

Final Report to PIRSA

Identification and assessment of addedvalue export market opportunities for non-GM labeled food products from South Australia

Worlds of Food

Customised

Niche markets & consumers

Provenance

Spatial, social & cultural dimensions

Industrial

Conventional production for mass markets

IP-driven

Proprietary production for mass markets

Adapted from Worlds of Food: Place, Power, and Provenance Morgan, Marsden & Murdoch, Oxford University Press, 2006

Global food trends

- **Naturally healthy** trend with the broadest influence overlapping & influencing all other trends
- **Provenance** creating a 'real' link to consumers
- **Clear label** organic and GM-free products showing the strongest growth
- 'Snackification'/convenience— no limits to growth
- **E-commerce** direct to consumer opportunities
- Small players, big ideas small companies have become the food industry thought leaders

Julian Mellentin, 10 Key Trends in Food, Nutrition & Health 2016, New Nutrition Business, November/December 2015

Innova's Top Ten Trend Predictions for 2016, Lynda Searby, William Reed Business Media, 27 November 2015

Naturally healthy

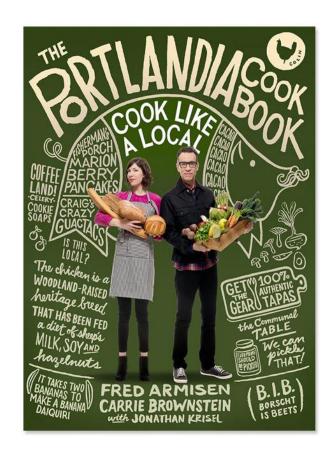
- Consumers seek foods with natural and intrinsic health benefit
- Accounts for a fifth of all new product launches globally
- Includes growth in organic 4.5% value growth in 2015 reaching US\$34.5 billion globally
- Related to 'free-from' artificial ingredients or ingredients that 'may cause me discomfort' (includes GM-free)
- Related to 'fragmentation of the consumer mind' creating their own definition of healthy diet and willing to experiment culturally

"Opportunities lie in the flourishing world of healthy niches."

Provenance

Creating links to consumers

- Place: Where produced geographic 8 cultural characteristics
- Product: How produced ethical and sustainable production practices
- People: Providing emotional & experiential connections



"The strength of the premium paid is another signal about how much consumers welcome positive stories about the origin of what they are buying. The strength of this interest is confirmed in consumer research, where the number of food consumers who state a willingness to pay a premium for local product has continued to increase to now reach 44%." Jan Davis

Trends in consumer demand for GM-free foods

- Related to consumer perceptions and trust levels
- Labeling and verification requirements
- Demand growing, with differences by market

Consumer attitudes are complex

PERCEPTIONS AND ATTITUDES THAT DETERMINE CONSUMER RESPONSE TO GM AND NON-GM FOODS

Purchasing intentions of GM foods increase as the price decreases (Hwang et al, 2005)

Japanese consumers would purchase GM noodles at a 60% discount over non-GM products (McCluskey et al, 2003).

Choice modelling reports indicate that Japanese consumers would be willing to pay 192% to 219% more for non-GM ingredients (Miller et al, 2014)

Urban residents are more negative about GMs than rural residents (Kikulwe et al, 2011)

Consumers in the UK do not rate GM-free or organic attributes as important as freshness, tastem quality and others (Miller et al. 2014)

Chinese urban consumers require a large discount to be willing to pay for GM rice regardless of rice trait and information treatment. Compared to previous studies, Chinese consumers' WTP and attitudes on GM rice have become more negative (jing et al. 2014)

Residence

Economics

European consumers are willing to pay a premium for non-GM foods than American consumers (Lusk et la, 2005; Jaeger et al, 2004) Government and farmer organisations are more receptive to GMs than religious associations and NGOs (Aemi, 2005).

Gener and religion influence views on GM foods (Yue et al, 2015)

Education and knowledge

considerations

A high level of education and knowledge on GM is associated with the acceptance of GM. A low level of education is correlated to high levels of perceived risks (Traill et al. 2004; Kim. 2011).

Food safety/Health

Gender

Women perceive low benefits in GMs and are more resistant to accept GM than men (Siegrist, 2000; McCluskey et al., 2006)

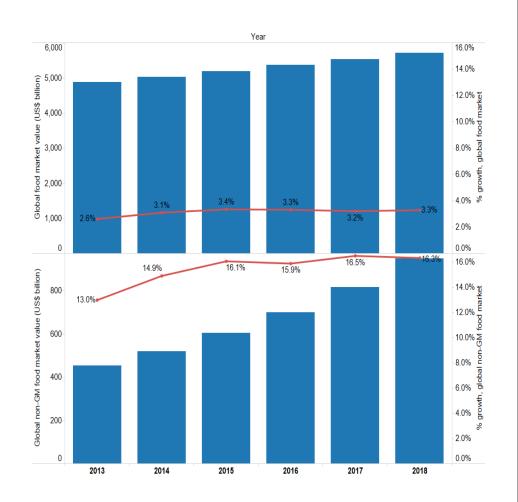
Allergic sufferers have a more positive view of non-allergenic GMs than non-allergic consumers (Schenk et al, 2011)

South Korean consumers require safety information about GM foods before buying them (Han, 2013)



Growing demand for non-GM foods

- Global non-GM food market valued at approximately \$521 billion of \$5 trillion global food and beverage retail market in 2014. Global market estimated to grow at annual rate of 3.3%
- Total global market for non-GMO food and beverage estimated to grow to \$948.68 billion at a CAGR of 15.9% by 2018.



In-depth analysis of 'proxy' categories

- Non —GMO products are assumed to fall under the Health and Wellness category, with Naturally Healthy (NH), Better for You (BFY) and Organic (O) as 'proxy' categories
- •In 2014, global sales in Health and Wellness 'proxy' categories were **US\$487.1 billion**
 - Naturally Healthy (NH): US\$284 billion
 - Better for You (BFY): US\$167 billion
 - Organic (O): US\$36.1 billion (does not include fresh fruits & vegetables which would bring total to US\$92.6 billion)

'Clear label'

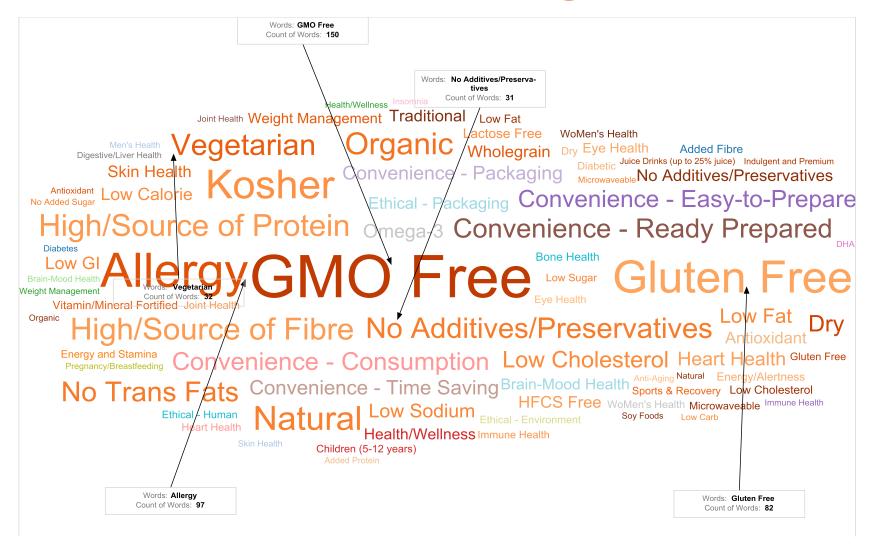
- Consumer pressure to use 'home cupboard ingredients'
- Products with organic or GM-free positioning showing the fastest growth
 - Unilever reported 4.1% growth in organic sales (vs 1.5% for conventional)
- Major food manufacturers in US are responding:
 - Mars will remove all artificial colours to meet 'evolving consumer preference'
 - Campbell Soup Co backs mandatory labeling of GM ingredients as part of its commitment to greater transparency



"Campbell's move potentially game-changing development in the US"

Robin Wyers, chief editor, Innova Market Insights

US: Word cloud of marketing claims



Target market: United States

- Consumer demand for healthier products leading to cleaner labels and more non-GMO segments (Food Dive, 6 Jan 2016)
- Major retailers demanding non-GMO products and going non-GMO with their own brands
- Food manufacturers committing to transparency and voluntarily seeking Non-GMO Project verification and seal
- Strong increase in demand for organic foods

In the US — debate about labeling is intensifying



China: Word cloud of marketing claims



Target market: China

- Fragmented, but rapidly growing market for 'naturally healthy'
- Opportunity for long-term positioning based on perception of Australia as provider of safe food
- Need more detailed analyses of consumer trends at regional levels
- Need profiles on major players along the value chain at regional levels



SA company attitudes to non-GM opportunities

- Retailer Does not consider Non-GM a category opportunity in the Australian retail market
- Food producers & manufacturers
 - Most perceive that mainstream Australian consumers are ambivalent to presence of GM ingredients.
 - Are not promoting Non-GM in overseas markets
- Notable exceptions:
 - Biodynamic dairy products
 - Carob products
 - Specialty flours & pre-mixes

An exception: Australian Carob Company

- SA producer of more than 200 tonnes of allergy-free carob pods for distribution throughout Australia and export markets: US, China, Hong Kong and the UK
- Non-GMO certified by CERT-ID

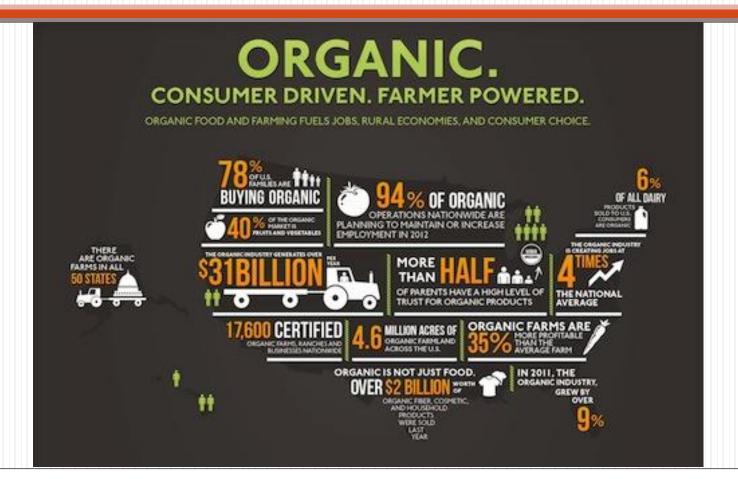
"We are already committed to the highest standards of sustainable and organic farming practices but our increasing export activities means we were being asked about our non-GM status too.

The Cert ID Non GMO Verification scheme provides a unique selling point because we are now able to demonstrate complete traceability at every step of carob production, which gives us **real 'added value'**."



Michael Jolley, owner of The Australian Carob Company

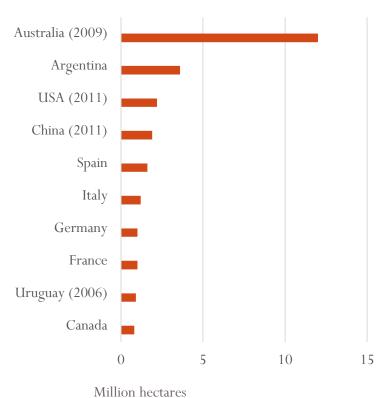
Organics – a growth opportunity?

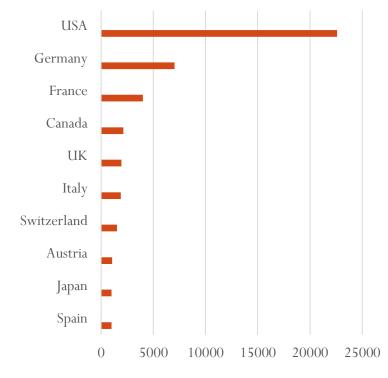


Organic: Supply and demand









Retail sales in million euros

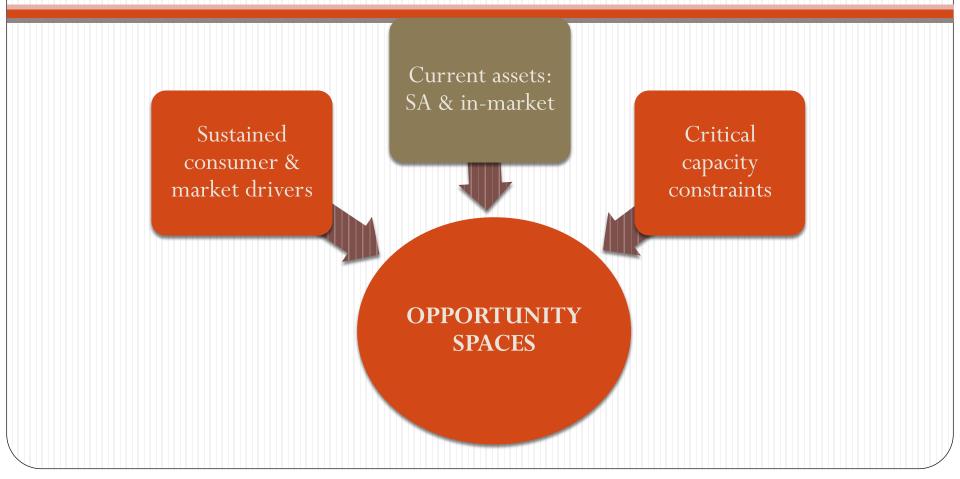
Source: FiBL-AMI-OrganicDataNetwork survey, 2014

Growth in organic & identity-preserved ingredients in the US

- Supply issues for farmers:
 - Three year transition period (USDA has expanded insurance for farmers transitioning to organic production to lower the barriers to increased production)
 - Farm management practices eg full crop rotation
 - Limited on/off farm storage separate storage for identify-protected crops
- Demand issues for food companies:
 - Supply risk management
 - Financial risk management hedging tools do not exist
- Mechanisms to mitigate risks:
 - Vertical integration eg Nature's Path
 - Long-term relationships directly with growers
 - Market mechanisms Back-to-back contracts, long-term forward contracts

Mercaris: 2015 Navigating U.S. Organic and Non-GMO Markets

Opportunities for Collaborative Action



Opportunity Spaces

DRIVERS

- Overriding global trend is strong growth in 'naturally healthy' category - fresh & packaged
- More consumers seeking authentic linkages to food – where & how it is produced
- Major retailers in the US committing to GMfree (Whole Foods Market & Target)
- Major manufacturers responding (Campbell Soup & Mars) & requiring GM-free ingredients
- Strong growth potential in China for CURRENT ASSETS 'safe', healthy food
- Strong growth of organics in US
- Uptake of eCommerce (particularly in China) opening market to smaller players

CONSTRAINTS

- Industry generally not aware of opportunity
- Limited experience in US market
- Capacity of SMEs to expand & innovate
- Limited supply of organic product
- Shortage of infrastructure to support identity preservation systems

- GM moratorium
- Some SA industry leadership (Laucke, Spranz & Jolly)
- Experience of Food SA as industry-led service provider
- Credibility of SA regions in building provenance (Barossa)

China markets

Chinese market opportunity

"A large proportion of Chinese people believe that all their agricultural land is contaminated in some way, and that their water is polluted in some form. They also do not trust those that are in control of food production. They, therefore, do not trust the safety of their own food, and they are in a position to exercise choice as to the origin of that food. They are both willing and able to pay significant price premiums for imported food that is trusted as safe. The growing middle class in China has contributed to spending patterns that are reflective of discerning consumers worldwide."

Need for verification system

"Australia is a reliable and trusted supplier. The current perception of 'Clean, Green, and Safe' is very fortunate, but fragile. Must move actively to protect and secure it, and then build on its secure underpinnings."

From a briefing paper by Mark Laucke, Laucke Flour Mills

US: Whole Foods Markets



Opportunities for collaborative action

Develop a 'naturally healthy' category linked to SA provenance:

- Promote consumer-driven opportunities in naturally healthy products (that includes GM-free claims) to SA food industry
- Build collaborative eCommerce platform to promote the category
- Underpin 'provenance' claims with identity preservation systems for products promoted on the platform
- Build export delivery platforms into targeted markets