essential nutrients over time, speaking to a wider culture of historically conscientious ground management that contrasts significantly with farming neighbours like Indonesia, for example, where malpractice is still a challenge. Despite the ecosystemic handicaps, "Australian farmers have historically achieved strong productivity growth, increasing the volume of output produced from a given set of inputs. Agricultural productivity growth has been comparable to competing farmers in other high-income countries and faster than other sectors of the Australian economy ... driven by improvements in technology and structural change", as per the Department of Agriculture (see figure below).³



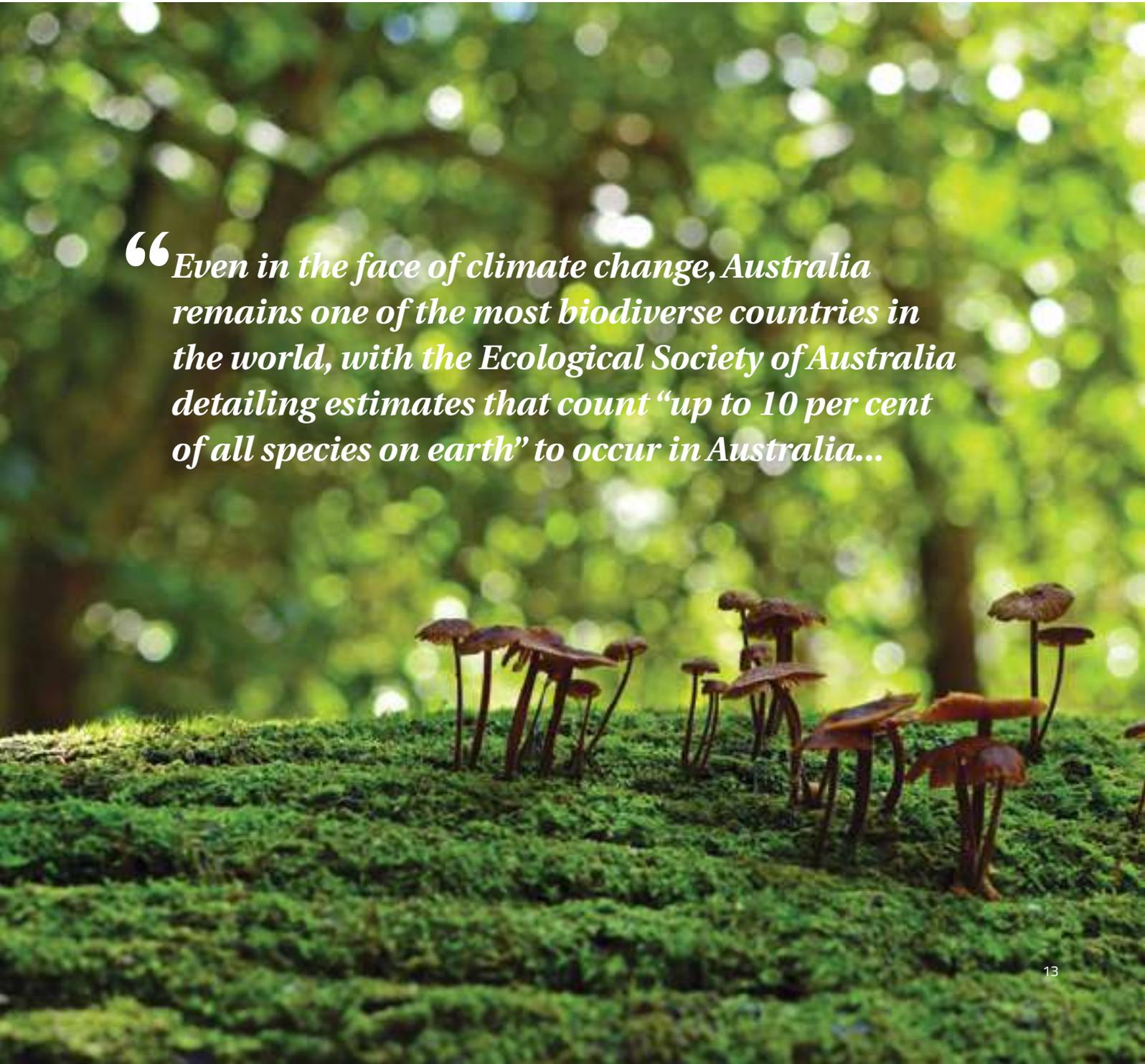
COMPARATIVE AUSTRALIAN AGRICULTURAL PRODUCTIVITY AND TERMS OF TRADE



BIODIVERSITY

Even in the face of climate change, Australia remains one of the most biodiverse countries in the world, with the Ecological Society of Australia detailing estimates that count “up to 10 per cent of all species on earth” to occur in Australia as “one of the world’s “megadiverse” countries ... [with] 1,350 terrestrial vertebrate animals found nowhere else, and more than 90 per cent of the 17,580 species of flowering plants endemic”.⁴

Managing Director of the Ultra Group Ravi Sanganeria believes that “the breadth and depth of what can be grown as well as the vast size of Australia is a huge market strength ...Australia can provide 70-80% of the world’s essential oil catalogue”, evidenced in Golden Groves’ growing portfolio and recent introduction of lavender oil following continuing rounds of research and development.



“Even in the face of climate change, Australia remains one of the most biodiverse countries in the world, with the Ecological Society of Australia detailing estimates that count “up to 10 per cent of all species on earth” to occur in Australia...”

ECONOMY

Australian farming is known for its self-sufficiency, contributing +2 per cent over America to the GDP at the level of the farm, allowing funds to be more tightly resourced and allocated and giving independence and power to the farming industry.⁵ In 2017, 85 per cent of farmers' incomes came from production sales, 11 per cent from off-farm business activities and only 0.6 per cent from grants and relief funding.⁶

The National Farmers' Federation of Australia notes in a 2017 report that "the agricultural sector, at farm-gate, contributes 3 per cent to Australia's total GDP. The gross value of Australian farm production in 2016-17 was \$60 billion ... Australia's farm exports earned the country \$44.8 billion in 2016-17, up from \$32.5 billion in 2010-11".⁷

POLITICS

Compared to many of the world's top competing farming economies, Australian politics is relatively stable and remains committed to sustainability that is being rightly recognised as an absolute requirement and not a marketing choice anymore. In the same report, the NFF details how they view "Australian farmers [as] frontline "environmentals", owning, managing and caring for 48 per cent of Australia's land mass. Australian primary industries have led the nation in reducing greenhouse gas emissions intensity — a massive 63% reduction between 1996–2016".⁸

Also noted was the decrease in water consumption "in 2014–15 by 7% from 2013–14. The largest decrease in water consumption was in the agriculture industry. Since 2011, areas managed for conservation have continued to expand, to about 18% of Australia's land area".⁹



EDUCATION

In our interview, Mr. Sanganeria acknowledged that “the biggest obstacle in doing business in Australia is the high labour and production costs ... To be successful in Australia you have to be mechanised with a large initial investment and shrewd labour management that targets business areas most in need”, yet countered the challenge with its positive shadow – “that said, Australia’s field managers are very well-educated and therefore productivity and efficiency are much, much higher than markets with comparable crops; there is greater traceability and accountability in operations, too”.

In evidence, Southern Cross University just launched what they describe as “the world’s first degree in regenerative agriculture, aimed to equip land managers in tackling the impacts of climate change ... It will develop specialist knowledge in a whole-of-system approach to farming ... distribution and production, examining human ecology, agro-ecology, regenerative agronomy, soil management and planning rural landscapes”, starting in February 2020.¹⁰ Cutting-edge education programmes such as these that integrate applied science with new technology have “enabled Australian agriculture to stay a step ahead of our international competitors — returning average productivity growth of 2.7 per cent a year over a 30-year period”, as reported by the NFF.¹¹



BRANDING

Mr. Sanganeria presents a compelling case for what Australia's brand stands for today: "your investment really pays off in Australia ... the agricultural economy is stable and backed up from multiple touch points – scholarship, government, natural resources and regulation. Their quality assurance and trade rules are world-class, holding a premium brand in the industry that stands for ethical trade and the highest quality ... Australia is one of those countries that ticks all the boxes for merchants, preserving stringent standards for paperwork and authentication. From an investment standpoint, as well as a consumer branding standpoint, it is secure and profitable".

The F&F industry is arguably currently underutilising Australia's brand potential. Shrewd brands will spot the soft cultural value that Australian essential oils offer to today's health-conscious, sustainability-demanding consumer and use the R&D platforms that the country is able to fulfil to pave innovation and set an example for best-in-class practice in natural sourcing that other farming nations can aspire to in the future.



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7. National Farmers' Federation, 'Food, Fibre & Forestry Facts', <https://www.nff.org.au/farm-facts.html>
8. *Ibid.*
9. *Ibid.*
10. Mirage News, 'Southern Cross University regenerative agriculture degree a world first', <https://www.miragenews.com/southern-cross-university-regenerative-agriculture-degree-a-world-first/>
11. National Farmers' Federation, *Ibid.*



golden grove

NATURALS

AUSTRALIAN SANDALWOOD

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Santalum album
Santalum spicatum
Santalum austrocaledonicum
Santalum lanceolatum

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THE TOP THREE QUESTIONS THAT WILL AFFECT THE FUTURE OF AUSTRALIAN FARMING WITH AARON POLLACK, CEO OF GOLDEN GROVE NATURALS

Eddie Bulliqi [EB]: As a farmer, are you fully satisfied with what Australia's soil profile offers you? Is there anything you wish you could change?

Aaron Pollack [AP]: The character of the soils reflects the arid and severely weathered nature of the Australian landscape. A distinctive feature would be the naturally low level of phosphorus, due to weathering. Native Australian plants have adapted to low phosphorus soils; many do not need high levels to survive. There is a minority of Australian plant species which are extremely sensitive to excessive phosphorus, and great care should be taken when farming such. Introduced crops to Australia require phosphorus fertiliser to be applied.

Golden Grove Naturals actively undertakes soil, plant and water testing to monitor and adjust our inputs as required. Over supply of resources can be as detrimental to the farming operations as under supply can be. Maintaining a balance is the key. We are committed to understanding soil microbes which are vital for ecosystem health and supporting soil fertility. Soil fertility and structure is considered a main priority to our farming operations. Healthy soil = healthy plants, and healthy plants lead to regular high quality products and long-term viability and profitability for the business.

Implementing regenerative farming practices is key to our agronomy operations, this includes the rehabilitation of the local environment we operate. These farming practices among other benefits include rebuilding soil organic matter and restoring degraded soil biodiversity. Resulting in both carbon draw down and improving water cycle. Setting up the conditions for crops to become more disease and pest resilient.

EB: Does current government policy and practice support the security of your business? Is there anything more that could be done?

AP: Australia has a "clean and green" image and the government has a commitment to strict quarantine practices and ensuring farmers maintain excellence in low chemical residue status, as well as monitoring the levels of land clearing and licensed water usage; although this seems to be the extent of government policy.

Given the growing sophistication of the international marketplace, consumers are demanding credible evidence to support claims such as clean and green. This may lead to the adoption of integrated quality assurance and environmental management systems, where Quality System provides a guarantee on the quality, clean and safety aspects of the product and process while the Environmental System addresses the "green" component - the impact on the environment.

Government policy could / should provide a framework that is more conducive to better environmental management. Policies focusing on educating the general public about the state of the environment, protecting consumers from misleading claims, developing incentive schemes that reward good agricultural management and penalise noncompliance, providing more funding for research and implementation of practical sustainability indicators are the way forward.

Interview

EB: Do you feel connected to the innovation landscape in agricultural science and empowered and capable to invest in and implement new technology? Which technologies and agronomy discoveries most excite you for the future?

AP: Golden Grove Naturals is connected to the innovation landscape and maintains involvement with government and private R&D organisations. I want us to strive to be at the forefront of implementing new technologies, particularly in the areas of reducing reliance on agrochemicals for weed and pest management.

Some examples, I am currently interested in the development, implementation and science behind:

1. Soft chemical use in weed reduction, the continuation of substituting agrochemicals for steam to manage weeds in crops, as well as the implementation of unmanned robotics to selectively target weeds for eradication by high pressure / temperature-regulated steam or by mechanical cultivation.
2. The implementation of drones to undertake precision pest and plant disease identification and treatments.
3. "Live" and in-real-time soil health and structure monitoring equipment and similar for water systems, reading and regulating:
 - a. moisture meters
 - b. pH meters
 - c. temperature meters
 - d. conductivity meters
 - e. coupling these meters to weather monitoring systems for data logging.



ORANGE OIL

Citrus sinensis 🌐 Brazil

Brazil crop estimates can be somewhat confusing because there is a one-year lag between the Brazilian Marketing Year (MY) from July-June, and the US MY, which is used by the USDA. Thus, the current Brazilian MY 2020/2021 is equivalent to U.S. MY 2019/2020. In the data below, the US MY is used.

The USDA predicts the new Brazilian orange crop in 2019/20 will be 370 million boxes (15.1 MMT), a massive 22% decrease as compared to the current crop. This estimate is somewhat below Fundecitrus's last estimate of 385 million boxes. According to Fundecitrus's 2019 greening survey some 19% of the commercial area in São Paulo and Minas Gerais is affected by greening, slightly higher than the previous year, although the spread of the disease has been relatively stable in recent years. The decline in output is due to climatic factors including warmer than usual temperatures and below-average rainfall after the first two blooms and fruit set in São Paulo State. It is predicted that production in São Paulo state and western Minas Gerais will account for 270 million boxes, while a further 100 million boxes will be from other origins. As a result, the total amount of fruits for processing will fall substantially. It is expected to be at 254 million boxes (10.4 MMT) which is 95 million boxes (3.9 MMT) less than in 2018/2019. According to initial estimates, most of the plants were scheduled to run until the end of February. However, in the wake of the reduced numbers, several of these have stopped production since most of the fruit will be mobilised for fresh consumption and exports. Meanwhile, fresh orange domestic consumption is lowered to 4.7 MMT, the lowest in 4 years. Also, the estimate of the current Brazilian orange crop (2018/2019) has been revised down from 494 to 475 million boxes (i.e. 20.15 MMT to 19.38 MMT). According to the IBGE this was mainly due to below average rainfall during late 2019 resulting in smaller fruit size and above-average fruit drop rates in São Paulo and western Minas Gerais.

Total Brazilian FCOJ 65 Brix equivalent exports for 2019/20 are forecast at 935,000 MT, a drop of 345,000 MT compared with 2018/19 due to expected lower availability of oranges for crushing in the upcoming season. Orange juice exports to the U.S. are likely to drop with the recovery of the orange crop in Florida.

With the decreased crop size and most of the volumes already accounted for, supplies are already dwindling. We expect prices to start inching up this year after historic lows last year.

📊 USD 6.00 /kilo

USDA ORANGE PRODUCTION AND PROCESSING FOR SELECTED COUNTRIES (X 1,000 MT)

Countries	2016/17		2017/18		2018/19		Forecast 2019/20	
	Production	Processing	Production	Processing	Production	Processing	Production	Processing
Brazil	20,890	16,116	15,953	10,975	19,380	14,239	15,100	10,365
USA	4,616	3,001	3,560	2,010	4,833	3,332	4,898	3,357
Mexico	4,630	2,100	4,737	1,900	4,389	1,950	4,417	1,955
European Union	6,739	1,491	6,270	1,154	6,505	1,249	5,840	1,045
China	7,000	580	7,300	570	7,200	590	7,300	600
Argentina	700	273	750	375	800	376	720	350
Egypt	3,000	100	3,120	100	3,600	360	3,000	300
South Africa	1,363	123	1,586	240	1,500	299	1,560	238
Costa Rica	322	238	315	232	295	216	310	230
Australia	480	60	525	108	510	90	500	190
TOTAL	49,740	24,082	44,116	17,664	49,012	22,701	43,645	18,630



LAVENDER OIL

Lavandula angustifolia 🌍 Bulgaria

Early field reports have brought to the forefront farmers' reluctance to continue with the cultivation of lavender. If indications are anything to go by, most of the farmers will forego lavender and go ahead with other stable crops which promise better returns. The reason behind this is the extremely low prices commanded by inferior grade lavender oil that is flooding the markets now. Lavender is in excess, but there is an acute paucity of superior grade lavender oil. The new harvest is set to come in only by July. Till then it is impossible to procure good quality oil. The remaining grades of oil in the market are non-ISO and not up to the mark. Many are worried that this deficit could lead to prices shooting up after the fresh crop is available. It is advisable to book orders at the earliest if the quality is satisfactory since it is estimated that it will be a couple of years before lavender oil returns to its ideal price.

🏠 EURO 77.00 /kilo



ROSE OIL

Rosa damascena 🌍 Bulgaria

As with lavender, rose is an annual crop and there is not much happening on the rose oil front. The season for rose is May to June, so it is a wait-and-watch situation with not much to report. Growing conditions have been standard with fairly decent weather that is conducive to growth. Those who require rose oil have booked their orders early in summer.

🏠 EURO 8200.00 /kilo

BLACK & WHITE SPRUCE OIL

Picea glauca 🌍 Canada

The needles and twigs of the spruce tree are used for distilling oil which is again immensely popular. Though the black spruce is more cost effective in comparison to the white spruce (it requires half the distillation ratio of the black spruce), the market is rather tight and availability is constrained. Higher distillation costs coupled with a healthy global demand is bound to push up prices. Some of the major distillers are trying to promote white spruce oil, which is also an excellent product.

📈 USD 169.00 /kilo

CEDAR LEAF OIL

Thuja occidentalis 🌍 Canada

Canada's long and austere winter took its toll on the crop. Harvesting and distilling was considerably delayed, especially after the extreme cold temperatures and early snowfall that hit the region. The entire production chain has been hit hard. Another problem that has arisen is that most of this oil has tested for substantially reduced levels of thujone and is below market specifications. However, a positive aspect is that the carryover stocks from the summer 2019 harvest, which was a good one, should see the market through until the arrival of fresh stock in June this year.

📈 USD 72.00 /kilo

FIR NEEDLE OIL

Abies sibirica 🌍 Canada

Fir needle oil is becoming a favoured oil in numerous new applications. As a result, the demand has intensified but production is unable to fulfil requirements. The season was truncated with the onset of early winter and snowfall which hampered the crop and subsequent processing. Now, though, volumes of available oil are curbed, and prices have charted their way to reach USD64/kg; producers are trying to distil more quantities by the end of the season.

📈 USD 68.00 /kilo

WHITE PINE OIL

Pinus strobus 🌍 Canada

There is a lull in demand for this oil. Consequently, there are sufficient stocks and capacity to produce more in the eventuality of increased demand. It is priced at USD120/kg.

📈 Price on Request



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CORIANDER OIL

Spreading smiles with every seed



The coronavirus situation has escalated to epidemic proportions and authorities are struggling to contain it. The world is on tenterhooks, and keenly watching developments in China with a mix of emotions. There is cause for concern as some of the areas like Yunnan, Sichuan, Hubei, Guangdong, and Henan constitute the heartland of essential oil production and are harshly impacted. Almost all production is halted; restrictions are imposed; and daily life severely crippled. Farmers have been advised not to venture out and transport logistics too affected. Though producers are limping back into production, the atmosphere is still tense. Inflation is shooting through the roof, and economic activity is disrupted across all sectors. China plays a crucial role in the global value chain, so there is bound to be drastic reflections in the demand, supply and growth equations.

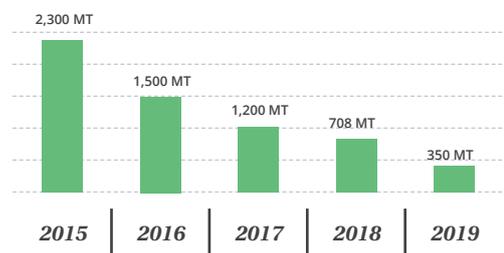
CITRONELLA OIL

Cymbopogon winterianus 🌐 China

The supply of good quality oil remains tight and stocks are inadequate. 2019 was not an encouraging year, so farmers were eager to sell their inventories before the Chinese New Year break. The Indonesian variety has emerged as a stiff competitor and this compelled Chinese suppliers to offer their wares at lower rates to remain competitive in the market.

🏠 USD 18.00 /kilo

ESTIMATED PRODUCTION OF CITRONELLA OIL



EUCALYPTUS OIL

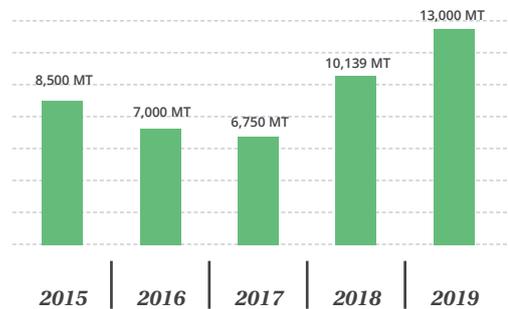
Eucalyptus globulus 🌐 China

The demand during the Christmas season is traditionally low and so it was this year too. Several of the factories and collectors tried to use this to their advantage by building up their stocks for the main upcoming season. As a result, there was a drop in the price of eucalyptus.

However, with the onset of the coronavirus the situation has become serious. With the closing down of factories and complete standstill of logistics, availability of raw material will suffer. It is natural that prices have begun to rise considerably. We hope that the situation normalises soon as with the current uncertainty raw material shortage is bound to happen.

🏠 USD 19.00 /kilo

ESTIMATED PRODUCTION OF EUCALYPTUS OIL



CASSIA OIL

Cinnamomum cassia 🌐 China

All the distillers have been badly affected by the USA and China trade war and are still reeling in the aftermath. Following the shift of natural benzaldehyde production out of China to Vietnam and the USA, the demand for Chinese cassia oil has plummeted. The prices for crude cassia oil extracted by the new method have seen a drop at the close of 2019. However, with the current situation in China due to the coronavirus, prices are expected to increase.

🏠 USD 36.00 /kilo

GERANIUM OIL

Pelargonium graveolens 🌐 China

With the advent of winter, the geranium crop is over. The 2019 stocks have been collected and prices have been set. At this point, the purity of the available geranium oil is somewhat below standard expectations of 5%. This is a usual phenomenon during January through to April. We expect prices to firm up for this product.

🏠 USD 250.00 /kilo



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GINGER OIL

Zingiber officinale 🌍 China

Ginger oil, like some of the others, is facing a lull in the market. Farmers displayed a bit of reluctance for distilling ginger in the coming season. Forecasts predict a low output and high prices in the new season.

🏠 USD 58.00 /kilo

LITSEA CUBEBA OIL

Litsea cubeba 🌍 China

The current available stock shows an oil content of about 64% by GC. Out of a total output of 650 MT in 2019, 100 MT was channelled into flavouring uses and 200 MT was the carryover after adjusting for price adjustments and sold inventory. Input costs for farmers are on the higher side. They are unwilling to sell at a lower price and therefore looking to wait it out for a later time when the market is expected to rise.

🏠 USD 33.00 /kilo

STAR ANISE OIL

Illicium verum 🌍 China

The supply of star anise leaf oil is limited. The marginal quantities that are making their way into the market are primarily oil obtained from the fruit and not the leaf. The leaf oil supply remains very tight.

🏠 USD 22.00 /kilo

WINTERGREEN OIL NATURAL

Gaultheria procumbens 🌍 China

The wintergreen oil market has plateaued out. Farmers did not show much enthusiasm for cultivating or distilling wintergreen in the coming season. Of late, the market has been rather subdued compared to some of the other essential oils from Yunnan; so naturally this may be the causal factor behind this nonchalance. As a result and also due to the current situation in China due to the coronavirus, prices are anticipated to firm up in the coming months.

🏠 USD 55.00 /kilo



AMYRIS OIL

amyris balsamifera 🌐 Dominican Republic

India is one of the largest consumers of amyris oil. However, the Indian economy is passing through an economic slowdown and there are no takers for replenishing the depleted stocks. These developments have greatly influenced Indian demand which has nosedived in 2019. In fact, the demand has fallen so drastically that many distillers who were using expensive fossil fuels to distil four to five batches of wood for fifteen days, had to shut down their operations. The bulk of amyris oil comes from three major plants in the Dominican Republic (DR), out of which two distilleries use waste wood biomass as boiler fuel. Thus, they are able to maintain reasonable operating margins. Much of the amyris wood makes its way into Haiti as contraband from DR, and Haiti remains a strong player by processing this material. However, distillers are unable to continue processing oil in the wake of civil unrest and political turmoil and the blockage of roads that hinders movement of goods. Production of amyris oil continues to take place sporadically. As inventories dwindle, the market is looking forward to a positive outlook in 2020 with the recovery of the Indian economy.

🏠 USD 63.00 /kilo

The Egyptian market is going through a period of lull with not much happening for most of the essential oils. The strengthening of the Egyptian Pound against the USD has already had a negative impact on the economy. The market is anxious about the repercussions on essential oil prices and is hoping for a reprieve and revival before this strengthening has further damaging consequences.



ANISEED OIL

Pimpinella anisum 🌍 Egypt

Considerable volumes of aniseed oil are available from producers, obtained from good quality, clean seeds containing 85% anethole. Prices are stable.

🏠 USD 165.00 /kilo



BASIL OIL LINALOOL

Ocimum basilicum L 🌍 Egypt

There are limited volumes of good quality oil in stock but the market continues to be sluggish; and prices have eased out.

🏠 USD 89.00 /kilo



BLUE CHAMOMILE OIL

Matricaria chamomilla (L.) 🌍 Egypt

Industry analysts predict a small new crop since the demand for this oil has not been very encouraging in the last few months. There is enough carryover stock which is expected to tide over demand. However, most of this is over two years old and has deteriorated in quality and thus offered at very low rates. Good grade oil supply is limited.

🏠 USD 525.00 /kilo



CORIANDER OIL

Coriandrum sativum L. 🌍 Egypt

The cultivated area for coriander has reduced from previous years. Availability became very limited and at high prices. Also, we know that cultivated areas are very limited this year. A further price rise is anticipated.

🏠 USD 111.00 /kilo



CUMIN OIL

Cuminum cyminum L. 🌍 Egypt

Cultivation of cumin is limited and as such there are very small quantities of oil available. Prices have started moving up.

🏠 USD 118.00 /kilo



GERANIUM OIL

Pelargonium graveolens 🌍 Egypt

A greatly decreased demand for geranium oil has led to a reasonably low pricing for this oil.

🏠 USD 91.00 /kilo



JASMINE ABSOLUTE

Jasminum grandiflorum L. 🌍 Egypt

Production has ceased since the crop season is over but the quality is nothing to write home about. The new crop season is scheduled to start in June and it is hoped quality will improve. Demand has fallen short of the anticipated levels, so there are certain quantities of carryover stock available.

🏠 USD 3050.00 /kilo



MARJORAM OIL

Origanum majorana 🌍 Egypt

Like some of the other oils, the demand for marjoram too has dwindled over the last few months. Consequently, prices have been more or less steady with a marginal increase.

🏠 USD 71.00 /kilo



NEROLI OIL

Citrus aurantium 🌍 Egypt

At the moment production has stopped and will resume in March. Market forecasts predict a short demand despite an increased production. The availability of carryover stocks is welcome news but quality is inferior. Prices are anticipated to be lower than last season. However, there will be more clarity closer to the production season.

🏠 USD 5300.00 /kilo



ONION OIL

allium cepa 🌍 Egypt

Production of onion oil has almost stopped. The export of fresh onions has increased substantially, and consequently the price of raw materials has sky-rocketed. Industry watchers are unable to put a number to the price of onion oil, but one point is clear. A price reduction does not look likely. The market will wait and watch but indications point to on-demand prices that will factor in both input costs and availability.

🏠 Price on Request



VIOLET CONCRETE

Viola Odorata 🌍 Egypt

There is a healthy demand for this oil but producers are unable to fulfil requirements. Some new plantations have been added but the numbers are very limited and additional production is small. As a result, prices have escalated.

🏠 USD 1100.00 /kilo



CLARY SAGE OIL

Salvia sclarea 🌍 France

The market is stable. This is mainly due to the decrease in production because farmers were afraid that there will be less consumption because of the production of synthetic sclareol.

📈 EURO 102.00 /kilo

LAVANDIN OIL

Lavandula hybrida var. abrialis 🌍 France

There is an excess of lavandin available as ready stock. However, farmers do not want to sell at the current low prices. Demand is diminishing because of fragrance reformulations from major players. Reformulations are happening due to major fluctuations in prices.

📈 EURO 36.00 /kilo



CARDAMOM OIL

Elettaria cardamomum L. 🌍 Guatemala

Guatemalan cardamom is a seed-dominated market. November witnessed a sudden spurt in demand, but with a largely decreased harvest, the crop fell short of projected expectations. As a result, prices of cardamom pods spiralled by a massive 40%. It was hoped that January would bring a reprieve and prices would ease. However, the extreme cold weather played havoc with the crop, leading to delay in maturing and diminishing quantities of pods reaching the markets. In the already volatile market environment, prices rocketed sky-high, with a 20% increase, rather than firming out as hoped. In this unprecedented state of affairs cardamom prices are now riding a shocking, exorbitant peak of 30% above the historical maximum with no hope for softening in sight. It is challenging to predict the prices given the volatility of the market. It is advisable to take stock of requirements since it does not seem likely that prices will ease anytime soon.

📈 USD 855.00 /kilo



VETIVER OIL

Vetiveria zizanioides 🌍 Haiti

The vetiver market witnessed a sudden sky-rocketing of prices in 2018. This price hike was fuelled by sudden interest from certain established companies. These bigwigs commercialised the vetiver growing region by mobilising farmers into associations of root producers and workers syndicates, undertaking intensive work for community development, and finally implementing ecological and ethical standards for distillation. Naturally, in a ripple effect this led to an increase in operating costs and a subsequent increase in prices. Now as the prices were moving up, dealers and stockists started building their inventories. 2019 saw prices plummet following a significant drop in demand. Dealer inventories at the moment are very limited; the market is hoping for a price resurgence in 2020 when the season starts in spring.

📈 USD 295.00 /kilo



BASIL OIL

Ocimum sanctum 🌍 India

Though basil prices are stable at the moment, a slight increase may be on the cards. Adequate stocks are available with the producers.

🏠 USD 17.00 /kilo

BLACK PEPPER OIL

Piper nigrum L. 🌍 India

The market has not yet responded to the paucity of raw material for black pepper oil. The supply of raw black pepper is under a bit of strain. Though the prices are still holding out, it will not be long before prices escalate if the situation does not improve.

🏠 USD 34.00 /kilo

CARDAMOM OIL

Elettaria cardamomum L. 🌍 India

At present, the cardamom market is witnessing a slump in the availability of raw material. Prices are holding up, but this will not be for long. Rates are dependent on the quality of the oil; and clients are advised to put a hold on to their purchasing plans.

🏠 Price on Request

CITRONELLA OIL

Cymbopogon winterianus 🌍 India

Like some of the other oils the citronella market has been static for some time now. Recent reports indicate that prices will remain unchanged for a while.

🏠 USD 18.00 /kilo

FENNEL OIL

Foeniculum vulgare 🌍 India

This is one oil that is enjoying good availability. The quality of the oil is crucial since it affects the pricing. Surprisingly, prices are touching rock-bottom and so will only go higher from there. It is a good time to invest.

🏠 Price on Request

GINGER OIL

Zingiber officinale 🌍 India

At present, there is a breather in the ginger oil market after a period of exorbitant pricing. Although some stocks are available, there is no pressure to buy. It will be smart to place orders only according to requirement and after prices ease out slightly.

🏠 USD 124.00 /kilo



LEMONGRASS OIL

Cymbopogon citratus 🌍 India

Lemongrass oil availability is limited and therefore prices are inching upwards. Currently the market seems stable. Naturally, the better the quality the higher the price of oil.

🏠 USD 19.00 /kilo

MENTHA ARVENSIS OIL

Mentha arvensis 🌍 India

The demand for *Mentha arvensis* products in the global market has declined but it is business as usual on the domestic front. Despite the lull in international demand, sentiments are positive led by strong price expectations. As a result, farmers are holding on to their stocks and releasing them into the market in smaller quantities in hopes of an imminent price rise. This year the stocking of *mentha* oil is up to 60% to 65% compared to 50% last year. Stockists are also expecting better price returns and are willing to hoard their goods for longer if it brings better returns.

🏠 USD 22.00 /kilo

MENTHA PIPERITA OIL

Mentha piperita 🌍 India

The international demand for *Mentha piperita* oil remains constant. However, there is a dearth of raw materials and prices are set to go up.

🏠 USD 35.00 /kilo

MORINGA OIL

Moringa oleifera 🌍 India

Moringa oil stocks are available since the crop season is ongoing. The market seems to be stable and prices workable.

🏠 Price on Request

PALMAROSA OIL

Cymbopogon martini 🌍 India

Supplies of oil are available and prices of palmarosa have plummeted. This trend is continuing for some time. There are no indications that the situation will change any time soon.

🏠 USD 28.00 /kilo

SPEARMINT OIL

Mentha spicata 🌍 India

Spearmint oil is following the same trajectory as *M. piperita*. The prices are on an upward swing while demand remains static. Current price is dependent upon the quality of the oil and the presence of carvone. Stocks are available.

🏠 USD 30.00 /kilo



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CITRONELLA OIL

Cymbopogon winterianus 🌐 Indonesia

There is an unprecedented surge in citronella production despite it fetching lower prices in the market. This is because farmers are favouring citronella because it is simple to cultivate and easy to incorporate into the locally produced biofuel, that is ex-palm oil. Consequently, current supplies are much higher than the demand, and therefore prices have plunged. This is definitely not an encouraging scenario since it is not sustainable in the long term. However, it is predicted that the proactive work in developing infrastructure for better irrigation and improved distillation processes will enable farmers to explore production of other essential oil crops like patchouli, lemongrass and ginger, and practise crop rotation. This will even out the graph and enable producers to cater for the demand as required.

📈 USD 16.00 /kilo

GINGER OIL

Zingiber officinale 🌐 Indonesia

Ginger consumption has increased by leaps and bounds. The Indonesian herbal beverage sector especially has witnessed a considerable rise in the usage of ginger. Corresponding to this sudden spurt in demand, the availability of biomass for distillation has taken a drastic plunge as stocks are exhausted and ginger can be harvested only two to three times in a year. Though the overall demand for the oil remains largely unchanged, prices of the Indonesian variety of ginger oil has escalated sharply and may firm up.

📈 USD 268.00 /kilo

PATCHOULI OIL

Pogostemon cablin 🌐 Indonesia

Patchouli oil has become a coveted ingredient in the F&F industry. The Indonesian essential oil market is sluggish yet patchouli speaks of a different story altogether. It continues its dream run with steady demand and climbing prices; a stark contrast to other essentials in the Indonesian repertoire. Recently, there is a marked shift of crop cultivation from South East Sulawesi to Central and North Sulawesi. This has thrown the established supply chain out of gear and resulted in a highly volatile and irregular supply. Consequently, source pricing is in a state of constant flux. The next harvest season is around the corner in April. At the moment, most of the global buyers have already procured their stocks through long term contracts; this is predicted to have a positive stabilising effect on the patchouli essential oil market. Prominent suppliers continue to work towards establishing a more sustainable supply network that will benefit the sector in the coming decades.

📈 USD 60.00 - 65.00 /kilo

CLOVE OIL

Eugenia caryophyllata 🌐 Indonesia

The much-awaited rains came at a time when many hectares of clove plantations were adversely desiccated and bereft of water. Prices of clove oil and its derivatives had hit the roof and were not sustainable. However, with the rains now in full swing in Java and Sumatra, there is a gradual fall in supplies of clove leaves and stems for distillation. Consequently, distillation has reduced. A firming up of prices is hoped for in the coming weeks, with some relief from its earlier rates. Van Aroma has augmented its capacity by doubling its production and is in a good position to offer eugenol in bulk volumes along with its derivatives.

📈 USD 13.00 - 19.00 /kilo

NUTMEG OIL

Myristica fragrans Houtt. 🌐 Indonesia

The nutmeg oil sector continues to be unwavering with almost no upheavals, both on the production as well as the demand fronts. The coming months are not likely to witness any change either.

📈 USD 65.00 /kilo

VETIVER OIL

Vetiveria zizanioides 🌐 Indonesia

The introduction of technology-backed distillation processes has led to a significant improvement in the quality of oil at source. As a result, end-users are being wooed back to the Indonesian variety of vetiver, and this augurs well for the industry. Currently, production and demand remain at an equilibrium. However, the signs are positive. The market is looking at a healthy increase in demand in the coming months, which will shake up the hitherto stable vetiver market.

📈 USD 180.00 - 230.00 /kilo

DISCOVERING INDONESIAN NATURALS **VAN AROMA'S STUDY TOUR OF SULAWESI (4TH – 6TH OCTOBER 2019)**

In early October 2019, a short study tour to Sulawesi was organised by Van Aroma (VA), as part of its goals of being “transparent and responsible” and committed to Indonesia. On Friday morning 4th October at 6 AM, just a few hours after the IFEAT Bali Conference Closing Banquet, some 20 delegates from 14 organisations and 12 countries, met in the lobby of the Mulia Hotel to fly from Denpasar to Makassar and on to Pomalaa in southern Sulawesi. Based in the Pomalaa/Kolaka area, over an amazing and tremendously informative three-day period, delegates travelled around in 4x4 vehicles visiting plantations, distillation units, nurseries and VA’s operations, each visit incorporating detailed question and answer sessions. Each day, delegates wore a different coloured t-shirt reflecting the specific oil being studied that day, namely yellow (citronella – Day 1), green (patchouli – Day 2), brown (clove – Day 3). A wide range of information was provided on the growing, harvesting and processing of these major oils, alongside the sustainability initiatives being developed for each oil by VA in collaboration with Firmenich and Symrise.



SULAWESI

Over the past decade, Sulawesi has become a rapidly expanding source of essential oils to the global F&F industry and its importance will continue to grow. VA has played a major role in this expansion, having been established in Indonesia since 2006. Sulawesi became part of Indonesia in 1950 and is Indonesia's 3rd and the world's 11th largest island. As the map illustrates, it is shaped like a tropical orchid, with four "petals" forming distinct peninsulas. It covers 172,000 km², a population approaching 20 million and a 5,500 km coastline. Much of the island can be considered virgin territory. It is highly mountainous, with active volcanoes, and has been subject to major climatic events, most recently the tsunami and volcano of September 2018.

During the tour, delegates learnt about the various advantages and disadvantages facing essential oil production in Sulawesi. Advantages included the availability of fertile land, good rainfall for much of the year and low labour costs. Disadvantages included a lack of infrastructure, various natural hazards (including weather extremes, tsunamis and volcanoes), logistical difficulties (e.g. shipping material to Jakarta some 1,400 km away), acidic soils, long marketing chains involving large numbers of stakeholders, collectors and brokers, limited irrigation facilities, lack of skilled labour, lack of access to finance and financial institutions.

Nevertheless, Sulawesi is a diverse island with huge potential. During the 21st century considerable efforts are being made to establish a secure and sustainable raw material supply chain for key essential oils, especially clove and patchouli oils and their derivatives. This has been recognised both by Indonesian and multinational F&F companies who are increasing their investment there in naturals production and value addition.

CITRONELLA (*Cymbopogon winterianus* Jowitt)

Citronella is a perennial grass grown by smallholders that is relatively easy to cultivate. It can be hand-harvested every three months and distilled throughout the year, using basic equipment and techniques. No additional fertiliser and weeding are required and it acts as a natural pesticide. Recently Indonesian production has grown very quickly with annual output estimated at 1,000-1,200 MT – similar to patchouli. However, because of substantial local consumption, only 300-350 MT is exported. After 2-3 decades Indonesia is about to overtake China as the world's largest citronella producer. Also, Indonesian citronella is better priced than citronella from China, Vietnam, and Sri Lanka but price volatility is considerable. Consumption has been growing, reflecting its wide range of uses. These include use in cosmetics, perfumery, aromatherapy, insect repellents, various medicinal purposes and potential use in biofuel.

Citronella was traditionally grown in North Sumatra and West Java, each with its own characteristics leading to a blending of both types to meet customer and ISO specifications. Production has been moving eastwards particularly in Java and into Sulawesi. As production expands there is also a lot of out-of-specification material available in the market.

The first visit on the tour was to Tanggetada, southern Sulawesi, to see a deep root sourcing project between VA and Firmenich started in early 2018. The local community approached VA to guide them on what to grow as most farmers at the time had been growing chillies in a falling market. VA recruited an agronomist to inspect the land and recommend suitable crops and the sandy soil and hilly land was well suited to growing citronella. Some 50 local farmers, each with one hectare of land, planted seedlings imported from Java to produce the correct quality of citronella. The area planted has now increased to 125 hectares. In addition, some 5 x 1 MT distillation units are in operation that can be used for other oils. Citronella distillation takes about 3-4 hours and typically yields 0.5% - 1% of oil post filtration. Although the citronella oil is produced organically it is not currently certified.

Following the tour, lasting approximately 4 hours, the delegates held a Q/A session with the local producers. One major issue was the current low prices, which were below production costs. Alternative hardy crops were discussed including lemongrass, palmarosa and ginger. Farmers commented that the project has facilitated great improvements in the soil and its fertility.



Photos: Delegates being briefed in a field of citronella



Photos top: Harvesting citronella. Briefing by agronomist. Photo centre: Delegates at a Q&A session with farmers. Photo bottom: Delegates in citronella field.

PATCHOULI (*Pogostemon cablin*)

The second day was devoted to patchouli oil, one of the most sought-after ingredients for fine fragrances. Indonesia dominates global production, with annual exports of 1,200 – 1,500 MT accounting for approximately 90% of international trade. Production and prices fluctuate for a variety of reasons: climatic factors, both drought and heavy rain, pests and disease, farmers shifting to alternative crops and the impact of El Niño, earthquakes and tsunamis.

Despite Indonesia's rich volcanic soils, patchouli is a very demanding crop, rapidly depleting soil nutrients. The crop is usually grown for only two years on one plot of land if intensive unsustainable agriculture practices are followed. So, over the past few decades the crop has moved from Sumatra to Java and in the early 2000s Javanese migrant farmers introduced patchouli into southern Sulawesi. Patchouli was considered an alternative cash crop to cocoa and cultivation expanded quickly into other parts of Sulawesi, which now accounts for some two-thirds of Indonesia's patchouli oil output. Sulawesi output is estimated at 1,000 – 1,200 MT produced by an estimated 30,000 - 40,000 farmers. Sulawesi patchouli oil has slightly different characteristics from patchouli oil produced elsewhere in Indonesia and initially many buyers rejected the oil, but the market has increasingly adapted to Sulawesi patchouli. Sulawesi producers have assisted in this adaptation by undertaking longer processing and distillation times as well as fractionating and acid washing.

Considerable efforts are being made to try to reduce the constant migration and stabilise patchouli and other oil production in Sulawesi. VA, working alongside Symrise, has adopted a hands-on long-term approach – reflecting its position as Indonesia's largest patchouli oil exporter. The delegates visited the Toari sustainability project, established in 2017, with its demonstration farm and distillation unit. VA showed that by using the right methods and techniques some previously unproductive land was made fertile again and some 170 partner farmers with 200 hectares are now involved. Visits were made to the demonstration plots, compost pits and plant nurseries and then to a partner farmer and distiller working with the project. Dry patchouli leaves and twigs, usually produced in the ratio 40% leaves 60% stems, typically yield 1.5%-2.5% of oil.



Photo: Delegates visiting a patchouli nursery

The delegates then visited a project extension at Polinggona, established in early 2019. Other crops for rotation and intercropping are being propagated to improve the soil and provide sources of farmers' income. Delegates visited the 3 nursery houses and 4 demonstration plots for patchouli, citronella, lemongrass and sweet basil, as well as neem trees to provide a source of pesticides and marigolds to prevent nematode disease. Over one million plants have been distributed to farmers. Each delegate planted their own tree as well as participating in inaugurating a new distillation unit. Visits were made to 3 distillation units and at each location a Q/A session was held with farmers, researchers and distillers.

Delegates were shown Van Aroma's approach to sustainability involving investing in land and then preparing and developing its own plantations, using best practices and support from experienced agronomists and botanists. Detailed knowledge is acquired about varieties, best farming practices, pests, composting, fertilisation, harvesting, drying and distillation. These are documented and then passed on directly to partner farmers, who can see the positive results of VA's efforts first-hand and watch and learn from the experience. VA and its collaborators are confident that this is an ongoing high impact sustainability project that no one has done previously in Indonesia. By providing organic compost and natural pesticides, it hopes to ensure that patchouli stays in Sulawesi for the next generation of farmers. Time and resources are being invested in stakeholders in the supply chain, especially smallholder producers, with the provision of tools, technology and know-how to improve their yields, products and businesses. VA's goal is to stabilise the source of patchouli supply from Sulawesi. This will benefit all Sulawesi stakeholders in the supply chain - farmers, collectors, distillers, and exporters - as well as consumers. This strategy also benefits the company directly by building up trust and facilitating the production of more stable supplies and quality products. A truly win-win situation.

Nevertheless, there is evidence of a continuing shift of the crop from south east Sulawesi to central and north Sulawesi. This shift in producing areas has meant a cumbersome supply chain and highly volatile prices, which in turn has a considerable impact on farmers' livelihoods. VA continues to work with its partners to make the patchouli supply chain more sustainable and stable in the future.



Photos top: Visit to Symrise/VA Sustainability Project Offices. Patchouli planting and growing. Photo bottom: Visiting a patchouli still

CLOVE (*Eugenia caryophyllata*, syn. *Syzygium aromaticum*)

The third day was devoted to cloves. Indonesia is the world's biggest producer and consumer of cloves, producing an estimated 80,000 MT each year from some 440,000 hectares located mainly in Sulawesi, Java and Sumatra. Clove buds are mainly used domestically in the kretek cigarette industry. Clove oil is produced from the clove buds, leaves and stems and clove oils are the second largest essential oil produced in Indonesia, after turpentine oil. Annual oil production has shown wide fluctuations with recent annual output estimated to range between 4,000 and 5,000 MT. Climatic factors are an important factor behind the annual fluctuation and every fourth year Indonesia tends to have a large harvest lasting 3 – 4 months, with 2019 seeing a large harvest, particularly in Sulawesi. Despite variations in annual output and prices, current estimates suggest that the overall production trend is stable. Clove oil production is done by hundreds of small traditional distilleries, spread over large areas of Java, Sumatra and Sulawesi.



Photos top: Drive through clove plantations. Explanation of cloves. Photos centre: Harvesting cloves. Separating buds and stems. Photo bottom: Discussing cloves

There is a strong demand for clove derivatives, in part because of new applications (e.g. in animal feed and pheromones). Within Indonesia, sizeable investments are being made to produce value added clove products. Such investments provide clove producers with greater security. Over 60% of Indonesia's clove plantations are in Sulawesi. However, the Sulawesi farmers focus on harvesting clove buds as a spice and have no use for the by-products of leaves and stems. All the major clove oil distillers are concentrated in Java, close to the kretek cigarette factories. Although Sulawesi has abundant clove leaf material available it is some 1,400 km from Jakarta, which presents a logistical nightmare. One of VA's innovations in southern Sulawesi was to introduce a facility in mid 2017 to distil clove leaf and stem oils, undertaken during the dry season from May until October. Processing at source facilitates greater control of raw material quality as well as product testing.

One highlight of the tour was travelling early Sunday morning in open top vehicles to Jalan Cengkeh or Jl. Cengkeh ("Clove Street") through hills covered in clove trees stretching over 300 km northwards. The views over the plantations and Gulf of Boni were stunning. Delegates visited a partner farmer, whose family had been in the clove business for many years. Alongside the Q/A session, delegates had the opportunity to try their hand at the difficult task of climbing trees to pick clove buds, as well as see efforts to improve clove leaf collection. This included placing nets under the trees to collect fallen leaves. This improves oil yields and quality as well as reducing labour inputs. Clove leaves usually yield 1%-2% of oil but the new collection method has raised yields to 2.5%-3.5%, with a 70%-72% eugenol content. Clove stem can yield 4%-4.5% and has an 84%-85% eugenol content. In addition, VA has developed and provided on-site farmer training for leaf collection using backpack leaf-blowers enabling the collection of up to 10 times more leaves than using brooms. This reduces farmers' workforce and the greater efficiency helps them to pay off their leaf blowers and other farm equipment.

Then followed a visit to a partner distiller, who had worked with VA for several years and had 4 stills and was now a key distiller and accumulator of clove buds, stems, leaves and their oils. The distillation operations were very basic, but it was pointed out that this set-up represents 95% of Indonesian distillation facilities. However, VA is sharing the designs of steam distillation stills and endeavouring to further improve existing traditional setups (e.g. adding insulation, using pellet fuel, stainless steel inner linings, and safety pressure valves).



Photo: Happy delegates at Pomalaa airport departing for Jakarta

VAN AROMA KOLAKA PLANT

During the tour, two visits were made to VA operations in Kolaka, where substantial investments are being made. Over the past decade VA has been focusing on the development of a secured and sustainable raw material supply chain from Sulawesi. The initial attraction was patchouli, but it has now expanded to other oils. VA made its first investment in Kolaka in August 2017 by investing US\$1.5 M for demonstrating the potential of distilling clove leaf and stems, as well as for being closer to patchouli sources. Farmers and collectors focused primarily on the clove buds, and the fallen leaves and stems were waste products. With considerable effort, VA has been able to educate farmers and collectors of the value of distilling clove leaves and stems to provide an additional income source as well as facilitating reduced price volatility. After demonstrating the benefits of distilling clove leaves and stems, VA partnered with local farmers in the Kolaka region, where there are now more than 40 distillation units. Moreover, investment has been made in superior distillation equipment, including stainless steel oil separators and safety pressure relief valves to improve working conditions.

The company also saw the potential of collecting clove buds and stems as a spice and started cleaning, drying and standardising these products for export. Seated on the ground, delegates joined the women in hand-separating the buds and stems. In addition, VA doubled the capacities of its own steam distillation units and distributed the refurbished units to partner farmers to further improve their capabilities. The new Kolaka plant is now the largest in Indonesia, with six state-of-the-art distillation stills, processing up to 12 MT of clove or patchouli herbage per day. During the peak distillation period it produces 5-6 MT of clove oils each week. In 2019 VA has invested an additional US\$ 3 M on doubling its warehousing facilities and installing new fractional distillation, blending and filtration capabilities for its complete range of products to be better prepared to serve its customers' requirements.

Besides seeing these distillation units in operation, delegates visited VA's quality control laboratory, the first on Sulawesi. Equipment includes GC, GC-MS, colorimeter, polarimeter, refractometer and density meter, which facilitate the process of testing patchouli, clove oils and other oils at source. This not only benefits customers but allows our farmers and distillers to receive quicker turnaround on approvals, thus improving their cash flows.

VA's investments have substantially increased employment opportunities in Sulawesi, and over 50% of their employees in Kolaka are women. Moreover, during the field visits and Q/A it was interesting to see the vital role played by women in producing the raw materials.

On the final evening, delegates held their own informal workshop to discuss what they had learned and ways forward. All agreed that it had been an intense, informative and fascinating tour that could be thoroughly recommended. The large VA team involved were congratulated for their superb organisational and knowledge transfer skills.



Photo: Delegates outside a clove plantation owner's house with some plantation workers

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BLACK PEPPER OIL

Piper nigrum L. 🌍 Madagascar

In keeping with the pattern across most other origins, there is a radical fall in the price of black pepper oil. The current levels have touched a nadir in the last twelve years.

🏠 USD 52.00 /kilo

CLOVE LEAF OIL

Eugenia caryophyllata 🌍 Madagascar

Clove is a good one this year with 10,000 MT of crop coming in. The repercussions of the trade war between China and USA are still being felt with the high taxation of vanillin and eugenol. Chinese manufacturers are reluctant to buy eugenol, and the current situation in China with the outbreak of coronavirus is alarming. All these have considerably impacted the overall demand. The clove crop is keeping farmers busy. All these factors put together, mean there is no distillation of clove leaves happening. Clove leaf oil is coming in from the fields in small quantities, a drum at a time. These limited stocks of clove leaf oil are commanding exorbitant prices. In comparison, Indonesia has had good rainfall leading to a healthy crop and large quantities of available stock. However, considering the disturbing situation in China, it is a tad difficult to make accurate predictions.

🏠 USD 13.00 /kilo

GERANIUM OIL

Pelargonium graveolens 🌍 Madagascar

This year the geraniol content in the recent crop is quite low, a mere 6% compared to the usual 12%. Inclement weather with torrential downpours has adversely impacted the geranium crop. This has taken a toll on both the quality and quantity of the geranium. As a result, prices are not moving for Madagascar geranium, unlike some of the oils from other sources.

🏠 Price on Request

YLANG YLANG OIL

Cananga odorata 🌍 Madagascar

Ylang ylang III constitutes a large portion that is almost 2/3 of the entire volume of the oil produced. There is nil demand for this oil and as a result prices of all the fractions including ylang III have plummeted. The market is in a stagnant phase. There are substantial volumes of stocks lying with the producers with no takers, especially for the low fraction oil. This implies that clients prefer to book the higher fractions since the prices are attractive. However, this turns out to be detrimental for the reduction of ylang III stocks. The challenge that arises from this situation is that distillers, stuck with ylang III stocks, stop production of ylang ylang altogether.

🏠 USD (Ylang III) - 245.00 /kilo

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The arid, drought-like weather conditions proved to be a cause for worry with the citrus plants unable to flourish as usual. These conditions have been prevailing for some time now, though the final crop will depend upon the weather throughout the year. As a result, the crop estimates are at par with those of last year. The signs are positive in terms of strong international demand and good prices. With key limes, Mexico retains its global second position in the key limes trade and farmers are looking at 2020 with renewed hope in anticipation of improved yields. The strong demand coupled with attractive prices for citrus is expected to buoy the market with a healthy export for Mexico. Nevertheless, as with other citrus producing countries, Mexico is facing significant problems with citrus greening, with Huanglongbing (HLB) disease being detected in most citrus growing areas.

LIME OIL

Citrus aurantifolia 🌐 Mexico

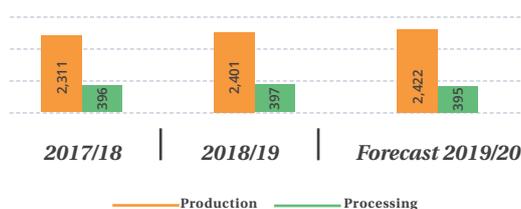
The MY 2019/20 forecasts lime production to touch 2.4 MMT. About 52% of lime production in Mexico is Persian and 48% is the key variety. Veracruz state is the dominant producer of Persian lime, while for key lime, the state of Michoacán leads with Colima following a close second. The Michoacán grade of lime is harvested during winter, that is, December through February. Consequently, this lime hits the markets before its Colima counterpart which meets the demand from May through September. Oaxaca and other states cover the remaining year. The consumption figure is pegged at 1.2 MMT, marginally higher compared to the previous market year.

Mexico has been faced with severe drought conditions that will have an impact on the main producing areas of lime. Even though the forecast for the crop is slightly higher than last year, fruit allocated to processing will be less due to an increase in domestic consumption for fresh fruit. Current estimates suggest that approximately 395,000 MT of lime will be processed in 2019/20, a similar level to 2018/19.

Prices for lime oil continue to be firm. The increased use of fertilisers has been expensive for growers due to the depreciation of the Mexican peso against the US dollar.

📈 USD 36.00 /kilo

MEXICO LIME - ESTIMATED PRODUCTION AND PROCESSING (X 1,000MT)



ORANGE OIL

Citrus sinensis 🌐 Mexico

Oranges enjoy the lion's share of cultivated area among all the citrus crops, around 344,420 hectares in 2019/20. Among the key orange belts, Veracruz is the prominent player with 50% of planted area and a record-breaking 55% in the last year. Other significant producing states include Tamaulipas, San Luis Potosi, and Puebla. Naturally rainfall and temperature play crucial roles in determining the quality and quantity of crop, and of course yield. Valencia oranges, Lane Late Navel and Navelina are the main varieties grown in Mexico, with Valencia being the most common variety. Harvested in May, these are juicy-sweet and the most prevalently produced variety in Mexico. It is used primarily for juice. The Lane Late Navel with its high acidic content, does not lend itself well for juicing. It is harvested in February and consumed fresh. The Navelina, harvested in December, is versatile. It is great for consuming fresh and also used for juices; it is harvested starting in December. The MY 2019/20 predictions estimate the total orange production to be at 4.4 MMT. The Nuevo Leon, Tamaulipas and San Luis Potosi States are expected to produce better volumes compared to last year's weather-affected crop.

Exports are pegged at 62,000 MT, a 3% leap from the figure of last year and fuelled by a strong international demand. Oranges for processing is estimated to be at a similar level to the previous year, with FCOJ production for MY 2019/20 forecast at 195,500 MT. Orange consumption in Mexico is quite unwavering since it forms an indispensable part of the Mexican diet. Exports too are on the rise, though oranges available for processing are more than sufficient.

📈 USD 6.00 /kilo

Wild harvesting of botanicals, such as rosemary and wild chamomile, is a huge challenge in the Moroccan market. This is because the sector is inchoate and still largely unstructured. In this fragmented environment obtaining authentic information and computing accurate figures regarding crop and yields is difficult. The situation is compounded by constraints on availability due to widespread thefts. The unpredictable weather pattern is also a factor in the endeavour to collate coherent information.



BLUE TANSY OIL

Tanacetum annuum 🌍 Morocco

Organic blue tansy is almost impossible to procure. With the growing demand from aromatherapy players, the producers under pressure focused on an increase in production. As a consequence of these developments, there are sizeable volumes of adulterated stocks of oil that have made their way into the market, thereby effectively leading to a market crash in this segment.

🏠 EURO 210.00 /kilo



NEROLI OIL

Citrus aurantium 🌍 Morocco

The three important plantations are able to offer good quality neroli oil, and fulfil demand, which so far continues to trace a steady path. However, organic quality oil is scarce, so clients are advised to be careful about the numerous other qualities available in the market now.

🏠 EURO 5900.00 /kilo

CABREUVA OIL

Myrcarpus frondosus 🌍 Paraguay

Despite restricted availability of this oil, the market scenario is healthy. With a decent crop and production industry watchers do not anticipate any scarcity in the coming months.

🏠 USD 38.00 /kilo

GUAIACWOOD OIL

Bulnesia sarmientoi 🌍 Paraguay

Paraguay farmers continue to receive their CITES permits from the 2019 quota even now. However, their Spanish importers have not yet received any authorisation for 2019 imports from the CITES office in this regard. The guaiacwood oil market seems to be in a good situation with excellent availability keeping pace with a robust production.

🏠 USD 33.00 /kilo

PETITGRAIN OIL

Citrus aurantium ssp. 🌍 Paraguay

Carryover volumes of petitgrain oil are almost nil and exporters are scrambling to build their inventories. This year's production is heartening, and the situation continued till around February. Despite the robust crop and oil production, prices remained steady.

🏠 USD 61.00 /kilo



CLARY SAGE OIL

Salvia sclarea L. 🌍 Russia

Similar to dillweed, the clary sage crop was impacted by weather disturbances. The harvest and oil were largely reduced.

📈 USD 121.00 /kilo

CORIANDER SEED OIL

Corriandrum sativum L. 🌍 Russia

The coriander oil market has continued to run on a positive note. Prices have come down marginally towards the end of the year and demand and supply followed a healthy ratio. However, production of oil has stopped from January. The availability of good quality coriander seeds is limited; the volumes available for distillation are woefully inadequate and prices of seed are on the rise. This is putting strain on distillers as the cost of production is exceeding the current market selling price. There is no production at the moment; producers are waiting for the new 2020 crop to come in before production resumes in August. If demand continues to be encouraging, and there is sufficient availability of raw material for distillation, it is expected that market prices will escalate and meet the requirements of the producers at source.

📈 USD 50.00 /kilo

FIR NEEDLE OIL

Abies sibirica Ledeb. 🌍 Russia

Siberia witnessed massive bushfires last year. However, these did not affect the fir needle market. Since there was no disruption in availability, prices remain unwavering.

📈 USD 35.00 /kilo

DILLWEED OIL

Anethum graveolens L. 🌍 Russia

Inclement weather affected this year's dillweed crop. This coupled with a decrease in the area of cultivation across Eastern Europe has resulted in a considerably reduced crop size. Consequently, oil output was also not encouraging.

📈 USD 41.00 /kilo

PINE OIL

Pinus sylvestris 🌍 Russia

There is not much activity on this front since production is according to demand and requirement, so prices at the moment are quite stable.

📈 USD 35.00 /kilo

THUJA OIL

Thuja occidentalis 🌍 Russia

This is another oil which is produced only in accordance with demand, so prices and the market remains steadfast.

📈 USD 51.00 /kilo

The elections have brought to power a new President and a caretaker government. With a pro-economy approach, policies and subsidies that promise to work in favour of the farming community have already been implemented. These and announcements of other measures to revive the economy have contributed to a positive sentiment and strengthened the Sri Lankan rupee against the dollar. With respect to the essential oils sector, copious rains have been a boon for crops and all stakeholders. A significant improvement in the European and American markets augurs well for Sri Lanka.

CINNAMON BARK OIL

Cinnamomum Zeylanicum 🌐 Sri Lanka

January witnessed a weakening of the supply of cinnamon bark as the season came to a close. This was a period of mounting prices, and the market is now looking forward to the arrival of the new harvest scheduled to come in by end of April. This is quite contrary to the last quarter when raw material was in abundant supply barring the few weeks of seasonal leafing. Seasonal leafing occurs when cinnamon peeling stops because it is difficult to separate the bark from the wood. There was no remarkable price hike considering the export rate was favourable for overseas buyers. Demand was also lower than usual. However, as the season closes and the availability of raw material wanes, a price rise is anticipated.

📈 USD 255.00 /kilo

CINNAMON LEAF OIL

Cinnamomum zeylanicum 🌐 Sri Lanka

The cinnamon leaf sector is in the midst of a price upheaval. The fall in oil prices led many farmers to withdraw from leaf distillation. The resultant lower oil supply has put upward pressure on prices, which combined with reduced availability of raw material supplies over the coming months is likely to push prices up. It is advisable to book your orders and fulfil requirements at the earliest.

📈 USD 20.00 /kilo

CITRONELLA OIL

Cymbopogon winterianus 🌐 Sri Lanka

Driven by weak demand, prices of Sri Lankan citronella were steady but remain unaffected. This is despite the fact that there was a surfeit of rainfall, more than adequate availability of raw material and healthy production. Javanese citronella continues to pose stiff competition for Sri Lankan farmers, which could be a probable factor behind the extremely low demand.

📈 USD 25.00 /kilo

CLOVE BUD OIL

Eugenia caryophyllata 🌐 Sri Lanka

The reasonable prices offered by Indonesian farmers created quite a dent in the demand for Sri Lankan clove bud oil. In this context, there is quite an apprehension regarding demand in the coming year. Clove harvesting is ongoing but it is too early for prices to be fixed since increased demand from the spice export industry for fresh cloves is yet to be factored in. However, a price adjustment was imminent by February 2020.

📈 USD 75.00 /kilo

CLOVE STEM OIL

Eugenia caryophyllata 🌐 Sri Lanka

Clove stem oil prices have plummeted with the advent of abundant raw material into the supply chain. As a result of this and the new crop coming in, the sector predicts lower prices in the coming few weeks.

📈 USD 35.00 /kilo

NUTMEG OIL

Myristica fragrans Houtt. 🌐 Sri Lanka

Indonesian nutmeg oil is available at lower prices and Sri Lankan producers are bearing the brunt of it. However, in the eventuality that Indonesian prices escalate, and the rains are favourable then the Sri Lankan market would benefit. The year-end harvest is now coming in though some inferior qualities of oil are making their way into the markets.

📈 USD 45.00 /kilo

EUCALYPTUS OIL E RADIATA

Eucalyptus radiata 🌍 South Africa

Conventional eucalyptus still commands a healthy demand the world over. The new plantation areas are operating at a good pace and producing ample quantities of oil. As a result, there are surplus volumes of *E. radiata* coming into the market. However, there is no equilibrium between the demand for organic *E. radiata* and stock availability; producers are unable to meet the unwavering demand for conventional, organic material, while demand for conventional material remains steady. Prices are in keeping with the levels of previous years.

📈 USD 61.00 /kilo

GRAPEFRUIT OIL

Citrus paradisi 🌍 South Africa

This year's crop projection is set to better last year's record with a healthy 8% increase. This year's production puts the figure at an all-time high of 420,000 MT. The favourable weather conditions and additional cultivating areas have contributed significantly; and with bumper production and consumption then exports are predicted to touch new highs. Processing is predicted to increase from 115,000 MT in 2018/19 to 124,000 MT in 2019/20.

📈 USD 20.00 /kilo

ORANGE OIL

Citrus sinensis 🌍 South Africa

The weather showed signs of returning to its usual pattern. This, buoyed by the increase in the area of cultivation, augured well for the orange crop in South Africa. Farmers are anticipating a better crop than last year with the predictions pegging a jump of 4% at 1.56 MMT of oranges. Additional factors accounting for the growth in production include an expansion in hectareage planted with high yielding and late maturing varieties. The country accounts for one quarter of the world's orange trade; and this year the export figures are pegged at a strong 1.3 MMT. The European Union is the primary market for South African oranges, seconded only by China. In 2019/20 it is estimated that 238,000 MT of oranges will be processed, compared with 299,000 MT in the previous year.

📈 USD 5.00 /kilo

TEA TREE OIL

Melaleuca alternifolia 🌍 South Africa

South African tea tree oil is slowly nudging its way into a favoured status for a plethora of applications that use tea tree oil. The demand for conventional tea tree is seeing a strong, surging demand, while demand for the organic variant remains steady. In fact, much of the 2020 crop of conventional tea tree oil has already been pre-booked.

📈 USD 41.00 /kilo

EUCALYPTUS OIL E SMITHII

Eucalyptus smithii 🌍 South Africa

This variant of eucalyptus is fast emerging as an ideal substitute for *Eucalyptus globulus*, apart from its own wide-ranging applications. Thus, it continues to chart a gradual increase in terms of demand. New plantations have been added, and the supplemented production is able to adequately supply rising demand. The price of *E. globulus* has fallen; so *E. smithii* is also under a downward pressure.

📈 USD 15.00 /kilo

TAGETTE OIL

Tagetes erecta 🌍 South Africa

The outlook for tagette seems very positive considering that the demand for the South African variety is quite heartening. The crop projections for the upcoming season from March to June anticipate a good crop and enough oil to fulfil this year's demand. Prices are unremitting and are in keeping with last year's graph.

📈 USD 162.00 /kilo

LEMON OIL

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

Many new plantations have come up in the last few years. These plantings are now bearing fruit and have come into full production. Along with good weather and the supplemented supply of oil from increased areas of cultivation, production is estimated to better last year's figures. Production is projected to grow by 6% to touch 530,000 MT compared to the previous crop of 498,000 MT. With improved supplies and consumption, then fruit for distilling and exports is expected to reach record figures. An estimated 139,000 MT will be processed in 2019/20 compared with 135,000 MT the previous year.

📈 USD 12.00 /kilo



A LEMON SCENTED TEA TREE TANGO LOVE THAT LEMONY SCENT?

If ever you make your way through the sandy rocky escarpments of eastern Australia you will be greeted with swathes of small, white flowers on pendulous branches of tall shrubs that dot the coastline. As you brush past, happening to break a few of its slender leaves or even tread on the fallen ones, your olfactory senses are assailed with its zesty, lemon-like aroma. Yet it has no relation to the popular citrus. On the contrary, *Leptospermum petersonii*, or lemon-scented tea tree (LSTT) traces its ancestry to the *Myrtaceae* family and is a close cousin of the common tea tree. The Greek word *leptos* means *slender*; while *sperma* refers to the seed; therefore, the term implies *narrow seeds*. Caressing the swampy shores and abutting the Australian rainforests, this species is older than Australia's indigenous inhabitants. With its exquisite ornamental value and distinctively uplifting scent, LSTT has nudged its way into the hearts of millions.

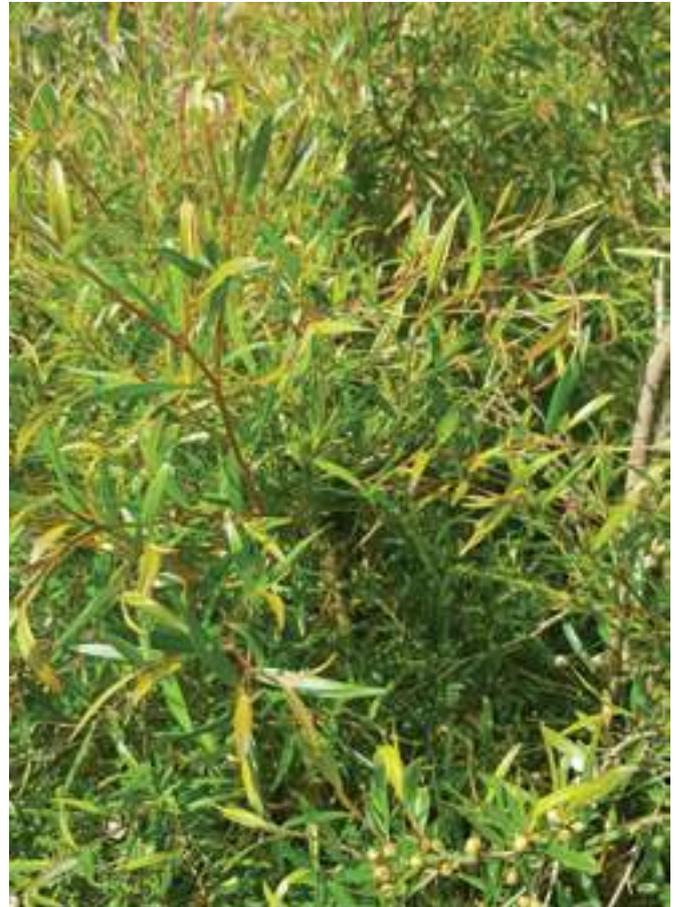


FEATURE

HABITAT

In the wild LSTT thrives naturally near wet sclerophyll forestlands of Eastern Australia preferring sandstone or basalt soil on moist outcrops or near natural watercourses. This resilient little, fast-growing, evergreen is open-branched and can attain heights of about five metres. Its pale green, simple leaves are slender; ranging from about 25 to 50 mm in length and 6.5 mm in width. The bark of the tree is firm, but soft and ridged. It is not very cold-tolerant, preferring the warm temperate sun of the tropics. In summer the tree is spectacularly captivating, for that is the time when it bursts into masses of snow-white flowers with green, woody centres. Aesthetically pleasing, with a refreshingly citrusy aroma, LSTT is quite a favourite and is commonly grown as a hedge, windbreak, feature or screen plant across Australian front yards.

As the world whirls to the whiffs of lemon, it is this lemon-scented tea tree oil that is fast replacing the traditional tea tree in a host of skincare, medicinal and household applications. Concerted efforts have resulted in the establishment of successful commercial cultivation of *Leptospermum petersonii*. A visit to the provinces of southern Queensland and the northern regions of New South Wales throws light on large, sprawling plantations covering several hectares. The leaves, usually around 40 mm in length, are now smaller here but more supple and as such are professionally harvested "along with twigs" to extract the essential oil. Among the plantations of note Golden Grove Naturals is one of the oldest. This was the erstwhile Australian Plantations Limited, one of the first to explore the marketable cultivation of tea tree in the early 1980s. Established in the very regions where tea tree indigenously abounds, Golden Grove Naturals has today evolved from a tree plantation into a premier distillery offering authentic natural products and plant essences. The company has upgraded its facilities and, true to its original, ethically sourced and bottled tea tree vision, has recently established a new planation of lemon-scented tea tree.





DISTILLATION

Now that we are well into tea tree territory, and we have sufficiently stirred your curiosity, let us give you a peep into the operations of oil extraction.

The essential oil of *Leptospermum petersonii* is extracted by steam distilling leaves and terminal branches usually harvested from December through March. Harvested plant material, generally distilled within 48 hours to ensure the essential volatile compounds are preserved, is exposed to steam in a distillation unit. This steam is subsequently condensed using ambient temperature water and the resulting water/essential oil mix collected in a separator. Once cooled the plant yields a sparkling, effervescent oil with the divine citrus-green fragrance that distinguishes this oil from its cousin, the conventional tea tree oil.

WHAT MAKES IT UNIQUE?

The one thing that professionals, aromatherapists and consumers all tend to agree on is that the vibrant, lemon aroma is what makes this oil special. Its lemon-rosaceous top note is delicate with a hint of sweetness. The herbaceous, lemon-like back note, which follows well into the heart note, leaves you with a crispy clean, astringent tang which is delightfully enlivening. The tingle, at once reminiscent of the citrus peel-like grassy aroma of lemon verbena, citronella or lemongrass, is quite an olfactory nirvana of sorts – a packed powerhouse of stimulants.

The GGN TDS/SDS shows the chemical composition of LSTT as

- 45 to 65% citral
- 25 to 35% citronellal
- 1 to 5% citronellol, geraniol, linalool
- Trace – 8% isopulegol

Evidently in addition to the invigorating fragrance, lemon-scented tea tree also exhibits the properties of tea tree. As such its antiviral, antibacterial and antifungal properties are widely recognised. Couple the milder composition with lemon-scented tea tree oil's ability to mask the aroma of conventional tea tree oil, and we can see why it makes for a coveted ingredient in cleaning and personal care products. This is especially beneficial for those with sensitive skin who are susceptible to allergens.

APPLICATIONS AND BENEFITS

The supermarket shelves are stacked with bewitching displays of luxurious body butters, a plethora of shampoos and shower gels, and a variety of soaps, lotions and scrubs. Reach out for any of them and there are high chances that you will find lemon-scented tea tree oil listed among the ingredients printed on the back. Its buoyant, vivacious aromatic profile ensures that LSTT finds a place in a variety of personal care products. With the escalating clamour for aromatherapy and natural wellness, LSTT oil is also widely used by practitioners of aromatherapy; with reports of it being a powerful relaxant cum mood lifter. It instils calmness and eases anxiety, stress and nervous tension.

It is evident that LSTT's aromatic constituents and therapeutic properties make it a favoured component for perfumers. LSTT's light floral, citrusy notes blend amazingly well with a variety of other oils such as citrus and herbal oils like rosemary and thyme to create the most divine fragrances.

Aroma is not all LSTT has to offer. Extensively recognised for its anti-bacterial, anti-fungal, anti-viral and antiseptic properties, lemon-scented tea tree oil finds a host of uses in many industrial products and medicines.

There are several explorations of LSTT's anti-fungal benefits being harnessed for alternative preventive solutions for pest and disease control in agriculture and forestry. Because it is such a fantastic bacteria buster, it is used in salves, compresses or ointments as curative for problem and acne-prone skin. Acne is caused by bacterial infection of the skin and may cause irritation, flare-ups or break-out of spots and blackheads. LSTT oil works wonders in these instances. In addition, it is used on skin infections like warts, athlete's foot and nail infections.

Domestic cleaners contain an abundance of harsh chemicals. LSTT has the power to take on all the microbes, moulds and fungi that may be lurking around the house or office. It is a robust disinfecting agent and is largely used as a non-toxic surface cleaner for households, bathrooms and kitchens. This is precisely the same reason that LSTT is a favourite inclusion in hand sanitisers and soaps and can be found stocked in most bathroom cabinets.

The high citral and citronellal content in LSTT works as an efficient insect repellent too. Chemically similar to citronella and exhibiting similar qualities as that of tea tree oil, the lemon-scented variety exudes a more jaunty, fresher scent. Used as a spray, or in a vapouriser, LSTT is an effective natural repellent for keeping those tiresome mosquitoes and bugs at bay.

LSTT is a natural defence booster and a potent respiratory cleanser, a warrior in its own right. Steam inhalation clears congestion by stimulating the bronchi and is an effective remedy to combat coughs and colds.

Lemon-scented tea tree oil, by virtue of its strong aroma, holds the potential to overpower other smells. As a result, it is sometimes a handy ingredient to mask particularly unpleasant odours, even the acrid, burnt smell of smoke.

Blending of LSTT oil into other carrier oils or even surfactant-rich products like shampoo or body wash has shown the astonishing staying power of the oil. The fragrance lingers long and does not die or fade easily. Quite literally too, as an ode to its staying power, the message is loud and clear. As more and more people join the alternative wellness bandwagon, lemon-scented tea tree oil is here to stay and will linger in many hearts for decades to come.

A-LIVE AND LIMONY EXPERIENCE.



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In what is being touted as a landmark development, the Spanish citrus industry association AILIMPO spearheaded by Secretary General José Antonio García joined hands with South Africa's Citrus Growers' Association steered by Justin Chadwick to officially unveil the World Citrus Organisation at the Fruit Attraction Fair in Madrid. The WCO envisions a collaborative effort to instil transparency, face common challenges together and explore opportunities for the common benefit. Argentina, Chile, Morocco and Peru have also joined hands and were represented by their respective citrus sector officials. Australia, Bolivia, Brazil, Egypt, Greece, Portugal and USA have expressed interest and have joined in principle, and were present in spirit. Administered from Brussels in Belgium, the WCO's mission is to bring together citrus-producing nations and initiate dialogue, action and research and actively promote citrus. Not surprising, since one of the foremost tasks the association has set itself is to resuscitate lost market share of citrus with the recent decline of consumption and stimulate demand.

With around 330,000 hectares under citrus cultivation, and producing approximately 6.3 million tonnes of fruit, Spain is among the most prominent citrus producers on the international horizon. Production and consumption have plunged in the wake of storm Gloria in mid January 2020 and other weather disruptions which have adversely affected the citrus crop and led to substantial damage.

LEMON OIL

Citrus limon (L.) Burm. F. 🌐 Spain

The latest AILIMPO forecast in January 2020, following Storm Gloria, reduced its original crop estimate by 90,000 MT. The forecast for total production in 2020 is now 1,020,000 MT. This represents a 22% reduction on the previous season's total crop which reached a record 1,300,000 MT. With this Spain leaves behind the record high of 2019 and returns to the normal average.

The revised estimate relates entirely to the Fino variety, which was reduced 20% from 820,000 MT to 730,000 MT, compared to 918,000 MT in 2018-19. The demand for the Fino variety is expected to be active from February onwards, while the Verna harvest is expected around April to June. The 2020 estimate for the late season Verna variety remained unchanged at 290,000 MT but was down 24% compared with 2018-19.

Some 20%-25% of the current lemon crop is expected to go to processing.

📈 EURO 15.00 /kilo

FORECASTS FOR 2019/2020 SEASON (MT)

Lemon	Total Crop 2018/19	Sept Forecast for 2019/20 Crop	Jan Forecast 2019/20 Crop
Fino	918,000	820,000	730,000
Verna	382,000	290,000	290,000
TOTAL	1300,000	111,0000	1020,000

LEMON OIL

Citrus limon (L.) Burm. F. 🌐 Turkey

Turkey falls short in lemon production by a 9% decline to a crop production figure of 970,000 MT. Correspondingly, with the restricted supplies consumption and exports are forecast to go down.

📈 Price on Request

CEDARWOOD OIL TEXAS

Juniperus mexicana 🌐 USA

In a recent incident six months ago, the oldest of Texas' three important distilleries was ravaged by a massive fire. The plant suffered considerable damage and production was adversely affected. Consequently, available supplies are in deficit, which may push up prices. Ever since 2008, cedarwood oil Texas has been very stable on the price front. Prices increased marginally in 2009 following the economic recession but have maintained their position until the recent event.

🏠 USD 18.00 /kilo

CEDARWOOD OIL VIRGINIANA

Juniperus virginiana 🌐 USA

Quite widely preferred by perfumers, there is enough demand for cedarwood *Virginiana* and it remains stable. The price at source is quite constant though the transacted volumes are much less than cedarwood oil Texas and China. Several widely-used chemical derivatives are also obtained from these oils.

🏠 USD 29.00 /kilo

GRAPEFRUIT OIL

Citrus paradisi 🌐 USA

The Florida grapefruit industry had been teetering but has gradually found its feet once again thanks to increased demand for a healthy option. The revival augurs well for the hitherto struggling grapefruit sector. The USDA report predicts a healthy crop figure of 5.90 million boxes of all Florida grapefruit. This is a marked climb of 0.5 million boxes from the December forecast, and if realised will be an impressive 20% increase from last season's crop. What is encouraging is that the fruit size of both red and white grapefruit is above average at harvest, but projected damage due to droppage is also above average. Of this total crop figure, red grapefruit is projected to reach 4.50 million boxes, while the white variety escalates to touch 0.9 million boxes. California is projected to contribute 4.1 million boxes with Texas bringing in 6.2 million boxes. The states together bring up the total USA grapefruit crop to 15.7 million boxes. Supplies are adequate, and so there will be a cascading positive effect on consumption and demand. Exports are set to be higher with volumes of fruit apportioned for processing also increased. Grapefruit processing in 2019/20 is estimated at 6.85 million boxes, an 11% increase on the previous year, but substantially below levels of five years ago.

🏠 USD 60.00 (White) 40.00 (Pink) /kilo

USDA GRAPEFRUIT PRODUCTION AND PROCESSING FOR SELECTED COUNTRIES (X 1,000 MT)

Countries	2016/17		2017/18		2018/19		Forecast 2019/20	
	Production	Processing	Production	Processing	Production	Processing	Production	Processing
China	4,600	0	4,800	0	4,900	0	4,930	0
European Union	106	19	107	17	108	21	89	15
USA	633	268	462	191	512	256	582	285
Mexico	442	88	418	90	456	94	468	95
South Africa	354	118	403	111	390	115	420	124
Turkey	253	0	260	0	250	0	300	0
Israel	149	80	144	68	139	77	155	72
Other	25	1	26	2	26	2	26	3
TOTAL	6,562	574	6,620	479	6,781	565	6,970	594

ORANGE OIL

Citrus sinensis 🌐 USA

Florida's citrus farmers have been grappling with the severe effects of citrus greening for several years. This deadly disease has decimated many of the trees; operating and maintenance costs have soared significantly. 2018 saw Hurricane Irma wreaking havoc on the citrus plantations. However, following this long spell of difficulty, things have now improved with two consecutive years of bumper production. This has brought some relief for the citrus farmers. Exports and fruit for processing are predicted to rise with the production increase.

Considering initial indications in the growing areas, the recent 2019/20 USDA forecast estimates Florida's total orange production at 74.0 million boxes with California contributing 49 million boxes. If the actual crop size achieves this milestone, it will overtake the previous year's production by 3%. Florida's Valencia oranges are predicted to be at 42.0 million boxes; while the non-Valencia varieties (early, midseason, and Navel) are projected to touch 32.0 million boxes. Out of these, Navel oranges comprise a figure of 800,000 boxes, making up 3% of the non-Valencia total crop. Despite a good crop projection, California beat Florida to bring up a production figure of 40 million boxes; but falls short in the Valencia category with 9 million boxes. These figures include calculations for average fruit per tree for both regular and first late blooms. The fruit size this year is considerably diminished for both varieties; non-Valencia oranges require 316 pieces to fill a 90-pound box. Fruit droppage is marginally higher than average and is projected to remain so during harvest as well. There has been a lot of damage through fruit droppage; 28% for non-Valencia oranges is quite significantly above average.

📈 USD 6.00 /kilo

USDA ESTIMATED USA ORANGE PRODUCTION

X million of 40.8 kg Boxes	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Florida	96.95	81.7	68.85	45.05	71.75	74
California	48.2	58.5	48.3	44.2	49.8	49
Texas	1.452	1.691	1.37	1.88	2.5	2.56
TOTAL	146.6	141.891	118.52	91.13	124.05	125.56





VEGETABLE OILS THE MANY FACETS

Many vegetable oils have variables from nutritional facts, to benefits, to temperature durability, and uses. Let's break this down for you.

Essential oils, carrier oils, vegetable oils, nut oils, oils for skin, oils for hair...the list goes on. The shelves overflowing with an incredible, mind-boggling array of oils, each advertising their unique benefits are sometimes quite bewildering. Staring at the stacks and rows of oils, most of us are left in a dilemma. Should it be the canola? Try out the coconut, maybe? A shampoo that proudly promises great hair with macadamia oil? How about sweet-smelling body lotion containing baobab oil?

Thanks to the new narrative of wellness and aromatherapy, mood lifter essential oils have made their way into mainstream conversation. However, we have all heard words like 'omega this' and 'unsaturated that' thrown around, but this is still uncharted territory. Vegetable oils are obtained from oil-rich seeds like corn, groundnuts, soybeans etc. These oils comprise complex compounds called unsaturated fats; they remain liquid at low temperatures and withstand high heat. Natural vegetable oils are then further refined to yield a chemically stable, light amber coloured, mildly aromatic liquid. ¹

We give you a peep into the fascinating world of vegetable oils now available from Ultra UK.



RAPSEED OIL

Imagine an oil made from cabbage! Well, not quite, but close. Magnificent yellow blooms from the same botanical genus as the cabbage (*Brassica*) yield seeds from which the oil is distilled. Rapeseed is among the oldest cultivated oilseeds, containing a high concentration of erucic acid. Canada started producing a variant with less than 2% erucic acid, which is what we know today as canola oil.

Production

Rapeseeds are heated slightly and put through mechanical crushing and grinding with a hexane solvent to break the cell walls. Then the seeds are dehulled in a regulated disc mill, which also helps in drying. The broken seeds pass through a screw oil mill for oil extraction by cold pressing. The extracted crude oil is finally refined using water and organic acids to remove gums and neutralise free fatty acids. It is passed through an intensive filtration and deodorising process before reaching the shelves².

Nutrition

- A healthy proportion of omega-3 to omega-6 (the good fats)
- Vitamins E and K found in both rapeseed and canola
- Lowest levels of saturated fat content (the harmful ones)

Benefits & Uses

You can cook, drizzle, and safely store culinary rapeseed oil that is canola oil. The high smoking point makes it suitable for high-heat cooking. It also has the propensity to hold its own and does not go toxic easily. Its earthy, nutty flavour finds widespread culinary use, while the industrial variety (with higher erucic acid) is used in the automotive and chemical industries.

Look out for: Cold-pressed or minimally refined rapeseed oil. It will retain most of its nutrient value.



HEMP OIL

A rather misunderstood oil, hemp oil, also called hemp seed oil, is obtained from the miniscule seeds of the *Cannabis sativa* plant. See, here lies the root cause of misunderstanding. It has nothing to do with the cannabis we all know! Hemp seeds contain less than 0.3% of the intoxicating compound i.e. tetrahydrocannabinol (THC) that's responsible for the 'high' of marijuana. On the contrary, hemp seeds are a powerhouse of nutrients, fatty acids, and bioactive compounds.

Production

Though there are methods like supercritical fluid extraction (SFE) with solvent and the new-age ultrasonication (ULT) processes, the oilseed screw press machine is the most common method followed for hemp oil extraction. The cold-pressed seeds yield an unrefined oil, dark to clear green in colour with a nutty, grassy flavour.³ This is refined by using carbon dioxide, and ethanol processes to give a clear, colourless oil with little flavour.

Nutrition

- 'Nature's most perfectly balanced oil' with optimum 3:1 ratio of omega-6 to omega-3 essential fatty acids⁴
- High in Vitamin E
- Essential minerals

Benefits & Uses

With a composition similar to the human skin, it's a match made in heaven. Excellent moisturiser for dehydrated skin, an effective treatment for atopic dermatitis, eczema, and other dermatological problems. A favourite for anti-ageing, hemp seed oil also does not clog pores and thus regulates the skin's oil balance. You will find hemp oil in numerous skincare products, soaps, shampoos, and cleansers. Consumption is beneficial for brain and heart health. Industrial grade hemp oil is used in inks, paint, lubricants, fuels, and plastics.

Look out for: Any good quality hemp oil. The good news is that it suits almost all skin types.

BAOBAB OIL

Flourishing in the arid terrain of Africa, Arabia and Australia, the baobab tree (*Adansonia digitate*) is shrouded in mystique and superstition; and the world knows little of it.⁵ However, this large, succulent tree is revered among the Africans and often referred to as the “Tree of Life” or simply by its more common moniker the “upside-down tree.” The name was given because it looks like it has been planted upside down with the roots sticking up in the air. Baobab oil is obtained from the seeds of the pod-like kernels of baobab fruit.

Production

Baobab oil is extracted from the seeds through a single, cold-pressing process. After separating the seeds from the hard, outer shell and powdery interior of the fruit, the seeds are washed clean and air-dried in the sun. With the help of a mechanical decorticator the soft kernel is isolated from the rough husk before being sieved and readied for processing. The oil is rich with a silky feel and mild aroma.

Nutrition

- Fortified with sterols, palmitic acid
- Vitamins A, F, E
- Natural source of Vitamin D3
- Supercharged with Vitamin C, it can give an orange a run for its money

Benefits & Uses

Add to your daily beauty regime, savour the flavour of the leaves, use the bark and fibres for baskets or store the dried seeds. What’s more, because it is slow to oxidise, it spoils slower and, stored properly, has a shelf life of five years. Its super-rich vitamin content makes it a must-have ingredient for cosmetics and hair care products. Highly penetrating, nourishing and even edible, this nutrient-rich dynamo is also used to treat asthma, kidney problems, mosquito bites, and bladder problems.

Look out for: The only vegetable oil that can be added in its raw state in cosmetics; and can safely be included in diet.



MACADAMIA OIL

Native to the Australian mainland, macadamia nuts are found on evergreen trees across the continent, and it is one of the most popular commercial crops of the country. Despite being a hard nut to crack, (macadamia is the hardest of all nut shells known), these delicious white nuts feature as the star ingredient for many a chocolatier, culinary artist or even shampoo manufacturer. The oil obtained from macadamia nuts (*Macadamia integrifolia*) is a preferred flavouring agent.

Production

The clear, light-yellow oil from macadamia is obtained by cold or expeller-pressed squeezing. The labour-intensive process of extraction and nutrient-rich profile has pushed it to becoming one of the world's most premium and expensive nuts.⁶

Nutrition

- Highest content of fatty acids, 85% monosaturated and polyunsaturated fats
- Rich in anti-oxidants like squalene
- Vitamin A1, B1, B2, E
- Essential minerals

Benefits & Uses

In a nutshell, macadamia is heart-to-hair happiness. It is a first-class rejuvenator and nourisher of skin and hair, and so found in a plethora of skin and hair products. You can use it for dressings and marinades for its delicious nutty flavour. Since its smoking point is much higher than the oft-used olive oil, it's great for medium heat cooking. The fatty acids help lower bad cholesterol, and promote heart health.

Look out for: A sudden spring in your step, for macadamia oil is a great source of energy-boosting fibre. However, for those with nut allergies, it would be wise to avoid.





MORINGA OIL

If you believe that good things come in small packages, the moringa is one such gift from nature. The tree (*Moringa oleifera*) is quite a small tree, thriving and native to the rocky soil of the mighty Himalayas. From seed to root, bark to flower and leaf, virtually every part of the tree finds use in nutritional, industrial, or medicinal purposes. For this reason, it is widely called 'the miracle tree' or even going by the shape of its pods, the 'drumstick tree.' The oil is extracted from its seeds.

Production

The first step involves crushing the seeds. Then the seeds are soaked in water about 10% of the total volume of the seeds. These are then heated over a low fire. Finally, the soft kernels are put through a screw press and cold pressed, or solvent extraction can be used to produce the oil.

Nutrition

- A whopping 92 nutrients
- 46 antioxidants⁷
- High proportions of Vitamins A, B, C
- Monosaturated fats
- Proteins

Benefits & Uses

The benefits of moringa have been traditionally harnessed since ancient times. Uses include as a cooking medium for cholesterol management, diabetes control, liver protection, and for nutritional supplement.⁸ As a topical cleanser, moisturiser, antioxidant, moringa is used in a host of soaps, liquid cleansers, hydrating toners, massage oils, shampoos, and hair conditioners. It is used effectively in treating oedema. In industrial applications it is used as a fuel and machinery lubricant.⁹

Look out for: Food-grade moringa oil that is a storehouse of nourishment, both inside as well as outside.

The list of vegetable oils with their benefits is on the rise, and wellness awareness is also growing. The uses of these oils range from industrial to personal, and therefore the potential is huge. With this 360° view, the supply and availability are catching up with the demand.

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