Exotic Superfruits – consumer trends in Europe between health and hype

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1. Health potential of selected superfruits
2. Trade statistics and market trends
3. Developments in the nutraceutical market
4. Outlook
1. Health potential of selected superfruits
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- Fruits with high content in polyphenols (anthocyanins, flavonoids, flavones, etc.) Vitamin C and other anti-oxidants.
  - E.g., pomegranate, mangosteen, blackberry, blueberry, ...

- Beneficial against skin ageing, cancer, diabetes, cardiovascular diseases, arteriosclerosis, viral and bacterial infections, ...
### 1. Health potential of selected superfruits

<table>
<thead>
<tr>
<th>Species</th>
<th>mg GAE/kg FW</th>
<th>range</th>
<th>source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pomegranates (4 cultivars)</td>
<td>4,100.3</td>
<td>3,260.1-5,224.6</td>
<td>Gözlekçi et al., 2011</td>
</tr>
<tr>
<td>Pomegranate juice (4 cultivars)</td>
<td><strong>1,218.2</strong></td>
<td>784.4-1,551.5</td>
<td>Gözlekçi et al., 2011</td>
</tr>
<tr>
<td>Pomegranate peel (4 cultivars)</td>
<td>2,746.8</td>
<td>1,775.4-3,547.8</td>
<td>Gözlekçi et al., 2011</td>
</tr>
<tr>
<td>Pomegranate juice</td>
<td><strong>11,000.0</strong></td>
<td></td>
<td>Kalita and Jayanty, 2014</td>
</tr>
<tr>
<td>Mangosteen flesh</td>
<td>1,332.9</td>
<td>1,128.5-1,537.3</td>
<td>Chaovanalikit et al., 2012</td>
</tr>
<tr>
<td>Mangosteen inner pericarp</td>
<td><strong>34,040.9</strong></td>
<td>30,821.7-37,260.1</td>
<td>Chaovanalikit et al., 2012</td>
</tr>
<tr>
<td>Blackberry</td>
<td>1,210-4,400</td>
<td></td>
<td>Manach et al., 2004</td>
</tr>
<tr>
<td>Blueberry</td>
<td>2,280-7,360</td>
<td></td>
<td>Manach et al., 2004</td>
</tr>
<tr>
<td>Blueberry (DW)</td>
<td>8,100.0</td>
<td></td>
<td>Kalita and Jayanty, 2014</td>
</tr>
</tbody>
</table>
Diverse findings:

- Proven effects of several plant-based antioxidants against skin cancer and/or skin ageing (e.g. lycopene (tomatoes), resveratrol (grapes, berry fruits), anthocyanins (pomegranate), (Afaq & Mukhtar, 2011)
- Many of the claims unsubstantiated (Haneke & Baran, 2011)
- Experimental setup often unsatisfactory as cannot distinguish treatment effects (Grether-Beck, 2015)
2. Trade statistics and market trends
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- Calculated total value of fruit and vegetables exported is US$180 billion
- **Countries identified where fruit and vegetable exports or imports exceed US$2 billion (2008)**
- Despite huge volumes exported, one estimate is that 93% of fruit and vegetables are produced and consumed locally

Source: ISHS “Harvesting the Sun” p44
2. Trade statistics and market trends
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- Recent publicity against exaggerated health claims of superfoods.
2. Trade statistics and market trends

Sales of latest 'superfood' soar

Demand for pomegranates hits record high

16 March 2007

Pomegranates are the latest fruit to enjoy a sales surge after being dubbed a 'superfood', a retailer said today.

Demand for the seed-filled fruit has grown by 76 per cent across all stores over the past year, figures from market analysts TNS show.

Pomegranates have overtaken blueberries as Britain's fastest growing superfood, according to Tesco.

The country's biggest supermarket chain sold 3.8 million pomegranates in the past year - an increase of two million on the previous year.

Consumer demand for the fruit was prompted by the launch of pre-packed pomegranate juice.

Vitamin C

Tesco pomegranate buyer Kevin Patel said: 'In the last few years there has been tremendous publicity surrounding pomegranates and their supposed health-giving qualities and that has led to the phenomenal rise in sales.'
2. Trade statistics and market trends

Ditch 'superfoods' and save up to £439 a year

Save money with cheap superfood alternatives

21 July 2014

You can save hundreds of pounds by swapping pricey superfoods for cheaper alternatives, without missing out on key nutrients.

Salmon is regularly praised for the long-chain polysaturated fatty acids it contains, but salmon is pretty pricey. Meanwhile, sardines contain the same fatty acids and are significantly cheaper - a 140g portion of fresh sardines is £2.10 cheaper than fresh salmon.

Over the course of a year swapping two servings of salmon to sardines a week could lead to an annual saving of £288. Swapping out other superfoods such as goji berries and wheatgrass for spinach and broccoli can also lead to considerable savings.

This month as well as looking at superfood alternatives, the team has been testing a range of baby foods.
2. Trade statistics and market trends

Acai: Content of antioxidants less than in some red grape variety or in blue berries; high oil content, 250 Kcal/100 g.

Goji: EFSA could not ascertain claims for cardio-vascular effects, difficult to find trustworthy sources for nutrient composition; vitamin C content of dried fruit (29-148 mg/100g) similar to fresh oranges (50 mg), strawberries (53 mg) or black currants (177 mg) but dry fruits have much higher energy content than fresh fruit. Dangerous interaction with anti-coagulants.

Pomegranate: EFSA could not ascertain claims of health potential.

Mangostene: Health claims are too unspecific and comparable to carrots and tomatoes.
2. Trade statistics and market trends
German radio (WDR2 Quintessenz) 15 July 2015:

“Exotics such as goji berries contain high amounts of valuable compounds but local berries such as black currants are similarly healthy for a fraction of the price.”

Photo: WDR2/dpa
2. Trade statistics and market trends

<table>
<thead>
<tr>
<th>Food</th>
<th>Serving Size</th>
<th>TAC/serving (μ mol of TE)</th>
<th>Price per serving ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ORAC</td>
<td>ABTS</td>
</tr>
<tr>
<td>Pomegranate</td>
<td>30 ml</td>
<td>21270</td>
<td>7743</td>
</tr>
<tr>
<td>Blueberries</td>
<td>40 g</td>
<td>19345</td>
<td>5170</td>
</tr>
<tr>
<td>Purple Majesty</td>
<td>173 g</td>
<td>13886</td>
<td>3946</td>
</tr>
<tr>
<td>CO97226-2R/R</td>
<td>173 g</td>
<td>5066</td>
<td>3559</td>
</tr>
</tbody>
</table>

Table 1: Total Antioxidant Capacity (TAC) of pomegranate, blueberries, and potato tubers.

3. Developments in the “nutraceutical” market
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Increasing interest in nutraceuticals-botanicals

Trade volume in nutraceuticals (bn US$)

- Global
- EU

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3. Developments in the “nutraceutical” market

**Innocent Smoothie £2.35**
A super smoothie is a healthy blend of fruit, veg, botanicals and crushed flax seeds, with added vitamins.

Energy is essential, and not just on sports day. This tasty, lively super smoothie is a blend of delicious crushed fruits and fruit juices, a dash of guarana infusion, some beetroot juice, and added vitamins, including vitamins B6 and C, which help your body release energy from food.

**Sea Buckthorn Pomegranate Facial Cream $34.00**
Antioxidant, Free Radical Skin Rejuvenator with Sea Buckthorn, CoQ10, Pomegranate, Hyaluronic acid and CO2 Extracts. One of our Best Organic Skin care products yet! ULTIMATE body and facial moisturizer. Healing, soothing, comforting, restores new skin, stops free radical formation, ultimate antioxidant, and the HOTTEST selling product EVER!
4. Outlook
4. Outlook

- Clear need to move beyond fresh produce.
- Distinguish from rogue producers and traders and their spurious claims.
- More high quality/ statistically sound research on health claims.
- Review and carry out research on new, hitherto less known fruits.
- New product development
Thank you for your attention!

**Everything Balm £19.95**

Everything Balm is a composition of magical ingredients from all over the world including certified organic marula and rosehip oil from Namibia, extra virgin olive oil from the Mediterranean Coast; jojoba oil from the Arizona desert and beautiful evening primrose (sun drop) oil and free range honey made in New Zealand.