

FUNCTIONAL FOODS & NUTRACEUTICALS

Superfruits — superheroes of functionality

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April 2007

*The halo of health surrounding fruits is getting brighter with the flood of continuing good news about their health benefits. From açai to cranberry, **Shane Starling** peers into the future of these functional powerhouses*

Juices, smoothies, bars, muffins, cereals, dairy — there are few food categories superfruit purées, powders, extracts and whole fruits have not been incorporated into. Supplements are performing well, too, with ingredients suppliers like California-based Cyvex Nutrition reporting a healthy trade in fruit ingredients including pomegranate, cranberry and red grapes.

Mangosteen, açai, goji, tamarind, gac-chi, lychee, acerola, yuzu, seabuckthorn, pomelo and noni are just some of the new breed that have made inroads into Western markets in recent years.

In a world increasingly perceived as degraded, especially when it comes to modern food production, the naturalness of the fruit sell and its intrinsic healthfulness — backed by convenient delivery platforms and innovative packaging — have propelled many of these fruits into the public eye.

Some, like açai, have benefited from celebrity endorsement (it was mentioned on the Oprah Winfrey show by skin specialist Dr Nicholas Perricone). The table was more substantially laid by the likes of cranberry and blueberry, and more recently pomegranate, which took scientifically backed nutritional payloads and developed sophisticated marketing campaigns to educate the public and entice it to purchase equally sophisticated end products.

Ocean Spray with cranberry, the Wild Blueberry Association of North America (WBANA) with blueberries, Sambazon with açai, and Pom Wonderful with pomegranate (although Pom Wonderful's US sales slipped 15 per cent from \$84.5 million in 2005 to \$71.2 million in 2006 at retail outlets except Wal-Mart, according to market analyst IRI), are all fine examples of category-breaking campaigns.

Major food and beverage companies are taking an interest, as are retailers with own-brand offerings. PepsiCo has been particularly active in the area, with acquisitions such as California-based Naked Juice at the end of 2006. At around the same time it launched a new brand, Fuelosophy, which includes a pomegranate/berry blend.

Coca-Cola has released an energy drink in Australia called Monster, which contains açai, and recently acquired Fuze Beverages in the US. The latter are infused with a Super CitriMax weight-management ingredient from California ingredients supplier and supplements maker Interhealth's. It comes from an Asian berry called *Garcinia cambogia*.

As Jon Wisniewski, managing director of New Zealand-based açai supplier and product maker, Nu Fruits, notes: "The fact that the bigger drinks companies are showing an interest in açai indicates it could make it through to the mainstream. Things are going well. There are a large number of new products coming out and a lot of NPD pipeline work being done."

A plethora of food and beverage start-ups have popped up around the world in markets such as North America, Australia, New Zealand, Japan and other parts of Asia. Major supermarkets



in the UK such as Tesco, Marks & Spencer's, Sainsbury's and others have launched smoothies, juices and other products incorporating superfruits as have high-profile players such as Innocent smoothies — the UK market leader.

Dr Wayne Geilman, senior research officer at Utah-based mangosteen pioneer and retail leader in the US, Pure Fruit Technologies, notes about 15 mangosteen competitors have sprung up in the past year in the US, many making spurious claims he sees as being damaging to the industry. "A few marketers dominate the Web with their message, blocking out others who have a good message to give," he observes.

Pure Fruit Technologies juices (including its goji, seabuckthorn and gac-chi products) are classified as supplements under the 1994 Dietary Supplements and Health Education Act. Typically dosage and formulation issues are a concern. "There are many products that contain superfruits in name only," says Geilman. "A weak product hurts the market for everyone. Our scientists look at traditional use rates, biomarkers, cost, convenience and response."

He adds: "Some formulators often forget flavour as an important factor in the success of a product. Most of the truly superfruits do not have the most pleasant taste and must be blended with other products to make them palatable. I think the future is very bright especially with the media support superfruits are getting."

However, not all the press has been glowing, with the likes of Washington DC-based better-nutrition lobby group, Center for Science in the Public Interest (CSPI), questioning the scientific backing of the health benefits typically attributed to mangosteen, noni and pomegranate. "Are these three juices 'super,' or just a super opportunity for a lot of people to make a lot of money?" CSPI asks of products that sell for as much as \$70 for a one-litre bottle.

While applauding the rise of superfruits in general, Arizona-based beverage specialist Jim Tonkin wonders if the public is becoming wary of the antioxidant sell attached to many superfruits. "People are buying them now because they are new and they are intrigued, but time will tell how many of these products stay the distance, especially as science, health-claim and formulation issues remain problematic."

It's a sentiment backed by Doug Klaiber, general manager at Massachusetts-based cranberry-ingredient specialist, Decas Botanical Systems. "Science-backed and proven fruits will remain in the mainstream and continue to grow, and that is why cranberry continues to grow. Most of the new superfruits have little or no real science support, but those that can substantiate a health benefit, may find themselves more mainstream in years to come. We are considering cranberry combinations with other superfruits." Klaiber says product growth for Decas has come in breads, cereals and nutrient bars.

As Arun Hiranandani, New York-based senior manager of worldwide marketing for Ocean Spray Ingredient Technology Group notes, "It's one thing to have a fruit that is high in antioxidants. It is another to develop products consumers actually want to purchase."

With such issues on the table, are superfruits here to stay or are they just another fad bound to slip from public view like so many low-carb foods? Do they meet their functional sell? Do they taste good enough for the mainstream crowd? Are they priced reasonably enough? Are the platforms convenient enough?

If you trust the industry pundits, then the answer to most of these questions remains a resounding 'yes.' As author and editor of trade journal *New Nutrition Business* Julian Mellentin notes in his 2005 report, 'Superfruit: eight key studies in marketing healthy fruit,' "If you are



in the business of whole fruit, fruit beverages or fruit ingredients, you can look forward with more optimism than most sections of the food industry to a bright future, propelled by the wellness trend. Fruit, it seems, may turn out to be the future of functional foods. More than any other food type, fruit has a halo of health. It's a halo that's being made brighter all the time as a steady stream of news about fruit's benefits, such as fibre and antioxidants, makes its way into a media eager for simple, positive stories about healthy eating."

In his 'Ten Key Trends of 2006,' Mellentin highlights how mainstream consumers who are typically suspicious of new ingredients — even those that have scientific backing — do not hold the same reservations when it comes to new fruit ingredients and products. "For new fruits (provided they taste good) consumers seem willing to make an exception, since fruit benefits from having a naturally healthy halo in consumers' minds."

So what separates superfruits from regular fruits? According to Karl Crawford, business development leader at New Zealand-based fruit science specialists, HortResearch, superfruits offer demonstrated health benefits beyond basic nutrition. "In reality, however, true superfruits need to meet much more detailed criteria," he notes. "There are five key criteria for superfruit success: novelty, health benefits, convenience, controlled supply and promotion."

It is no surprise then that brands such as Sambazon, Pom Wonderful and Ocean Spray are performing so well in many international markets as they earn a 'check' next to each one of these criteria. Although, as above, some may question the strength of science backing the health benefits of some superfruits, given the only superfruit able to carry an authorised health claim to date is cranberry, for which the French permitted a urinary-tract infection claim in 2004. (Ocean Spray reports rising sales in France and other markets as a result of the claim. It also carries an unofficial claim that has been approved by Trading Standards in the UK that states: 'Scientific research has now shown that Ocean Spray Family Classic, containing typically 100mg per serving of proanthocyanins — nature's natural agents — may help maintain your health by acting on certain harmful bacteria in the body.')

Crawford notes the halo of high antioxidant levels found in many superfruits, and their associated and widely accepted heart-health benefits, which precludes the necessity of authorised health claims. "'Proof' is flexible," he says. "It can be direct proof from scientific study or 'proof' inferred by common acceptance. Either way, the health benefit must be specific to a particular health concern (say kiwifruit for gut health), or, if a general benefit, must be above that already expected from fruit (for example a blueberry with higher levels of health-promoting antioxidants)."

The convenience factor is important because one thing that is unique to superfruits is the fact they are often consumed only in processed formats such as beverages, bars or supplements. There is, for instance, almost no market for whole pomegranates (too fiddly) or açai (too bitter). In this sense, the format — typically a beverage — IS the fruit. It adds value to a fruit that typically wouldn't otherwise be consumed on any major scale.

Crawford puts it this way: "Crucially, fruit is also about the only food that consumers still perceive as 'natural' when it has been processed. In fact, many consumers believe fruit is better when processed. Just look at the fruit-juice market — it's huge! This has massive benefits for those in the superfruits trade because it opens up a host of new possibilities — you can deliver to your customer all the benefits they demand from fruit —

Company Websites mentioned in this article

www.coca-cola.com
www.cyvex.com
www.decasbotanical.com
www.hortresearch.co.nz
www.interhealthusa.com
www.nakedjuice.com
www.nufruits.com
www.oceanspray.com
www.pepsico.com
www.pomwonderful.com
www.purefruittechnologies.com
www.sambazon.com
www.wildblueberries.com



taste, health, etc., with none of the side effects that make handling fresh fruit expensive — limited shelf life for example."

With many superfruits being harvested wild either in domestic Western markets or places such as Tibet and the Amazon, supply issues have arisen. Excess demand has stretched wild blueberry supply, sending prices skyrocketing and leaving some product makers short although a WBANA spokesperson tells *FF&N* the wild crop is increasing — along with less-nutritious cultivated blueberries.

As açai raw-ingredients suppliers and end-product makers, California-based Sambazon and New Zealand-based Nu Fruits attest, control of supply is paramount in a market expected by some to grow fivefold in the next year or two. While acknowledging a supply bottleneck in the Amazon due to processing constraints as more factories were built, both sing the praises of vertical integration.

"As a raw material it is obviously not oranges," says Nu Fruits' Wisniewski. "The fact supply is constrained is forcing raw-material costs up. Plus the logistics involved in harvesting açai and bringing it to market force its price up. But we are there in the thick of the action and that is important. We expect the supply issues to be resolved within 12 months, especially if work being done to have the fruit cultivated in plantations comes to fruition."

Sambazon vice president, Jeremy Black, said his company was succeeding because it had a steady approach that did not try to overheat the market too quickly. "Our approach has been to take it one step at a time," he notes. "That's why supply has never been a huge issue with us, and we are expanding our supply network and working with other berries from the Amazon like acerola."

Jamie Robinson, UK and Ireland commercial director of consumer products, Ocean Spray, notes cranberry was once a premium juice that commanded a high premium similar to many of today's superjuices. Now it commands 13 per cent of the US juice market and is a clear third behind apple and orange. Its market penetration is growing in other markets, especially Europe and Asia.

Douglas Mackay, ingredients general manager at UK supplier, JO Sims, observes there is plenty of room for all superfruits. "These new fruits aren't necessarily cannibalising from each other because there is more interest in healthier foods and superfruits in general."

A long, ripe season for superfruits

FF&N interviewed Tom Vierhile, New York-based director of market analyst, Productscan Online: www.productscan.com about superfruits.

FF&N: Superfruits have come to the fore in the past couple of years. Why now?

TV: Consumers are finally receptive to the whole concept of superfruits, partly because there is new interest in 'intrinsic' health. By this, I mean the consumption of products that are naturally healthful, like whole grains and yoghurt, for instance.

FF&N: What defines a superfruit? Aren't all fruits 'super'?

TV: If you talk to people within the natural-foods industry, they would tell you that the ORAC value of a food determines whether or not it is a 'superfruit'. I don't believe many consumers understand what the ORAC concept is, though. What defines a superfruit is a

much higher nutrient content than 'regular' fruits like apples, oranges, grapes, etc. If you use common fruits like these as a benchmark, any fruits that offer double, triple or more contents of antioxidants or nutrients would be considered superfruits.

FF&N: Which superfruits are the star performers, and what is it about them that has allowed them to rise to the top of the tree?

TV: If you use product launches as the metric for 'star performers', then pomegranate is clearly at the top of the list. And that may also carry over into the sales front where pomegranate has gained interest from high-profile packaged-goods companies like PepsiCo (Tropicana), Unilever, Tetley, and Pernod Ricard. All have introduced pomegranate-flavoured products over the past year. Pomegranate has been a rising star because the fruit has just the right combination of features. It does not have a polarising taste. It has a great colour, especially when mixed into alcohol drinks. It is just familiar enough with consumers to be intriguing, but is not too weird or unusual.

FF&N: Which newcomers are pushing for superfruit status?

TV: Goji berries are rising very rapidly on the 'superfruit' front, though I am not sure they have the taste profile necessary to go mainstream. Tamarind and lychee tend to be more ethnic flavours, and are promoted primarily on the basis of their flavour and not any functional benefits or nutrient contents. Tamarind is popular with Hispanic consumers, for instance, while lychee is definitely an Asian fruit, though it is beginning to work into Western markets. Açai is a good bet to be the next superfruit to make a mainstream run, though the fruit itself is definitely more polarising than other 'superfruits' like pomegranate, cranberries or blueberries, mainly because of its somewhat-bitter taste.

FF&N: How important is it for a superfruit to have clinical backing and associated health claims?

TV: Because these products are fruits, and all fruits are good for you to one degree or another, I do not believe that clinical backing is absolutely necessary for success here. In the case of pomegranate, for instance, I don't believe anyone consuming pomegranate-flavoured vodka is going to expect much of a health benefit. It is more of the novelty of trying a uniquely flavoured product that looks attractive in a glass. Proof of health claims may help create an audience for some fruits among the most health-aware consumers in the marketplace, but if the fruit itself doesn't offer strong taste benefits, I would not expect it to be all that successful long term.

FF&N: Most superfruits are consumed in a beverage format. What other platforms lend themselves to superfruit incorporation, be it in extracts or otherwise?

TV: We are seeing a sizeable number of superfruits in categories like non-chocolate candies, sauces, chewing gum, chocolate candies, snack bars and yoghurts. Ice cream, jams and jellies are two other categories that tend to see more than their share of superfruits.

Worldwide stock-keeping-unit (SKU) introductions in 2006:

- Pomegranate — 311 SKUs
- Tamarind — 187 SKUs
- Lychee — 99 SKUs
- Açai — 71 SKUs
- Yuzu — 59 SKUs

- Goji — 54 SKUs
- Noni — 45 SKUs
- Pomelo — 36 SKUs
- Seabuckthorn — 33 SKUs
- Mangosteen — 10 SKUs
- Resveratrol — 9 SKUs
- Gac-Chi — 3 SKUs

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