ESSENTIAL OILS

MARKET REPORT

WINTER 2023

LET IT SNOW!

Ultra International B.V.

Essential Oils, Ingredients, F & F

www.ultranl.com

ARTICLES

THE MAGIC AND WARMTH OF THE HOLIDAY SEASON

A steaming cup of hot chocolate, a batch of freshly baked cookies and the delicious aroma of roasted chestnuts. Oh! The fragrances of the festive season put everyone in a festive mood. At Ultra, our commitment to revel in the finest aromas has scripted another incredible year, and we are forever grateful for the support of our collaborators.

Natural remedies for mind, body, and home have caught the fancy of customers like never before. The aware customer of today reads the ingredients before picking a product. This has increased the use of natural raw materials, and the market for naturals is witnessing an evolution. We elaborate on nature's refreshing boost in this report.

There is nothing more intimate than smell, and it is pleasurable to embrace and dive into this sensory pleasure of the season. Winters elevate aromatic experiences and are kinder on the scent profile. Winter also has its own collection that delights, revitalises, and illuminates. Flip through this report to choose from winter trends to complement the season.

As we bid adieu to 2023, we merrily reflect on our busy calendar. The Ultra team has been on a global sojourn this year attending conferences worldwide, and visiting sourcing areas such as Indonesia, South America, and South India. We were the proud gold sponsor of IFEAT Berlin with many attendees from the team as well.

We constantly aim to innovate and grow. In this quest we welcome new members to our Ultra family and are proud to have Ms Magdalena León join Ultra UK as Chief Scientific Officer. She comes with over two decades experience in analysing essential oil blends using methodical and olfactory techniques. Based in UK, Magdalena will oversee all testing and analysis of essential oil blends.

Ultra Natura enters an exciting phase of research and development. We are recording constant success as we evaluate odour profiles in sizeable selections of plants and their extracts. Currently, we are working on ginger, turmeric, and vanilla in controlled environments.

We are also delighted to announce the opening of our newest Atelier Ultra facility in New York. We aim to convert it into a hub of creativity and learning for our American customer base. Our flavour profiles will be extensively on display here.

As we gaze ahead at the horizon, stepping into the unknown that is 2024, we wish to thank all our business partners, who have been with us each step of the way. Let's make the upcoming year more glorious and successful.

Wishing everyone a Merry Christmas and a Happy New Year!

Priyamvada Sanganeria
Director, Ultra International BV

LEMON OIL

Citrus limonum *Argentina*

Fresh lemon production in Argentina in 2022/2023 is forecast to decline to 1.65 million metric tonnes (MMT), down from 2.1 MMT the prior year, the U.S. Department of Agriculture Foreign Agricultural Service (USDA FAS) reported recently.

The decline is due to the impact of rising costs, which have prompted smaller producers to limit the maintenance needed on lemon-bearing trees and even abandon or convert their orchards.

Prolonged unfavourable weather conditions have also played a role in the decline in lemon production. A severe drought in the main lemon-growing region of Argentina during the 2022 spring damaged many trees and reduced the size of the lemons that were produced.

Over the past decade the lemon sector has been boosted by investments in new production and technology, with 70% to 75% of total production devoted to exports of processed lemon products. The products include essential oil, frozen pulp and dehydrated peel.

In recent years lemon growers in northwestern Argentina have expanded their planted area. The removal and replanting of trees have increased the number of plants per hectare and improved production efficiency and yields. However, for 2022/2023, lemon-planted area has decreased by 13% to 45,000 hectares.

The profitability of lemon producers has been under strain in recent years due to the increase in production costs and the exceptional overproduction of lemons in the prior two seasons. The rising cost of fertilisers, pesticides and labour wages have contributed to the increase in production costs, while the lower prices of fresh lemons have put further pressure on profitability. This has led some lemon producers reducing their planted area, as they are unable to make a profit from their crops.

USDA FAS estimated that the amount of fresh lemons for processing in 2022/2023 will decrease to 1.32 MMT, down from 1.64 MMT the prior year.

USD 6.95 /kilo

FEATURE

NUTMEG
A TREASURED SPICE AND HEALING ELIXIR

A native Indonesian evergreen tree is a source of two popular spices, nutmeg and mace. The inner seed of the plant produces nutmeg, while the red, lace-like substance covering the seed is mace.

HISTORY

Nutmeg has been a revered spice throughout history. Back in the 1st century AD, it was considered a high currency for trading. Wars were fought over nutmeg, the Dutch conquered Banda Islands to monopolise the nutmeg trade. This conquest resulted in the formation of the Dutch East India Company, which was an amalgamation of several Dutch trading companies.

HABITAT

Warm, humid conditions are ideal for nutmeg cultivation. Areas with annual rainfall in the range of 150 cm will see nutmeg thrive. Neither dry nor waterlogged conditions suit nutmeg cultivation. Nutmeg plantations require lands with clay loam, sandy loam, or red laterite soil. It propagates well in areas up to 1,300 m above sea level.

The most commercially viable species of nutmeg, *Myristica fragrans*, is native to the Moluccas, Indonesia. It flourishes in tropical climates, and is also propagated in Penang Island in Malaysia, the Caribbean islands, and India. Brazil, Madagascar, and California also cultivate varieties popularly used for essential oils.

CULTIVATION

Nutmeg is an evergreen tree that can potentially grow as tall as 20 metres, but the wait for the fruit after sowing is about eight years. Nutmeg trees reach their prime in 25 years and bear fruits till at least 60. Nutmeg is like apricot in appearance. Once ripe it splits into two, a brown seed on the inside engulfed by a crimson aril. Matured nutmegs are dried in the sun over six to eight weeks. Once the kernel starts rattling in the shell, it is broken, and the nutmeg is removed.

NUTMEG VS. MACE

While they have similar origins, being born out of the same tree, the two spices differ from each other. Mace is the outer coating of the nutmeg seed and is removed first. It is ground into a red-coloured spice, which is hotter in nature and best described as a combination of pepper and cinnamon. Nutmeg on the other hand, can either be ground or used as a whole. It has a milder taste and is sweeter compared to mace. They may grow together, but one hardly sees nutmeg and mace combined as flavours.

Considered an autumn spice, nutmeg is used to provide heat to the body, and also acts as an antioxidant. It is a popular ingredient in flavour, fragrances, wellness, and cosmetic industries.

DISTILLATION

Essential oil extraction only takes place, after nutmeg is free from its fixed oil content. Fixed oil can be extracted via hydraulic expression before distillation. Dried nutmeg undergoes steam or steam and water distillation to extract essential oil. Anywhere between 7%-14% essential oil can be derived from nutmeg. On the other hand, approximately 24%-30% of fixed oil or nutmeg butter can be extracted from the fruit.

APPLICATIONS AND BENEFITS

Nutmeg is a fruit of contrasts. It possesses a distinctive pungent fragrance but a warm sweet flavour. It is an extremely popular flavouring agent and is used in baked goods, confectionary items, puddings, potatoes, meats, sauces, and even festive beverages, all over the world.

Nutmeg oil is used by the cosmetics industry as scents in soaps and perfumes. It is also used by the food and beverage industry, and pharmaceutical companies. Ointment prepared from nutmeg butter has been useful in treating rheumatism, and as a counterirritant, though it is important to consume nutmeg in moderation. Due to its antimicrobial and antioxidant properties, nutmeg oil is also used as a bio preservative.

INDUSTRY TRENDS

As observed last season, unpredictable rainfall in Indonesia adversely impacted nutmeg production. Volumes were considerably lower, and the price saw an exponential rise. The quality of raw material was also questionable since it was getting mixed with Sulawesi production. Even Sri Lanka did not have any fresh crop to add to the supply chain with only dry material available in the market.

India also witnessed a shortage of supply, and it is expected to persist till the next harvest cycle commencing in March. Due to the supply crisis, nutmeg prices have seen a rise.

Nutmeg is an all-encompassing ingredient. It is a popular spice that adds warmth with its nutty flavour to sweet and savoury dishes alike. It also comes with a plethora of health benefits. Its unique and delicate aroma, and benefits for health, also make it an extremely popular product in the essential oils trade. Nutmeg contains an impressive array of powerful compounds that promote overall health. These reasons and more make nutmeg a favourite across the globe.

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ORANGE OIL CP

Citrus Sinesis *Brazil*

The updated Fundecitrus forecast for the 2023–2024 orange crop in Brazil's citrus belt is 307.22 million boxes (M. boxes) of 40.8 kilograms each. That is a reduction of 2.12 M. boxes, or 0.7%, from the September forecast of 309.34 M. boxes.

The forecast, by varieties, is:
- Hamlin, Westin and Rubi: 58.09 M. boxes (unchanged)
- Other early season: 18.51 M. boxes (unchanged)
- Pera Rio: 97.62 M. boxes (increased 1%)
- Valencia and Valencia Folha Murcha: 105.20 M. boxes (decreased 0.03%)
- Natal: 27.8 M. boxes (decreased 9.8%)

According to the current forecast update, the fruits will weigh less than the average of the last 10 years, which is 163 grams. One factor contributing to oranges not reaching their projected sizes is the persistent below-average rainfall.

Another impactful factor is the accelerated pace at which harvesting progresses, leading to a shorter period for fruit development. According to the Centre for Advanced Studies on Applied Economics (CEPEA), a new heat wave in Brazil's São Paulo state has been concerning citrus growers. Temperatures are higher than those registered in the last wave in September and are lasting longer. Faster harvesting is emerging as a strategy to reduce the fruit drop rate, which has been projected down from 21% to 19%, considering all varieties.

Many producers say that this hot weather may also affect 2024–2025 production, but it is still too early to estimate possible impacts.

Citrus greening is also affecting the growth of the oranges. Brazil estimated in 2023 that it had 202.88 million citrus trees, largely the result of massive replanting efforts. In 2016–2017, there was much new planting in the southern region of Brazil. Those plantings were made in an effort to outrun citrus greening that was spreading in other parts of Brazil. Citrus greening continues to be a problem in those new production regions. It is estimated that citrus greening affects 38.06% of orange trees in the states of São Paulo and Minas Gerais and productivity in Brazil's São Paulo and Minas Gerais citrus belt will be reduced by 12% in the next five years.

USD 12 - 14.00 /kilo

GERMAN CHAMOMILE OIL

Matricaria recutita Bulgaria

There is no change in the demand-supply dynamics since the last report.

EURO 1025.00 /kilo

MELISSA OIL

Melissa officinalis L. Bulgaria

The crop, and as a result quantities produced, in this cycle are lower in volume. The harvest season commenced late due to constant rains and a cold late spring.

EURO 1215.00 /kilo

ROMAN CHAMOMILE OIL

Anthemis nobilis Bulgaria

The market scenario for roman chamomile is the same as last season.

EURO 545.00 /kilo

LAVENDER OIL

Lavandula angustifolia Bulgaria

With a constant decrease in market demand for the oil figures have slid back to 2019 levels. Bulgaria has seen a reduction in the size of lavender fields. In 2021 20,000 ha were under cultivation. In the coming year it will be less than 10,000 ha. Farmers are regularly leaving the market and soon production may not be able to meet the dwindling demand. Oil price is at its lowest in the last couple of decades. These prices are expected to stay firm for as long as the current stockpile lasts.

EURO 35.00 /kilo

ROSE OIL

Rosa damascene Bulgaria

Market for rose oil has been recovering steadily since the culmination of the restrictions due to the COVID-19 crisis. Starting in 2024 the minimum labour cost in Bulgaria will increase by 20%. This will lead to an upward surge in the cost of rose picking and, ultimately, the overall production figures. Currently, the demand for the oil is good. However, due to increased labour costs and high raw material costs, the price of oil would see an upward trend.

EURO 12,050.00 /kilo

BALSAM FIR OIL

Abies balsamea L. Canada

There is abundant oil in stock. Sufficient quantity is available for regular oil as well as organic.

Price on Request

CEDAR LEAF OIL

Thuja Occidentalis Canada

Limited supply of oil is available in the market with increasing demand. The oil price is witnessing an upward curve.

USD 160.00 /kilo

LABRADOR TEA ORGANIC

Rhododendron groenlandicum Canada

Labrador tea is harvested from the wild. The process is protected and there is semi-control harvesting for it. There is a good stock and the price is holding firm.

Price on Request

WHITE SPRUCE ORGANIC OIL

Picea glauca Canada

There is decent supply in the market. However, the oil price is declining.

Price on Request

CASSIA OIL

Cinnamomum cassia China

Many adulterated quantities from Vietnam are flooding the market. China imports major volumes from Vietnam and suppliers need to be extra careful while preparing batches.

USD 45.00 /kilo

CITRONELLA OIL

Cymbopogon winterianus China

There is limited supply of citronella in the market. Demand for the oil has also been declining.

USD 17.00 /kilo

EUCALYPTUS CITRIODORA OIL

Corymbia citriodora China

Farmers have limited interest in the product. They are hardly distilling the oil. This is due to the constantly declining prices of the oil.

USD 15.00 /kilo

EUCALYPTUS OIL

Eucalyptus globulus China

Since the end of October demand for the oil has increased, though the margins on eucalyptus remain a challenge with high acquisition and production costs. This has been a discouraging factor for farmers. At present, the price has shown a recovery and has increased due to the growing demand.

USD 16.00 /kilo

GERANIUM OIL

Pelargonium graveolens China

The market for geranium is limited. There has been a decrease in demand and volumes being traded are low. This has helped stabilise the price.

USD 152.00 /kilo

LITSEA CUBEBA OIL

Litsea cubeba China

Raw material volumes are reducing in the market. Collectors hold major oil stock, while factories have stopped purchasing. The oil price has been stable since factories curtailed their purchase orders, but it is expected to increase again with the challenges around raw material.

USD 40.00 /kilo

STAR ANISE OIL

Illicium verum China

The market for star anise is inactive now. Limited quantities are in stock, and factories buy the product as per requirement. The crop season will commence next month.

USD 30.00 /kilo

WINTERGREEN OIL

Gaultheria procumbens China

Low volumes are being traded in the market. There has been a steady decline in oil distillation compared to last year. This is primarily due to a muted demand for the oil, which has resulted in reduced farmer interest in the product.

USD 60.00 /kilo

CARAWAY OIL

Carum carvi Eastern Europe

Good volumes are in stock to meet market demand.

USD 55.00 /kilo

CEDAR LEAF OIL

Thuja Occidentalis Eastern Europe

There is limited availability in the market. Demand for cedar leaf oil is high, though, the price is holding steady.

USD 165.00 /kilo

CLARY SAGE OIL MOLDOVA

Salvia sclarea L. Eastern Europe

Stock is available, since there was a good crop during the previous harvest. The oil price is stable.

USD 115.00 /kilo

FENNEL OIL

Foeniculum vulgare Eastern Europe

Moldova had a good crop. Price depends on quantities being purchased.

USD 125.00 /kilo

FIR NEEDLE OIL SIBERIAN

Abies sibirica Ledeb Eastern Europe

Stock from multiple origins is available in the market. Volumes from other countries like Kazakhstan are also entering the market. The oil price is mostly stable. Some producers are offering the product at slightly lower prices.

USD 65.00 /kilo

HYSSOP OIL

Hyssopus officinalis L. Eastern Europe

There has been good cultivation in the fields in Moldova. Oil is in stock.

USD 218.00 /kilo

CORIANDER HERB OIL

Coriandrum Sativum Eastern Europe

There is limited stock in the market. Demand is expected to rise before the next crop cycle, which could impact prices. Currently, there are no fluctuations in the oil price.

USD 120.00 /kilo

CORIANDER SEED OIL

Coriandrum sativum L. Eastern Europe

Demand for the product is low. The oil price is stable.

USD 95.00 /kilo

DILL WEED OIL

Anethum graveolens Eastern Europe

Producers are unhappy with this year's crop. The harvest in 2022 was superior compared to 2023, though the crop is sufficiently decent to keep price levels stable.

USD 50.00 /kilo

JUNIPER BERRY OIL

Juniperus communis L. Eastern Europe

There is a heavy demand from the spice market for the berries. The process of berry collection is ongoing. While the quantities produced are good, water content in berries is high and essential oil content is low. There is no significant change in price from last season. But due to the heavy demand, prices are not expected to fall.

USD 230.00 /kilo

LAUREL LEAF OIL

Laurus nobilis L. Eastern Europe

Oil is in stock from multiple origins globally. Supply is sufficient to meet the demand.

USD 80.00 /kilo

LAVANDULA FINE OIL

Lavandula angustifolia Eastern Europe

Stock is either reserved or already sold. Unfavourable, extreme weather conditions resulted in a 30% decline in production compared to last year.

USD 50.00 /kilo

LAVANDIN GROSSO OIL

Lavandula x intermedia var. Grosso. Eastern Europe

Demand for the product is low, while supply is available in abundance. Decent high-quality volumes have been produced this year.

USD 20.00 /kilo

LAVENDER OIL MOLDOVA

Lavandula angustifolia Eastern Europe

Cultivated in Moldova, this variety has similar characteristics to the Russian product. There are no fluctuations in price.

USD 40.00 /kilo

PINE OIL PUMILIONIS

Pinus pumilionis Eastern Europe

The severity of winter will decide the volumes produced during harvest. The new crop will be available in the months of May-June. Producers have oil in stock to meet any demand till the next crop cycle. The oil price is stable.

USD 125.00 /kilo

ORIGANUM OIL

Oreganum vulgaris Eastern Europe

Origanum is regarded as a natural antibiotic for the feed industry. There is massive demand for the product. The crop was decent, and oil is in stock. And the price is also stable.

USD 67.00 /kilo

SAGE OIL

Salvia officinalis L. Eastern Europe

The crop saw a decent harvest. After the last harvest oil prices increased, but they have stabilised now.

USD 75.00 /kilo

THUJA OIL

Thuja orientalis Eastern Europe

Market for the oil is stable. There are no major fluctuations.

USD 35.00 /kilo

THYME OIL

Thymus vulgaris Eastern Europe

Market for the product is stable.

USD 132.00 /kilo

ORANGE OIL

Citrus sinensis Egypt

Citrus production in Egypt is expected to fall 10% to 5.4 million tonnes. Forecast for orange production stands at 3.7 million tonnes.

USD 15.00 /kilo

CARDAMOM OIL

Elettaria cardamomum Guatemala

Cardamom is a volatile product and buyers are suggested to cover their requirements with purchases throughout the harvest cycle. Guatemala witnessed a drought at the beginning of their rainy season in May and June. This resulted in a delay of two months in the new crop cycle. This has led to speculation in the market and fluctuations in price. It is too early to predict the impact of this delay, though it could affect flowering. Output, however, should be on expected lines.

The last harvest cycle concluded in March 2023. Normally production volumes are in the range of 35,000 tonnes. The estimated output from the last harvest is significantly higher at 50,000 tonnes.

Due to the carryover stock from the last harvest, the price could fall. Cardamom saw its lowest price between October 2022 and January 2023 due to the quantity of material. In February 2023 to receive better qualities, exporters pushed the product price. Till that time producers were letting the pods overmature waiting for the price to improve.

USD 380.00 /kilo

FEATURE

A FRAGRANT **WINTER COLLECTION**

No sense is more intimate than that of smell. Our mind attaches it to memories easily and we form bonds with scents. Fragrances are evergreen. Warm weather is ideal for sporting lightweight citrus scents, but one can equally relish their magic in winter too, and there is no better joy than embracing and diving into the sensory pleasures of a season. Winters elevate aromatic experiences and are kinder on the scent profile, as without any heat or humidity, fragrances tend to last longer. If you want those aromas to linger even longer, here's a pro-tip, spray those spirits on your softest cashmere sweaters or woollen scarf and then add the layer to your skin.

Winter has its own collection that delights, revitalises, and illuminates. Pair a spirit to complement the wintery outdoors or elect a fragrance to brighten a gloomy winter day. Choose from the following winter trends to complement the season.

SKIN SCENTS

It is human nature to crave touch and tenderness. Skin scents answer this call by evoking intimacy. They are complex in nature but exhibit fresh and clean aromas. Skin scents by nature are slightly animalistic. They draw heavily on notes of musk and rose. Moreover, they are the perfect complement for cosy knitwear. Spritzing one with cashmere hugging the skin makes the ultimate intimate combo.

EARTH NOTES

An embrace that can comfort and nurture. That's the beauty of earth notes. They are a grounding, reliable collection, connected to the earth. The fragrance invites a moment of calm and soothes the senses. The majority of earth notes are woody in nature. Be it silky sandalwood, virtuous and viscous agarwood, and energy-clearing guaiac wood. These scents are derived from the earth and work wonders to keep one tethered to the ground.

FLORALS WITH A TWIST

Florals and spring are passé. They are predictable and lack creativity. But bring in the floral aroma to winters and you've got yourself a winner. The trick to a successful floral and winter merge is to go for headier florals. You need aromas that are sophisticated and possess unexpected notes. Florals with tropical connotations like ylang-ylang, tuberose, and orchid have the capacity to hold their intensity in tough winters. Pair them with leather and suede and enjoy an aromatic day.

SWEET, SANS SUGARY

Yes, winter signals the festive season, and the whiff of pumpkin pie, eggnog, and cotton candy wades in and out of shopping areas, restaurants, and even homes. It is the festive season. There is an explosion of sugary scents this time of the year, but you don't need to smell like a dessert table. Instead of sugary and fruity, opt for caramel. It exudes creamy and burnt notes. Several brands have tried the combination of a bold caramel mixed with peach. It is sure to bring the festive spirit alive.

SPICE IT UP

Winters call for a cosy embrace, therefore select for the softer side of spice. New spice induced collections aren't overbearing. They are milder and get a subtle kick from unexpected elements like pepper. Other popular combinations in the market feature ginger and cinnamon, which produces a spicy yet sweet scent without turning into a Christmas potpourri. A small suggestion, when going for a spicy scent, apply a little less than you normally would. Overpowering smells can be a big let-down.

FOODY SCENTS

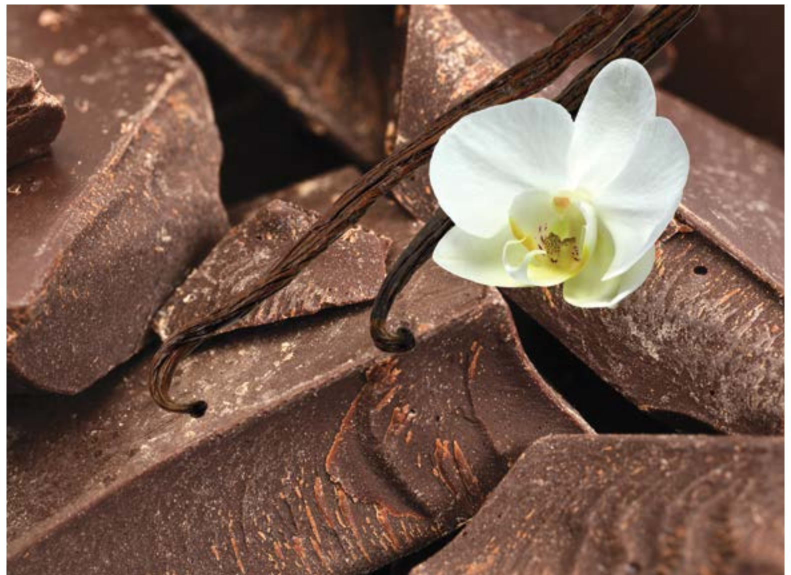
Borrowing superfood and superfruit trends from the F&B industry, perfumers are adding edible twists to winter scents. Spicy notes like saffron, pepper and sage find company in the fruity aromas of pear, raspberry, orange blossom, lychee, and rhubarb. The luxury perfume makers opt for mature notes like salt and rum. In fact, the fragrance industry borrows heavily from café and cocktail trends. In winters you will witness collections using bourbon, cognac, leather, whiskey, and sweet tobacco.

GOURMAND INSPIRED

Winters often see a rise in the demand for gourmand fragrances. Women prefer warm and soft notes in their spirits. Honey finds a large fanbase, but the ever-popular scents feature chocolate and vanilla. Winter berries are popular for that fruity aroma.

LAYER IT

A personal fragrance always catches customer interest. Layering is a great way to create individual scents by combining multiple aromas to craft a blend unique to a person. This trend allows people to mix and match to produce exclusive aromas best suited for their style and mood.



THE HOLIDAY COLLECTION

Winter is the time of the year when people are in festive mode. Brands love these opportunities and release limited edition, holiday-themed products. These collections tend to have special festive packaging. They also use aromas that are inspired by winter and exude a celebratory spirit.

CHEER FOR THE GREEN TEAM

Sustainability is a big draw for customers in this segment as well. Products that are eco-friendly, produced sustainably, and use natural ingredients tend to attract customers.

ONE SCENT FOR ALL

While this isn't a specific winter trend, the demand for unisex perfumes is on the rise. Customers are increasingly opting for one product that works for all. This winter the unisex trend is expected to witness a rise.

The arrival of winter brings with it warm woody notes, toasty spices, and an overdose of vanilla. Everything that has the inherent ability to make one feel cosy. Warm this winter with irresistible scents that kindle the tenderness of the spirit.

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AJOWAN OIL

Trachyspermum ammi India

The demand and supply for the oil is balanced. There is no major fluctuation in price.

USD 60.00 /kilo

BLACK PEPPER OIL

Piper nigrum India

There is an increased interest in the market for black pepper oleoresin due to its higher potency. This has led to an anticipation of a global surge in demand for the product. Unfortunately, the raw material availability in India, Sri Lanka, and Vietnam is less than last year. This has led to a sustained increase in price.

USD 45.00 /kilo

CARDAMOM OIL

Elettaria cardamomum India

There is a supply shortage due to low levels of production. Less rainfall and drought like situation in Kerala high ranges have affected the product. The harvest cycle for cardamom is between July and August. The price of cardamom is rising, and the trend is expected to continue in the coming months.

USD 380.00 /kilo

CITRONELLA OIL

Cymbopogon nardus India

There is good demand for the oil in the market. This trend is expected to continue in the coming months. Oil price is constantly rising.

USD 20.00 /kilo

CLOVE BUD OIL

Eugenia caryophyllata India

There is a shortage of raw material in the market. But demand for the oil is consistent. This has resulted in an increase in price.

Price on Request

CORNMINT OIL

Mentha Arvensis Oil India

Crop acreage in 2024 is expected to mirror 2023 levels or fall slightly short. At present, customers are not willing to hold stock. But if the economic situation improves next year, there is a potential for spike in demand. Price of mentha arvensis is also expected to increase next year. At present, the price has stabilised in the market due to farmers either holding stock or not possessing enough inventory.

USD 16.00 /kilo

CUMIN SEED OIL

Cuminum cyminum L. India

Unfavourable weather conditions and decreased plantation area have resulted in a significant drop in crop size. Oil price is increasing.

Price on Request

DAVANA OIL

Artemisia pallens India

The planting season has commenced. But there is already a loss of crop due to heavy rainfall. This is expected to increase the price in the future. There is a surge in demand for natural and exotic fragrances in the market.

USD 400.00 /kilo

DILL SEED OIL

Anethum graveolens India

There is consistent supply of raw material, though demand for the oil is limited. There is no major fluctuation in oil price.

USD 45.00 /kilo

FENNEL SEED OIL

Foeniculum vulgare India

Stock is available in abundance, though demand for the oil is low. Oil price is stable.

USD 150.00 /kilo

GINGER OIL

Zingiber officinale India

There is limited demand for ginger oil in the market. Once the harvest season approaches, demand and supply dynamics may change. The harvest season for ginger commences in September. At present oil prices are stable and are expected to stay firm in the short term.

USD 75.00 /kilo

GINGER GRASS OIL

Cymbopogon Martinii India

There is consistent demand for the oil, which may rise in the coming months. At present, there is no fluctuation in oil price.

USD 20.00 /kilo

HOLY BASIL OIL

Ocimum Sanctum India

New crop season has commenced, and good volumes are expected to be produced. Carryover stock from last season is also available in the market, though demand for the oil is limited. Oil price had been falling for a while, but it has started to stabilise now.

USD 120.00 /kilo

LEMONGRASS OIL

Cymbopogon citratus India

Production levels decrease during winter. This will impact citral percentage too. There is limited demand for the oil. Price is currently stable.

USD 25.00 /kilo

NUTMEG OIL

Myristica fragrans India

The next harvest season of nutmeg is in March. There are limited stocks in the market and the situation will persist till the next harvest cycle. This has resulted in a price increase and the trend is expected to continue till stocks become available.

USD 60.00 /kilo

INDIA

PALMAROSA OIL

Cymbopogon martinii India

Farmers and traders are holding stock. Oil price is stable.

USD 40.00 /kilo

SANDALWOOD OIL

Santalum album India

The market is stable with a good supply of raw materials. The quality being offered is also consistent. Suppliers are offering competitive pricing, which will help maintain the market balance.

USD 1855.00 /kilo

PEPPERMINT OIL

Mentha piperita India

Areas of plantation may reduce in 2024, due to the low price the product drew this year. Combined with the low acreage of American mint, market price is expected to increase. There is a shortage of chlorpyrifos-free mentha piperita. Market is flooded with low quality material, while high grade stock has been dispatched. Price levels witnessed in 2023 are not expected to continue in the coming year. An upward price trend is expected. Currently, the price of mentha piperita has increased by 5-8%. Mentha oil is being traded for INR 1,006/kg.

USD 30.00 /kilo

SPEARMINT OIL

Mentha spicata India

There is an increase in demand for the oil. But the low-price levels in 2023 can adversely impact plantation areas and furthermore supply in the coming year. Currently, there is a slight increase in oil price.

USD 45.00 /kilo

TURMERIC OIL

Curcuma longa India

Raw material cost has increased, which will adversely impact oil price. The harvest season for turmeric lies between November and February. Currently, oil price is stable, but future trends depend on raw material cost.

USD 15.00 /kilo

VETIVER OIL

Chrysopogon zizanioides India

There is heavy rain in most vetiver growing areas. This has delayed the harvest, which will now commence in January 2024. Demand for the oil is extremely high, as a result, price is witnessing an upward trend.

USD 300.00 /kilo

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

NEVER STOP LEARNING,


ITALY


AUSTRALIA


MOLDOVA


INDIA


AUSTRALIA


SPAIN


FRANCE


CANADA

ALWAYS KEEP GROWING.

Investing time at source to honour and nurture our relationships with the land and the growers.


INDONESIA


SOUTH AFRICA


INDIA

MAGDALENA LEÓN
Chief Scientific Officer

COMPANY UPDATE

MAGDALENE LEÓN: CHIEF SCIENTIFIC OFFICER, ULTRA UK DESIGNING A NEW R&D ROADMAP

Magdalena León joins the Ultra group as Chief Scientific Officer. She has over two decades of experience with essential oils, flavours and fragrances. Her extensive knowledge is a great asset for the group, and her familiarity with organoleptic and physical evaluation of essential oils will usher in a new era in quality control and research and development. Based in the UK, Magdalena will oversee all testing and analysis of essential oils and natural raw materials.

Magdalena started her career as an R&D Chemist at J. Manheimer in New York. After three years the company was purchased by Kerry, and she was retained as a key member of the natural products R&D group, where she remained for almost two decades. Her main interests are the analysis and evaluation of essential oils and understanding their use in flavours and fragrances. She has wide experience in both sweet and savoury flavour creation and applications. As part of her perfumery training, Magdalena developed a comprehensive knowledge of both natural and synthetic ingredients and learned about the major disciplines of perfumery and their application.

Research and development play a crucial role in today's market. Brands want innovative and sustainable solutions and products that adhere to stringent quality parameters. Magdalena, along with a highly skilled team, will support these endeavours with strong analytical insights. A passionate individual, her philosophy of building strong partnerships and striving for excellence run parallel with the core values at Ultra. We welcome Mrs. León to the team and are excited about the company's prospects with her leading our scientific operations.

THE
INDONESIAN
COLLECTION

CITRONELLA OIL

Cymbopogon winterianus *Indonesia*

Demand is low for this product and now prices are very low as well.

However, this is expected to change due to poor yield and severe weather conditions.

USD 15.00 /kilo

CLOVE OIL

Syzygium aromaticum *Indonesia*

Due to the rainy season, the yield of oil from raw material has reduced. Many distillation units in Java are reducing operations. Prices are on an upward trend and will perhaps continue until Feb 2024.

USD 18.00 /kilo

PATCHOULI OIL

Pogostemon cablin *Indonesia*

There is a scarcity of patchouli oil in the market. Harvest predictions till mid 2024 are also not promising. Pre-empting a supply shortage, producers and exporters are making upfront payments to ensure a smooth and consistent source of material.

Several reasons are responsible for this supply shortage. The prolonged drought situation in Sulawesi has impacted the quality of crop. Lush green foliage has been replaced by stunted plant growth. Wilt virus has also affected the plant. Luckily, its impact hasn't been as extensive as was feared initially. The depleting soil situation is a major concern as farmers have used the same patch of soil to replant patchouli without crop rotation to replenish soil nutrients.

While most areas are hit by drought, regions of Poso, Mamuju and Palopo have had some relief. There is also a forecast of rain, which should aid patchouli growth.

With supply issues, adulterated products are entering the market. Buyers need to watch out for contaminated products, which could either contain excessive fat, or elevated levels of DEP.

Throughout 2023, patchouli saw a consistent rise in price. In the last few weeks the price has jumped 25-30%. This price trend will persist for the next 4-6 months.

USD 68 - 72.00 /kilo

NUTMEG OIL

Myristica fragrans Indonesia

Nutmeg Cultivation and Harvesting Insights.

Nutmeg is a highly sought-after spice with significant economic importance in Indonesia, particularly in Sulawesi, Sumatra, and Java. The country stands as a major global producer of nutmeg, contributing to both local consumption and international trade. However, the nutmeg industry faces several challenges that impact production, yield, and quality. A nutmeg tree takes 5 years to yield fruits, and the peak production is around 15 years; then, the yield starts declining, but a nutmeg tree can live up to 40 years.

Key Findings

- ***Mature Nutmeg Selection for Spice (collected after 9 months)***
  Larger nutmegs are preferred for the spice industry. Currently, the spice market is 200% more lucrative than the oil market. 90% of the time it is more interesting, so farmers tend to leave the nutmeg fruits on the tree for an additional 3 months. Sulawesi is by far the largest producer of nutmeg in Indonesia, but it is mostly farmed for the spice. The quality of the oil is not as suitable as the qualities coming from Sumatra and Java.
  The Red Nutmeg Mace is mainly used for spice. However, some is also produced for the oil on demand.

- ***Small Nutmegs for Essential Oil***
  Smaller nutmeg fruits are used for essential oil extraction. Today they have lower myristicin content (7-8%) compared to (9-10%) in the past. The main reason for this decrease is due to climatic changes (last 3 years of rainy seasons).
  The mature nutmeg spice's skin is also added in the distillation.

- ***Intercropping Nutmeg and Cocoa or other crops***
  Nutmeg and cocoa intercropping is possible with an 8-metre gap between plants.
  Nutmeg can intercrop with many other crops. In Sumatra, it often grows in jungles. And if the price is not attractive anymore the farmers would just not harvest and grow something else. They often have different crops to diversify the risk and make sure they have food at the end of the day.

- ***Harvesting Seasons***
  Nutmeg harvesting season varies between August and November (9 months from blooming for the spice and 6 months for the oil).

- ***Climatic Impact on Harvest***
  The 2023 forecast suggests reduced harvest due to adverse climate conditions (excessive rain and warmth).
  Initial warmth is crucial for fruit growth, which has been compromised by heavy rains.

- ***Challenges in Nutmeg Production***
  Nutmeg production in Indonesia faces various challenges, including fungal infections and adverse environmental conditions, which adversely affect production, yield, and quality.

- ***Nutmeg Production and Yield Calculation***
  There are approximately 200 nutmeg trees per hectare, each producing 30 kg of fruit annually. Approximately 4 kg of dry seeds can be extracted from these 30 kg of fruit. So you can consider 800 kgs of dried seed per hectare. The yield of oil is around 7%, resulting in an estimated oil yield of 56 kg per hectare. Considering that there is between 100 and 150 MT of nutmeg oil produced in Indonesia, you would need between 1,785 hectares and 2,700 hectares to produce the whole quantity. 95% of nutmeg farmers have 1 hectare or less. However, we estimate that there are approximately 128,000 hectares of nutmeg in Indonesia. More than 95% is for the spice, and the main production is in Sulawesi, but the quality is not good for the oil. There are approximately 20,000 MT of nutmeg fruit spice grade. (Yield of nutmeg fruit is 0.8 kg per tree)

- ***Future Forecast & Challenges***
  Today, the spice market is 200% more lucrative than the oil industry, so most farmers are waiting for the spice grade unless they need quick cash. Regrettably, fungal infections pose a significant challenge to nutmeg production, leading to premature breaking and damage of nutmegs. There is currently no effective prevention for this fungal virus, resulting in declining yield and quality over time. Finally, the change in climatic conditions with three years in a row of no dry season affected the crop severely.

USD 95.00 /kilo

BERGAMOT OIL

Citrus bergamia Italy

A 40% drop in crop from last year is expected due to high temperatures. The season will commence soon, and price is expected to rise.

USD 265.00 /kilo

LIME OIL

Citrus aurantifolia Italy

High temperature in Sicily is adversely impacting growth of lime. Coloration of fruits depends on difference in day and night temperature. Currently, the daytime temperatures are hovering around 30-35°C and night-time between 20-25°C. Since there is hardly any difference, limes continue to be green even after maturing. The start of season has been delayed due to these imbalances.

USD 90.00 /kilo

ORANGE OIL

Citrus sinensis Italy

Italy is projected to see a 6% rise in citrus production in 2024. 2.58 million tonnes are expected to be produced which includes the volume of orange projected at 1.6 million tonnes.

USD 20.00 /kilo

MEXICO

LIME OIL

Citrus aurantifolia *Mexico*

Lime supply from Mexico faces inconsistencies, leading to diversification in sourcing, while firm pricing is expected until spring. Lime supply from Mexico continues to be inconsistent due to weather and other ongoing conditions including some aging trees, disease problems in nursery stock and drought. That means that fruit sizing and fruit bloom continues to be a problem. In addition, criminal activities are adding to the supply difficulties.

Some major retailers are either moving or diversifying their supply regions to include more supply from countries such as Colombia. Colombia is offering consistent lime supply, though internal markets are also very good in both Colombia and Peru.

Due to the lack of official figures from Mexico, and the fact that the USDA groups together both types of lime with lemon, it is difficult to give an evolution of the production and processing volumes.

The two different botanical varieties of lime can easily be differentiated by size. Key lime is much smaller, about the size of a golf ball. Key limes are cultivated in complicated areas of Mexico on the west coast. The distilled oil, which is the main product when processing, is used in soft drinks, but Key limes are also a popular ingredient in Mexican gastronomy and are very popular on the fresh market. Distilled Key lime is produced differently from other distilled citrus oils, as the whole fruit is crushed and macerated in the juice before distilling. Although Key limes are grown all year the main season is between May and September, and then a winter crop at the end of the year. In 2022 there was no winter crop, which pushed already high lime oil prices even higher to reach record levels. The difficulties in Mexico have encouraged an expansion of Peruvian production and processing. One source recently estimated that Key lime production in 2022/23 was 315,000 MT in Mexico and 216,000 MT in Peru. Production of Persian lime, or Tahitian lime, in Mexico was estimated at 400,000 MT during the same period, while Brazilian production was estimated at 90,000 MT.

The Persian lime is similar to a lemon, but is consumed and processed immature (green). This fruit becomes yellow if left on the tree. The Persian seedless lime is primarily grown on the Mexican east coast and is gaining popularity due to its lack of seeds, especially on the USA fresh market. Approximately 10% of the crop is processed to produce peel oil, often referred to as expressed oil, being the equivalent of a cold pressed quality for other citrus.

Mexico is the main origin of both types of lime and the tension on the lime pricing has only increased since COVID when this fruit was seen as an essential way to stay healthy. Pricing should soften for most qualities if the winter crop 2023 is confirmed, but not dramatically. Increasing production from Peru could also ease the tension.

USD 125.00 /kilo

ARGAN OIL

Argania spinosa Morocco

Challenging market conditions prevail in Morocco. The country depends on wild harvesting for its product supply. However, constant drought poses a major challenge. It has been five years since these unfavourable weather conditions have persisted. It has also negatively impacted raw material prices. Since the end of 2022, and through 2023, raw material prices were at their highest. They are dropping now. The Moroccan government has taken corrective measures and suppliers are hopeful for a recovery. The demand for argan oil remains high and long-term partnerships with producers are helping companies provide an uninterrupted supply of argan oil.

USD 40.00 /kilo

CEDARWOOD ATLAS OIL

Cedrus atlantica Morocco

There is a strong demand for the oil, and it is in stock.

USD 20.00 /kilo

CISTUS OIL

Cistus ladaniferus Morocco

Product is in stock. There is a good demand for it in the market.

Price on Request

ROSEMARY OIL

Rosmarinus officinalis L. Morocco

Unfavourable weather conditions have massively impacted rosemary production. There is heavy demand for rosemary in the market.

USD 82.00 /kilo

WILD CHAMOMILE OIL

Matricaria chamomilla Morocco

Harvest challenges posed by drought and other factors have severely impacted wild chamomile production. But suppliers have managed to offer good organic and conventional quality.

USD 1205.00 /kilo

WINTERGREEN OIL

Gaultheria procumbens Nepal

Wintergreen is gathered from the wild in Nepal. It is an all-season shrub and grows mainly in the hilly regions of Nepal. The variety grown in Nepal consists of 99.8% methyl salicylate. Production and demand for wintergreen has seen a decline. One of the primary reasons are the wildfires of 2021. A majority of the crop was destroyed in the fire and recovery will take at least three years. Due to the sustainability drive, an area is available for cultivation for a two-year period. The constant movement and distance for farmers to collect crops has resulted in collection of smaller volumes.

USD 75.00 /kilo

MANUKA OIL

Leptospermum scoparium New Zealand

Plants in New Zealand are exposed to some of the highest level of UV radiation. Developing nature's own defence mechanism these plants generate a high level of antioxidants. Manuka is one such plant. It grows in the east cape region of New Zealand. Manuka has a high level of b-triketones, which are powerful antimicrobial agents. They aid in creating a natural layer of protection.

USD 700.00 /kilo

PETITGRAIN OIL

Citrus aurantium Paraguay

Due to El Niño the region is experiencing heavy rainfall, and weather conditions are expected to persist in the coming months. Due to carryover stock, supply has not been hit. But if the rains continue, the production process will get delayed resulting in a shortage of product. The production season commenced in mid-October and has been good.

USD 77.00 /kilo

CABREUVA OIL

Myrocarpus Frondosus Paraguay

There is decent supply of oil in the market. Production has been good, and no fluctuations in price are expected till the end of the year.

Price on Request

SPAIN

LEMON OIL

Citrus limonum *Spain*

AILIMPO's lemon crop estimate for the next 2023/2024 crop season forecasts a production in Spain of 1,090,000 metric tonnes (MT), which represents an overall decrease of 10% compared to the 2021/2022 season. This closed with a final production of 1,211,000 MT according to the provisional balance that accounts for the fruit exported, processed, sold in the domestic market, as well as weight losses. The balance has been higher than initially expected partly due to a higher production of Verna lemons due to the strong increase in sizes, and an important harvest of "rodrejo" lemons in summer.

The expected decline is due to adverse weather conditions in 2022 with significant rainfall events in March and April that affected flowering and fruit setting in many production areas. In addition, the summer has been particularly hot with increased temperatures and a lack of rain, resulting in delayed fruit development with smaller fruit sizes at present date. The decrease will be particularly remarkable in the Verna variety, with a 22% drop. In the case of the Fino variety, a 5% drop is expected. In any case, the rate of harvesting and size development will determine the final crop estimate.

Spain will continue to be the world's leading exporter of fresh lemons in 2022/2023, and the second largest processor of lemons into juice, essential oil, and dehydrated peel worldwide. Spain will also maintain its leading position in Europe with conventional and organic lemons, consolidating sustainable production, support for biodiversity and GLOBALGAP and GRASP certifications, offering the European market a local product.

EURO 12.00 /kilo

SPAIN: LEMON BALANCE SHEET AND DESTINATION 2021/2022 SEASON

Destination	*Metric tonnes*
Exports to the EU	642,819
Exports 3rd Countries	21,734
Domestic Consumption	184,392
Losses	42,363
Processing	319,692
Total	**1,211,000**

SPAIN: LEMON CROP FORECAST 2022/2023 IN METRIC TONNES

	Production 2021/22	*Forecast 2022/23*	*DIF (%)*
Fino	850,000	810,000	-5%
Verna	361,000	280,000	-22%
Total	**1,211,000**	**1,090,000**	**-10%**

BERLIN 2023
IFEAT'S BEST CONFERENCE EVER?

After several years of planning and disruptions, IFEAT held one of its best conferences ever in Berlin, Germany from 8^{th} – 12^{th} October 2023. Under the title of *Trade, Tradition, Modern Spirit* it was IFEAT's first Conference in Germany – and hopefully not the last. The Ultra Group was very much involved sending a large team of delegates as well as being the Conference's Gold Sponsor. After the uncertainties and disruptions arising from the pandemic it was so enjoyable to meet up face-to-face again with friends, clients, and speakers from all over the world. The Conference was held in the Inter-Continental Hotel and IFEAT had sole occupancy during the whole five days, which for the most part coincided with some excellent sunny weather. The Ultra meeting room was on the top floor of the hotel with panoramic views over Berlin. An ideal location to meet clients and host Ultra's daily early evening Cocktail Workshops, with all the drinks formulated with natural tasting solutions developed at the Ultra Lab! In addition, Ultra hosted its first Conference party since Bali 2019. The Ultra Festival was at Club 1907 in the iconic Hotel Adlon Kempinski with live music, cocktails, food, and great company, which went on until the early hours of Monday morning.

The IFEAT Berlin Conference Committee, chaired by Jens-Achim Protzen, along with the IFEAT Secretariat are to be congratulated on organising a very successful conference after years of disruptions and uncertainties. Over 1,600 delegates from 557 companies and 59 countries – all IFEAT records – enjoyed a wide range of networking opportunities, lectures, workshops, trade exhibitions and entertainment over five days. The IFEAT Dinner, in an old water treatment works, was reactivated after a 4-year absence, while the Closing Banquet in a refurbished warehouse for the night was excellent.

The Inter-Continental Hotel provided ample space and an excellent central location for a wide range of delegate meetings. The Plenary Session was held in Potsdam III and, with its excellent video and sound reproduction systems, was a good location for the many hours of presentations and discussions, including the IFEAT AGM and Business Session, the legislative and regulatory session on the EU's Green Deal, and sessions on sustainability, innovation, research findings and market analysis. A neighbouring room hosted 30 companies exhibiting over the four days, while throughout the hotel companies had access to many meeting rooms and networking spaces, surrounded by a range of beverages and light snacks. In addition, there were over 40 suites in which individual companies could host meetings with existing and potential companies as well as seminar rooms for the two workshops on Flavour and Fragrance Ingredients and Perfumery. The continued use of a professional Master of Ceremonies, introducing the speakers and moderating Q/A sessions, ensured the programme ran to time with excellent discussions.

The Conference began with a Welcome Reception on Sunday evening, where Conference Chair, Jens-Achim Protzen, summarised the record length and number of people involved in the conference's preparation. He outlined some key programme highlights and encouraged delegates to participate. Certainly, the quality of the presentations was reflected in the record number of delegates attending the Plenary Sessions. A key Conference theme was the uncertainty faced by essential oils because of the unintended consequences of the upcoming EU regulations relating to its Chemical Strategy for Sustainability.

KEYNOTE SESSION

The first session saw two different presentations from host nation speakers. Tillman Miritiz's keynote address reflected on the wide-ranging changes taking place during his three-decade industry involvement, mainly in citrus oils. Among the topics covered in his *The Global Essential Oil and F&F Market: Yesterday – Today – Tomorrow* included price volatility, technological changes, supply chain dynamics, ownership, raw material availability, regulations, raw material pricing, changing consumer preferences and sector sustainability. The second excellently illustrated presentation was on *Essential Oils Past and Present Under the Scrutiny of Analytical Chemistry* by Dr Maja Zippel. After discussing the expanding uses of natural ingredients and essential oils she provided an overview of the increasingly sophisticated analytical techniques used along the supply chain to analyse the components, including different isotopic analytical methods, GC, chiral GC, residual impurities, etc. She stressed that understanding the strengths of analytical methods provided several benefits, such as the opportunity to strengthen the identity of natural products, facilitate consumer safety, and the ability to act on regulatory issues rather than to just react to them. Sector stakeholders use different analytical methods with differing degrees of background knowledge, but it is vital that the essential oils industry and trade take control and know their products on a chemical level to defend them.

EUROPEAN UNION LEGISLATION AND REGULATION

The next session concentrated on regulatory and legislative issues facing the sector. The current EU legislation on the Green Deal and its Chemical Strategy for Sustainability could have major unintended consequences for the global essential oils sector. Four important presentations were made to an overflowing lecture hall. One by Maria Spyraki, an MEP (Member of the European Parliament), who is playing a key role in tabling amendments to the proposed EU legislation aimed at protecting the production and use of essential oils. In *The EU's Chemicals Strategy for Sustainability and its Impact on the Essential Oils Industry* she shared her up-to-the minute insights on how forthcoming events are likely to play out and how the EU's chemical policy, including the Classification, Labelling and Packaging (CLP) regulation could impact the essential oils industry.

Manolo Donaire, President EFEO (European Federation of Essential Oils) followed with a presentation on *From the Lavender Fields to the EU Green Deal: Current State of Play and Impact on the Essential Oils Sector*. He pointed out that the EU's legislation was a direct threat to essential oils not only in the EU but also globally and could particularly impact SMEs, which are so vital to the sector. He also spoke about the increased joint advocacy work being undertaken aimed at influencing EU actions. IFEAT's recent expansion of its EU advocacy work was outlined by Susan Schneider of FGS Global, Brussels in her presentation on *IFEAT's Response to the EU's Regulatory Tsunami*. The ultimate objective is to ensure business continuity for IFEAT Members based on two key initiatives, namely, to amplify IFEAT's voice on key pieces of EU legislation and to enhance the perception of the sector among key stakeholders ending with a call to action.

The fourth presentation was by Dr Dan Selechnik, from the North American based trade association, Fragrance Creators Association, on *Natural Oils in a New Landscape: Regulatory and Legislative Trends in North America*. He discussed the high level of legislative and regulatory activity in the North American fragrance sector, at both Federal and State levels. Topics covered included fragrance allergens, labelling, volatile organic compounds (VOCs) and microplastics as well as the global ramifications of the EU's Green Deal. The session ended with the four presenters on stage with John Cavallo for a "fireside chat", exchanging views on the changing regulatory environment in the F&F sector.

IFEAT AGM, BUSINESS SESSION AND EDUCATION

Tuesday morning was devoted to IFEAT, beginning with the AGM and Business Session followed by the Medal Lecture. The 2022 Accounts were approved, two new EC directors were elected and IFEAT's EC Chair, Catherine Crowley, detailed the expanding of IFEAT's activities in 2022. Presentations were made on the next IFEAT Conference in Bangkok from 10-14 November 2024; two successful Study Tours to South Africa in November 2022 and Spain in early 2023; and two future tours to Italy from 21-27 January 2024 and Turkey from 2-7 June 2024.

From its very early days, IFEAT has had an educational role in the F&F industry and reports were presented on the IFEAT supported University of Reading flavour course and the ICATS (International Centre for Aroma Trade Studies) perfumery course and medals presented to the best student on each course. In 2023 IFEAT took over ICATS as part of an initiative to expand its educational role. One former student, Ashish Jhunjhunwalla, who won IFEAT's "Best Perfumery Student" award two decades ago gave an excellent insight into the learning opportunities in his presentation the following day on *Perfumery & Essential Oils: As Diverse As It Gets - An Insight into the ICATS Diploma.* His presentation included an audience smelling session where attendees experienced the diverse olfactory properties of a range of essential oils from different locations.

IFEAT's educational role continued with two very successful workshops. *The Flavour Workshop* led by Dr Michael Zviely, ran over two afternoons, while Marianne Martin, President of the British Society of Perfumers, ran an interactive *Fragrance Creation* half day workshop.

The IFEAT Medal Lecture was given by Dr Matthias Vey on *Three Decades Working in and for the Fragrance Industry – a Personal Perspective.* His presentation shared his wide-ranging and unique experiences of a career dedicated to fragrance. This included perfumer, quality assurance manager and key positions in the International Fragrance Association (IFRA), where he has driven the association's commitment to science, standards, and the safe use of fragrances in a rapidly changing sector.

INNOVATION, RESEARCH AND SUSTAINABILITY

The previous year's Medal Lecture had expressed concern that innovation, a major stimulus to industry growth, was being stifled by regulation, reduced raw material availability and continued sector mergers and acquisitions. However, several presentations during the Wednesday and Thursday sessions provided fascinating insights into some new innovative research developments and sustainability initiatives being undertaken in the sector.

Stephen Johnson and Andy Thornton spoke on *Using Blockchain to Unlock Value in Difficult Supply Chains: Lessons from frankincense, rosewood, and palm.* Customers are demanding more transparent supply chains, and, using several case studies, they argued that blockchains are an effective means of data collection at source. They can reduce risk in sourcing natural raw materials, can increase brand values and are a cost-effective solution to proving good practices and demonstrating positive environmental and social impacts, especially for difficult supply chains. Marc vom Ende, (perfumer), Sascha Liese (Director of Corporate Sustainability) and Pietersarel de Bruyn (organic farmer and essential oil producer) analysed innovative processes and products to utilise South African marula skin and pulp in the F&F sector. Their presentation on this relatively unknown botanical, *Creating Innovative Fragrance Materials Using New Botanicals from Africa: Marula Fruit* provided a unique perspective regarding the challenges faced, the sustainable and ethical impact on local communities, the use of genetic resources and traditional knowledge in accordance with the Nagoya Protocol and UN Protocol on Biological Diversity.

Many essential oils are produced by traditional steam distillation processes but Victor Lefrançois's presentation on *Next-generation Essential Oil Extraction: Introducing D.I.C. Technology* described a new revolutionary technology promoting greener and more efficient extraction. D.I.C. (Instant Controlled Pressure Drop) optimises extraction capacities while reducing processing times and energy consumption and delivering superior quality aromas.

Unwanted residues are a major concern in essential oil production and trade and compliance with MRLs (maximum residue limits) is often mandatory, especially in marketing organic products. Some research findings from an ongoing IFEAT funded project were presented by Hans Braeckman and Sibel Erkilic Horsman in their *Plant Protection Products (PPP) in Naturals - Identification, Quantification, and Interpretation.* Despite the great progress in analytical technologies there are still considerable challenges in how to evaluate the concentrations of contaminants in essential oils. They highlighted the practical and analytical difficulties and how this can create tension between laboratories, business operators and regulators.

Another key topic throughout the conference was the complex concept of "sustainability". The only afternoon session was a "Roundpanelshop" on *Sustainable Sourcing and Beyond – Initiatives in the Global Flavour and Fragrance Industry.* The discussion was under Chatham House rules whereby participants were free to use the information and opinions discussed but could not disclose the source or who participated. This was a new initiative at an IFEAT Conference in the hope that it would encourage a more open debate. This complex concept means different things to many people and companies along the value chain but has led in recent years to producers often being required to meet myriad rules and regulations monitored by a range of certifying organisations. For most this is very demanding, expensive and time consuming. Eight presenters from a range of organisations presented their views on this wide-ranging topic and attempted to answer questions on the main hurdles, drivers, and achievements.

Directly related to sustainability issues was Elisa Aragon's presentation on *Natural F&F Ingredients can Protect and Promote Biodiversity: Peru Balsam, a Case Study Using Satellite Image Analysis.* She explained how sustainable management of the Peru Balsam tree can protect and promote biodiversity. Using satellite spatial analysis, the research clearly demonstrated the ability to generate a sustainably managed healthy forest resource in El Salvador.

CITRUS AND MINT OILS

Citrus and mint oils are by far the two largest groups of essential oils and there were excellent presentations on both topics given to almost full lecture audiences. Karin Bredenberg's *Crop Market Report on Citrus* provided market updates on the major citrus oils: orange, lemon, lime, mandarin, clementine, tangerine, bergamot, and yuzu. For each oil the main producing origins, the current situation, market dynamics and forecasts were discussed.

A session was devoted to mint oils, moderated by Dr Geemon Korah, who pointed out comments on social media by large F&F companies arguing that synthetics were greener and more sustainable than naturals. The *Minty Oils* session was a response to this in the context of natural mints and menthol, demonstrating the impact that natural oils have on the environment, farmers' livelihoods, the supply chains that depend on them, and the sustainability of naturals. Three speakers covered the impact that these natural oils have on these aspects. Two presentations concentrated on India, which accounts for more than 80% of mint oil and natural menthol global output. Vaibhav Kumar Agrawal spoke on *Regenerative Mint Farming – The Next Big Step in the Sustainable Mint Supply Chain.* He discussed the challenges and crises facing the sector and the need for major action. Various strategies were outlined involving the adoption of sustainable and regenerative farming practices to make mint farming financially sustainable and an economically secure livelihood. Tony Phan's presentation on *Sustainable Menthol: Addressing the Environmental and Social Challenges of India's Natural Menthol Industry* provided a comprehensive overview of the beneficial economic, environmental, and social impact of natural menthol production in India and concluded by outlining practical solutions to mitigate any negative impacts. The final mint presentation was by Alan Brown on *The United States Mint Industry – The More Things Change the More They Stay the Same.* He discussed the many changes to the sector in recent decades and the lack of industry support from the major end user conglomerates which will lead to continued price volatility.

> *"Citrus and mint oils are by far the two largest groups of essential oils and there were excellent presentations on both topics given to almost full lecture audiences.*

SOME CONCLUSIONS

While one cannot satisfy all the people all the time, there is no doubt that a large majority of delegates thought the Conference was a great success. The Conference facilities, the food and refreshments provided, the networking and exhibition spaces as well as entertainment at the IFEAT Dinner and Closing Banquet were excellent. The lecture programme and discussions were of a high standard and it is impossible to provide details of all the excellent presentations made, but speakers had obviously spent a lot of time preparing their presentations. They were wide ranging both in content and in location, in part reflecting the growing diversity of IFEAT and its Member companies' interests. Many of the presentations are available in video form on the Whova app, which was available before, during and after the Conference and provided an important means of communication for both delegates and organisers.

The final Conference event was the Closing Banquet held in a converted warehouse catering for and entertaining over 1,000 delegates until the early hours of Friday morning. The Conference Chair thanked the many Conference sponsors and delegates as well as inviting on stage those who had made it such a success. Fittingly the IFEAT Founder's Medal was awarded to his father Klaus-Dieter Protzen, a Founding Member of IFEAT in 1977. In 2016 the Founder's Medal had been awarded to Sant Sanganeria, founder of Ultra, who had also played a key role in IFEAT's early development. The Berlin Conference provided a clear indication that IFEAT has weathered the pandemic and is growing from strength to strength. The Ultra Team looks forward to meeting up again at the IFEAT Bangkok Conference in mid-November 2024.

GRAPEFRUIT OIL

Citrus paradisi USA

Latest 2023/2024 forecast from USDA in December for all USA grapefruit production is 8.10 M boxes.

The Florida all-grapefruit forecast jumped from an initial season forecast of 1.9 M boxes to 2.4 M boxes. Red grapefruit climbed from 1.65 M boxes to 2.1 M boxes, while white grapefruit rose from 250,000 to 300,000 boxes. Fruit size of red grapefruit at harvest is projected to be above average, and fruit droppage is projected to be average. Projected fruit size of white grapefruit at harvest is slightly above average and projected droppage is below average. If this forecast is realised Florida's grapefruit crop will be 33% larger than last season's final production.

Meanwhile, California and Texas forecasts remained unchanged at 3.5 M boxes and 2.2 M boxes respectively.

USD 65.00 /kilo

USA ESTIMATED GRAPEFRUIT PRODUCTION 2021/2022 TO 2023/2024 DECEMBER FORECAST ('000 BOXES)

Crop and State	*2021/22*	*2022/23*	*2023/24 Dec forecast*
Florida-All	3,330	1,810	2,400
Red	2,830	1,560	2,100
White	500	250	300
California	4,100	4,000	3,500
Texas	1,700	2,250	2,200
Total	9,130	8,060	8,100

LEMON OIL

Citrus limonum USA

The December USDA USA total lemon production forecast for 2023/24 stands at 24.50 M. boxes, unchanged from the October forecast. Arizona production stands at 1.50 M. boxes while the forecast for California production stands at 23 M. boxes.

USD 25.00 /kilo

USA ESTIMATED LEMON PRODUCTION 2021/2022 TO 2023/2024 DECEMBER FORECAST ('000 BOXES)

Crop and State	*2021/22*	*2022/23*	*2023/24 Dec forecast*
Arizona	1,250	1,400	1,500
California	25,200	26,500	23,000
Total	26,450	27,900	24,500

ORANGE OIL

Citrus sinensis USA

The USA citrus production is forecast at 4.51 million tonnes, up 1% from the prior year. Oranges will account for 2.48 million tonnes.

The 2023/2024 Florida all orange USDA December forecast is 20.5 M boxes, unchanged from the October forecast. If realised, this will be 30% more than last season's final production. The forecast consists of 7.50 M boxes of non-Valencia oranges (early, mid-season and Navel varieties) and 13.0 M boxes of Valencia oranges.

Florida Valencia orange production in 2022/2023 hit a historic low of 9.6 M boxes, in large part due to losses from Hurricane Ian. Because 96% of the Valencia oranges grown in Florida go to juice, domestically produced orange juice (OJ) reached its lowest level in at least 50 years. Historically, Florida's production accounted for about 85% of the oranges going to processing in the United States. However, Florida's share of oranges for processing declined to 60% in 2022/2023, with the remaining 40% coming from California and Texas.

Citrus greening (HLB) has significantly impacted the Florida citrus industry. The disease has caused tree health, yield, and fruit quality to decrease significantly over time. In 2022–23, due to the combined impact of HLB, Hurricane Ian and a freeze in December 2022, the state-wide average yield for both Valencia and non-Valencia oranges was estimated to be approximately 50 boxes per acre, down from 389 and 473 boxes per acre in 2003/2004 respectively.

USD 16.00 /kilo

USA ESTIMATED ORANGE PRODUCTION 2021/2022 TO 2023/2024 DECEMBER FORECAST ('000 BOXES)

Crop and State	*2021/22*	*2022/23*	*2023/24 Dec forecast*
Non-Valencia Oranges			
Florida	18,250	6,150	7,500
California	31,500	36,500	37,000
Texas	170	570	450
United States	49,920	43,220	44,950
Valencia Oranges			
Florida	22,950	9,650	13,000
California	7,600	6,700	7,500
Texas	30	560	350
United States	30,580	16,910	20,850
All Oranges			
Florida	41,200	15,800	20,500
California	39,100	43,200	44,500
Texas	200	1,130	800
United States	80,500	60,130	65,800

CASSIA OIL

Cinnamomum cassia Vietnam

The second harvest season of cassia is in its final stage. Unfortunately, distillers do not have enough raw material to process the oil. Buyers should formulate procurement plans for 2024 keeping the upcoming holiday season in mind.

In terms of composition, almost 79-80% cassia oil consists of cinnamic aldehyde. Another high value isolate in cassia is benzaldehyde, making up 1.5-2% of the oil. Thus, the price of cassia raw materials directly influences their price too. If the challenges regarding raw materials continue it will increase the price of raw materials, and isolates like cinnamic aldehyde and benzaldehyde.

USD 42.00 /kilo

BASIL OIL

Ocimum basilicum Vietnam

The Red River delta area accounts for almost 85% of the growing area. The sowing season for basil begins in December. Harvesting commences three and a half months after the sowing season. The annual production capacity is 15 MT.

USD 122.00 /kilo

STAR ANISE OIL

Illicium verum Vietnam

Vietnam is the second largest exporter of star anise products. The harvest season for star anise commences in October and continues till December. After harvesting the leaves wilt for a couple of months before distillation. The annual production capacity is 120 MT. The best market rate for star anise is available between November and March.

USD 30.00 /kilo

TAMANU OIL

Calophyllum inophyllum Vietnam

Tamanu propagates in the coastal areas and lowland forests. The flowering season is between February and June, while fruits are picked from December till August. Oil is extracted from the fruits via cold pressing. The annual production capacity is between 5-10 MT.

Price on Request

THE ULTRA FESTIVAL
COCKTAILS AND DINNER EVENT
IFEAT BERLIN 2023

1907 HOTEL ADLON KEMPINSKI, BERLIN

Ultra International hosted a cocktail event for its friends, customers, suppliers and colleagues at the Hotel Adlon Kempinski, Berlin. The setting was elegant with music, drinks and appetisers to create a lively ambience. All those who attended engaged in friendly conversations in a relaxed atmosphere. The event was a perfect precursor to a hectic conference week to follow.

golden grove
NATURALS

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Santalum album
Santalum spicatum
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