

# Exclusive report

## Natural Products in Fragrance

### Emerging challenges for raw material producers

Bertrand de Preville, Biolandes

Today's business environment increasingly requires better service and reactivity from fragrance industry suppliers, in addition to lower prices, flexible product availability and safer products. With resurgent consumer interest in natural products, suppliers of natural ingredients face new challenges in meeting customers' high expectations.

#### Dominance of Synthetics

Throughout the past 50 years, due in part to the expense of natural ingredients, the fragrance industry's development and use of synthetic products have increased considerably. (Estimated market figures for several top synthetics are presented in T-1.) In comparison, market figures for naturals (presented in T-2) are rather modest.

To illustrate the point, let's look at rose, which has a far more extensive history than any synthetic. Rose oil probably was invented more than 1,000 years ago; rose concrete and absolute first were produced about 90 years ago. Yet, despite its long history, the entire natural rose market is far below the market of any of the (newer) major chemicals. Furthermore, this naturals market is fractured among:

- Thousands of farmers
- A handful of major extracting companies
- Hundreds of small producers
- Many intermediate companies

Despite the pessimism outlined with these numbers, there is great potential for natural extracts. To begin with, the demand for naturals is growing fast from both consumers who are asking for a return to nature, as well as perfumers who are looking for novel creative ingredients. Secondly, the potential of botanicals appears unlimited. Many materials/species have yet

#### Current market figures for several top synthetics

T-1

Material	Estimated market size
Galaxolide (IFF)*	\$60 million
Hedione (Firmenich)*	\$40 million
Lilial (Givaudan)	\$40 million
Linalol (synthetic)	\$45 million
Iso E Super (IFF)	\$25 million

\*Galaxolide emerged in the 1960s, appearing in *Musk of Jövan*. During that same period, Dior's *Christian Dior Eau Sauvage* made use of Hedione.

#### Current market figures for several top naturals

T-2

Material	Estimated market size
Patchouli	ca \$30 million
Rose	\$15 million
Fir balsam	< \$2 million
Tuberose	< \$2 million
Tagetes	< \$1 million
Black currant	\$1–2 million
Mate	> \$1 million (estimated)
Red pepper	> \$1 million (estimated)

to be discovered and/or exploited, while others currently used in other applications may have use in foods and fragrances, cosmetics, pharmacy, etc. In addition, agricultural processes, including micropropagation, have improved and diversified varieties. Other

processes, too, in the preparation of botanicals post-cropping made great strides: drying, fermentation, extraction techniques (using new solvents, for example), etc. The possibilities are, thus, huge—as are the challenges. This will be the subject of my article.

## Overcoming the Challenges

The current difficulty for naturals producers is to address the new business requirements of their customers in terms of quality, price, service, etc. This has caused the decline or stagnation of many products. These are well-known problems that keep coming back to haunt the industry:

- Irregular availability
- Excessive price fluctuations
- Inconsistent material quality
- Safety/regulatory issues
- Sustainability and socioenvironmental issues

Grasse's naturals producers first paved the way some 80 years ago without the tools available today. Our industry now has at its disposal a range of modern tools with which to take on several challenges.

**The challenge of farming:** Natural products are produced via agriculture, which means a medium- and long-term investment of five to 10 years at least. Unfortunately, the other end of the chain, the user, has a short-term vision of its business—two to three years, maximum. Therefore, it is not unusual to have, at the same time, a producer that surrenders plantations and a user that develops the market for these products. This challenge can be overcome, in part, by better communication between users and producers. By breaking into farming, the producers of oils and absolutes can build this bridge and thus better explain the unique challenges of naturals to their customers (who then can impart this information to consumers). This line of communication can move in both directions. Under this system, customers will be more inclined to convey their strategy back to naturals producers and integrate a longer-term focus on their business development. In this way, both parties' business plans can be addressed. This system is essential for compensating for shortages and, thus, price volatility, because discrepancies often are too distant and disconnected from the final user in order to be properly understood. To illustrate: Botanicals often represent 50% of our costs and are the main source of our problems.

**The challenge of processing:** Common processing practices are out of date and are not compatible with the increasing demands of the modern world. Producers need to deal with solvents in a more satisfactory manner, improve/update equipment, and manage processes using electronics and IT. The integration of new technologies is particularly important in decreasing energy bills and improving waste management. Such labor-saving practices will enable more extractions to run per day.

**The challenge of transparency:** The problem of adulteration has to be dealt with. Unrealistic price pressures from buyers throughout the years resulted in the supply of “cut”—or “extended”—batches from suppliers, including lavender, ylang-ylang, rosemary, etc.

I will use lavandin, or lavender, to illustrate a dangerous trend we should all resist. It is unfortunate to notice that, throughout the years, the largest traders of lavandin and lavender oils also have become the largest buyers of linalool. As most readers well know, linalool is the most common nature identical extender for those oils. It is in the interest of perfumers and buyers that pure and natural oils are purchased, and that they, the customers, incorporate any linalool themselves during their creative processes. Unfortunately, this philosophy is sometimes hard to communicate to some companies who put pressure on their purchasing departments to save money.

**The consumer perspective:** Because it appeals to consumers, the marketplace has seen the increasing use of the labeling term “natural.” This includes

marketing campaigns for aromatherapy candles, “natural” air fresheners and perfumes fragranced with an exotic flower grown in the Himalayas or the rain forest, etc. Consumers are led to believe that these fragrances or cosmetic products are full of naturals, although the reality very often is different. Marketers are abusing the trust of consumers and the reputations of companies that have a real commitment to naturals—companies that are experiencing difficulties in differentiating themselves from the rest of the so-called naturals pack.

**The challenge of sustainability:** This is fundamental for the future and demands the involvement of everyone—from farmers to consumers. Sustainability requires respect for the environment (sandalwood in India, for example). Sustainability also demands respect for international labor laws in countries where producers set up farms or facilities. Essential oils often are the only cash crop available to farmers in especially remote areas of developing nations. Producers need to ensure long-term activity and income for the people who depend on the crop. This balance can be achieved only if the industry remains committed to those ideals for the long run.

**The challenge of creativity:** It is no coincidence that major developments in synthetics throughout the past 50 years have been made by companies equipped with strong development labs, efficient marketing departments and internal teams of creators who had privileged access to new materials. It is now the task of naturals producers to better market new naturals and technically explain their creative potential to the industry.

**The challenge of safety:** Due to their various applications, naturals are subject to legislative provisions in the sectors of food, feed, nonfood and pharmaceuticals (including household remedies, aromatherapy, etc.). New naturals are vetted for potential risks to health in the same way in which new aroma chemicals are. Any naturals producers seeking to break into the market with a new ingredient will have to meet existing regulations and make available to regulatory agencies a list of any material’s major constituents and potential allergens. In addition, producers must register the product into the Codex if it has not been already and be able to answer any customer regulatory questions promptly—not the easiest part of the job, by the way!

Sometimes producers of naturals believe that they invest too much money in nonproductive investments, such as analytical equipment, laboratory technicians and scientists, safety experts, etc. Although this sometimes may be the case, producers must consider this an investment in the future and the best way to reassure our customers. At the same time, producers should team with their suppliers, customers and consumer associations to oppose excessive regulatory agencies and lobbies. After all, one is exposed to far more limonene when unpeeling an orange than by the orange oil diluted in a fragrance.

## Moving Forward

Customers must understand that everything I have mentioned—regulatory, creativity, sustainability, processing, etc.—has a cost. The reality today is that 90% of the newly introduced ingredients are synthetic aroma chemicals. Ironically, 90% or more of the inspiration and marketing that drive the design strategy of new aroma chemicals come from nature (such as headspace, for example).

The question no longer is why can’t we, but how can naturals advocates turn our dreams to reality and reverse this trend?

The demand for natural products always has existed and is now gaining ground. In cosmetics, a scientific approach to plant extracts has accelerated the exploitation of their functionality. Ayurveda, aromatherapy and other similar ancient healing techniques are resurging in the marketplace. This market for natural, organic and environmentally friendly products is growing at a fast pace. Can traditional perfumery afford to ignore these tendencies? Will manufacturers be able to develop a strategy for naturals?

Other industries have learned to cope with the issue of naturals. In the flavor industry, for example, the Ricard group encountered enormous difficulties in the 1970s with the supply of natural anethol, one of the main ingredients used in the French aperitif *pastis*. Ricard didn’t find a solution with its traditional suppliers, and decided to break into the cultivation and production of fennel: To the best of my knowledge, it has not had any serious problems since.

In conclusion, I would say that there is reason to be extremely confident about the bright future of naturals in the F&F industry. The difficulty lies with the great variety of products. Bringing together the users’ needs, the customers’ needs and the producers’ potential will enable the industry to successfully manage these difficult issues.

Success will require more transparent communication and integration at every stage of the industry—from the farmer to the consumer.

Address correspondence to Bertrand de Preville, Biolandes, 44 route de Placassier, BP 82085, Grasse, Cedex, 06131 France.

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