

# Competing Ingredient Demands

How the world's food needs and novel natural aromatic ingredient applications could put new pressures on F&F ingredient supplies

With ingredient pricing already impacting the F&F industry, the 2011 meeting of the International Federation of Essential Oils and Aroma Trades in Barcelona provided an opportunity to explore the challenges of the future. There will be 9 billion people on earth by 2050, noted Daemmon Reeve (Treatt USA) during a panel at the event's general session. As a result, food costs will rise, food demands will grow and, perhaps, supplant citrus in some areas as other foodstuffs rise in demand. In Brazil, Reeve explained, sugar is already putting pressure on citrus; in Florida, blueberries are supplanting citrus; meanwhile, there doesn't appear to be significant sources coming on line to pick up the slack of existing producers. Finally, he said, credit difficulties in recent years led to destocking in the F&F industry, swinging pricing power to origin.

Managing the ups and downs of supply and demand is difficult due to long start-up times for natural ingredients, said Colin Ringlieb (PepsiCo). He added that on this count the industry needs to do a better job.

Today, the F&F industry uses standardized oils, said citrus consultant Alfred Fogel. Perhaps, he continued, the industry could add alternate qualities of these materials to the palettes of formulators by introducing them in collaboration with flavorists and perfumers. The industry, he said, will have to take the initiative to pioneer any such new qualities.

Later in the program, James Gobert (Telmont Essentials) explained that essential oils and other natural aromatic materials are being employed by other indus-



*Myristica fragrans (nutmeg) oil may have insecticidal activity, making it attractive to the insecticide industry.*

tries to defend food production, particularly as demand booms for "softer herbicides" and other solutions. *Melaleuca alternifolia* oil, for example, can treat black sigatoka blight in bananas; methyl cinnamate can be used as a nematocide; citronellic acid can act as a muscicide; and *Anethum graveolens*, *Piper angustifolium* and *Myristica fragrans* can be used in synergy as insecticides. Meanwhile, oregano oil has found novel use in parasite control and as a feed stimulator in fish production. Clove oil and ho wood oil can be applied in fish and animal farming to reduce metabolism. Tea tree oil can be used to control mastitis in milk production.

Gobert noted that as investigations into the use of natural substances, essential oils and isolates grows, competition for supplies of these functionally active-rich materials will increase. Demand for essential oils in efficacious rather than hedonic applications will boost competition and prices. The growing organic food market has a need and can pay for these natural solutions. This, said Gobert, could have major impacts on supplies and create a geographic shift in production areas.

One key problem, he continued, is that the herbicide industry, for example, does not understand the complexities of essential oil production. Those companies are not yet thinking years ahead as necessary. And so it may be up to the F&F industry to ensure natural products continue to be available and sustainable.

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