

The sweet smell of citrus success

Bergamot, a citrus grown almost exclusively in Reggio Calabria, Italy, has been a favoured essence of the fragrance industry for centuries because of its quality and versatility. We visit a fourth-generation company that takes a thoroughly modern and sustainable approach to the production of this valuable ingredient in high-end perfumes.

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PHOTOGRAPHS BY MAURIZIO CAMAGNA

FRESHLY SEPARATED bergamot oil is an enigmatic emulsion. Its colour is iridescent green streaked with sunshine, reflecting its origins as a small greenish citrus hybrid between oranges and lemons. The heady fragrance encompasses both these fruits, and adds a subtle suggestion of exotic spices like cinnamon and cloves.

No wonder it was used in the original eau de cologne. An Italian named Johann Maria Farina, who had settled in the German city of Cologne, created the first scent under the name of his

adopted city in 1709. Homesick for the smells of his native land, he had written to his brother the previous year: *"I have discovered a scent that reminds me of a spring morning in Italy, of mountain narcissus, orange blossom just after the rain. It gives me great refreshment, strengthens my senses and imagination."*

TODAY, 90 PERCENT of the world supply of bergamot comes from Reggio Calabria, the region at the very "toe" of southwest Italy, and the fruit is still favoured by the "noses" of the fragrance industry: it is found in both traditional and modern perfumes because of its freshness, multi-faceted aroma, and its ability to blend well with other



scents. It is also used in many other aromatized products such as cosmetics and detergents – but you may be most familiar with it as an essential ingredient in Earl Grey tea.

The fortunes of family company Capua 1880 have been intertwined with bergamot and other citrus fruits of Reggio Calabria (oranges, lemons, mandarins) since 1880, when a Calabrese couple, Caterina and Domenico Capua, began supplying bergamot oil to perfume makers in Paris, Grasse, and elsewhere. The Capuas extracted the oil from the fruit using the old-fashioned pressing techniques of the time, but their marketing was modern for its day, gaining international clients from the outset.

TODAY, A FOURTH generation Capua, Gianfranco, runs the company, with his twin sons Giandomenico and Rocco already preparing for fifth-generation leadership. Much else has changed; extraction is done with high-tech Alfa Laval centrifugal separators, and marketing is entirely global (the company has no domestic clients). The product focus is also quite different: fragrances for perfumes, cosmetics, and household detergents represent only half of Capua's current turnover, which has experienced double-digit growth for the last half decade. The other 50 percent of business is comprised of flavourings for the food and beverage sector.

The growth in use for fragrances can be attributed to the quality, stability, and versatility of Capua oils, and the company's ability to supply them at a price acceptable to the buyer. The growth in use for flavouring is riding global demand for a "return to

nature". The natural fruit oils produced by Capua 1880 for the food sector are sold to companies that make flavour essences for food companies, and products like these that deliver more natural flavour and aroma are preferred by many consumers.

The company's strategy for future growth consists of three pillars, according to its president. The first is innovation. "R&D is continuous to help us develop new product processing," explains Gianfranco Capua. His company is always studying new techniques for extracting, filtering, and treating essential oils.

The second is new product creation. Citrus fruits don't change, but Capua is always looking for new ways to fragment the fruit oils to create something different. "Our clients are hungry for new ideas," notes Giandomenico Capua, one of Gianfranco's sons. "We may suggest ten new fragrance or flavour combinations and they want to hear about all of them. They may reject nine, but one will be accepted." The majority of Capua's oils for fragrances are custom-made for its clients according to the standards they specify.

THE THIRD PILLAR is market expansion. The "return to nature" trend has resonance not only in developed markets like Europe and North America but also in newer markets such as India and China, and even in Central and South America, who are leaders in the production of citrus fruits. Growth is prompting the company to consider a new purpose-built plant in the next few years, and Alfa Laval technology will be a factor in the layout of that facility. ■



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GIANFRANCO CAPUA, CAPUA 1880



Gianfranco Capua is the fourth-generation head of Capua 1880. The photo behind him is a reminder of family tradition.



Less energy, higher end-product quality

When Giandomenico Capua took over responsibility for citrus processing at Capua 1880 in 2013, he faced the problems of business growth and ageing equipment. He looked to new technologies in citrus oil separation equipment for solutions.

Over the course of the next five years, he evaluated separation equipment by Alfa Laval and others. The Alfa Laval CR 250 ranked at the top of his list for its performance, quality results, and yield increase.

On-site testing began in May 2017 and the results confirmed Capua's expectations.

- The Alfa Laval CR 250 can handle 4,000-5,000 litres of emulsion an hour – more than double the old capacity of 1,200-1,600 litres an hour.
- The separator uses 30 percent less energy than competitors' equipment for the same results.
- Its bottom-fed, fully hermetic design is gentler on shear-sensitive particles and eliminates oxygen pickup, leading to better quality aromas in the final product.
- The design meets the EU's highest regulatory standards for health and safety.
- The fact that the operator can optimize the process during production means reduced need for downtime for mechanical changes.

Sustainable citrus

Sustainable practices are ingrained in Capua 1880's corporate culture. Since the company's raw materials are 100 percent citrus fruits from local farmers, and all its finished products (essential oils) are sold abroad to environmentally aware multinational corporations, it is totally committed to sustainable goals. And it has been officially recognized as such: in January 2018, Capua 1880 was certified by the Union for Ethical Bio-Trade (UEBT) as a sustainable organisation.

In the first phase of this certification, Capua documented the sustainable practices of 450 of its citrus suppliers. The information gathered from this research was passed on to the UEBT for a subsequent phase of certification.

According to company head Gianfranco Capua, his agricultural suppliers should be motivated to follow sustainability guidelines – otherwise it is up to Capua to motivate them. By doing so, he says, "the quality of their produce improves, their yield increases, their efficiency improves, their savings increase, and they make more money".

Natural selections

Besides bergamot, some of the other raw materials found in high-end perfume can include:

- Woods are important in providing the base notes to a perfume. Birch, cedar, juniper, pine and sandalwood are among those commonly used.
- Ambergris, which is produced in the intestines of sperm whales. Occasionally found washed up on beaches, ambergris can be worth more than USD 10,000 per kilo.
- Musk is a potent, reddish-brown substance secreted by male musk deer. Today it has mainly been replaced by synthetic musk.
- Other natural ingredients used in perfume include flowers, grasses, spices, fruit, roots, resins, balsams, leaves, gums and bark. Alcohol, petrochemicals, coal, and coal tars are also used.

Citrus fruits are washed after arrival at Capua 1880, under watchful and experienced human eyes.



The bottom-fed decanter design, optimized by Ioannis Koulioumpas, produces better-quality citrus essence which means better aromas in the final perfume.