

# F&F Materials of Southern Africa

Buchu, rose geranium, hyraceum, rose hip, tagetes, baobab and more



*Rose hip oil (Rosa rubiginosa) has gained importance in the last several years, with use in beverages and teas.*

“Many times South Africa is used by multinationals as a test market for new products,” says Catherine Crowley, director of Eucaforest (Pty) Ltd. and African Bush Products Inc. Crowley recently presented insights into some of southern Africa’s unique flavor and fragrance ingredients and applications during the Women in Flavor and Fragrance Commerce fall seminar, “Saving Essential Oils around the World.”



*Catherine Crowley; photo courtesy of John Duff.*

Crowley—raised in an agricultural family—started African Bush Products 11 years ago when she was living in South Africa. Under the advice of family friend and southern African botanist Earle Graven, Crowley expanded into indigenous southern African oils and botanicals. In 2006, Crowley and her family—including sister-in-law Suzy Crowley—became majority shareholders in Eucaforest.

“One of the most exciting things about our industry is that there is always something else to learn about our products: it could be understanding a fractionation process on a new level, the more detailed chemistry of the oils, alternatives for harvesting and impact on yields for various crops, or considering additional growing areas and assessing these based on the specific microclimates present,” says Crowley.



*Hyraceum is produced from the crystallized urine of the Cape hyrax and is reportedly reminiscent of agarwood, civet, castoreum, musk and tobacco.*

## Traditional Materials

Organized cultivation of plants began in southern Africa—principally Botswana, Lesotho, Namibia, South Africa and Swaziland—in the late 1800s. In the 20th century, aromatic plant agriculture included lavender and rose geranium. Today, the spectrum of materials derived from the region’s botany has expanded.

“The good thing about it is that, in a developing economy, they’re not just exporting the raw products—they’re creating value-added products,” says Crowley.

**Buchu:** Buchu oil is one of the earliest indigenous cosmetic/flavor ingredients commercialized in South Africa. In recent years, greater areas of land have been cultivated, and the oil now finds use in everything from yogurts (ex: mixed with blackcurrant) to fruit juice to sparkling water. “It’s a product that’s seen tremendous fluctuation in the last five or six years,” she adds, noting that, as a result of overproduction and its effect on the market, the selling price is now roughly 25% of what it was three years ago. This state of affairs highlights ongoing production and pricing fluctuations, which recently led farmers to uproot some 75 hectares of material, which, if processed, would have yielded about 2.2 tons of buchu oil. In its place, some farmers are instead planting food crops. Crowley warns that if the current price stays where it is, buchu oil will no longer be economically sustainable for local farmers. Conversely, when there was insufficient supply of buchu plants, the oil’s price was too high. As a result, farmers overplanted and thus created a crash in prices—an all-too-familiar cycle for many key natural products. And so, Crowley stresses the need for price and supply stabilization for sustainability for both growers and industry.

**Tagetes:** Tagetes is a wild-grown ingredient processed with mobile stills. It is used primarily for fragrance, though it does find some use in flavors. Crowley says that production has historically hovered around 5–6 tons/year, though it has recently dropped somewhat due to changes in rain patterns. Meanwhile, demand has increased.

**Rose geranium:** This material has historically been supplied by Egypt, China and, to a lesser extent, India. South Africa produces 15–30 tons/year of indigenous Bourbon-type rose geranium (*Pelargonium capitatum x radens*), which has become more commercially viable as other sources have become overtaxed and, as a result, more expensive. Harvesting is semi-mechanized.

## More Recent Ingredients of Interest

**Baobab oil:** Baobab trees (*Adansonia digitata* L.) are indigenous to southern Africa, including Botswana and Namibia. The cold-pressed oil from the seed within the tree's fruit finds wide use as a moisturizer and emollient in skin and hair care products and contains high levels of omega fatty acids. Meanwhile, baobab fruit powder finds use in applications such as yogurts.

**Marula oil:** Marula fruit (*Sclerocarya birrea*), when fermented, has been known to intoxicate elephants, while the fruit pulp is the basis for the popular African liqueur, *Amarula*, which is creamy and nutty-flavored. The essential oil is derived from the kernel of the fruit, the processing of which has expanded as processing technology has improved. Current facilities can produce ~6 tons/month, according to Crowley. The oil has some use in flavors for its nutty aroma and taste, though the material is primarily valued for its antioxidant, moisturizing and nutritional facets.

**Rose hip:** Rose hip oil (*Rosa rubiginosa*) has gained importance in the last few years, says Crowley. Lesotho, the primary growing region for this material, can produce up to 10 tons/year. Most of the crops are wild-grown, though there are a few areas that are being cultivated. Rose hips themselves can be used as an ingredient in beverages and teas. The oil, which contains 77% fatty acids, is known as a constituent that helps regenerate cells and repair damaged tissue.

**Hyraceum:** Perhaps the most unusual ingredient covered by Crowley's presentation, hyraceum presents an historical, zero-cruelty, animal-derived material. Produced from the crystallized urine of the Cape hyrax, hyraceum is reportedly reminiscent of agarwood, civet, castoreum, musk and tobacco. Hyraceum is hand-harvested from the rocks upon which the guinea piglike creatures relieve themselves. The material can impart valuable animal notes to scents—if the right solvent can be found.

## Questions of Fair Trade

Responsible development of natural products in southern Africa, says Crowley, requires “balancing out doing the right thing because it is what you believe in with the need to report back to consumers who want to know the level of community development occurring in connection with the products that they buy.” Given the cost and resource burdens of formalized fair trade processes, she says, and the fact that these costs cannot be passed along to customers or consumers, means alternative methods for communicating the practice of fair trade must be considered. And so, Crowley's philosophy is to engage in community development—donating land, setting up medical clinics, putting in electricity, etc.—without putting irrecoverable funds into certification programs. Instead, she says, it is crucial to communicate the stories of products and their producer communities to customers in order to infuse end products with strong back stories.

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