Naturally Healthy Marketing: Downunder View from New Zealand

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New Zealand……it's Where?

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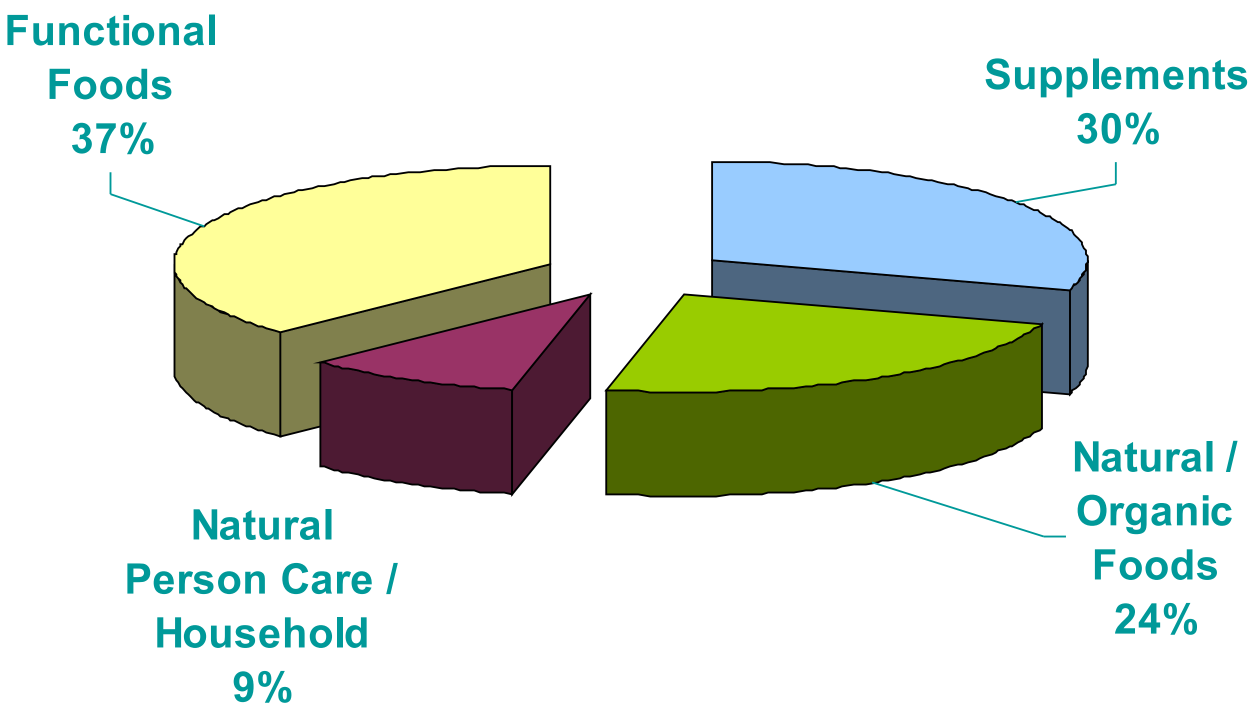
Location, Location, Location!

- Yes it is a long way off
- Isolated by distance, but not out of touch
- Temperate to semi- tropical climate
- Unique raw materials and wide diversity of plants and products
- Clean, clear environment
- Well developed infrastructure

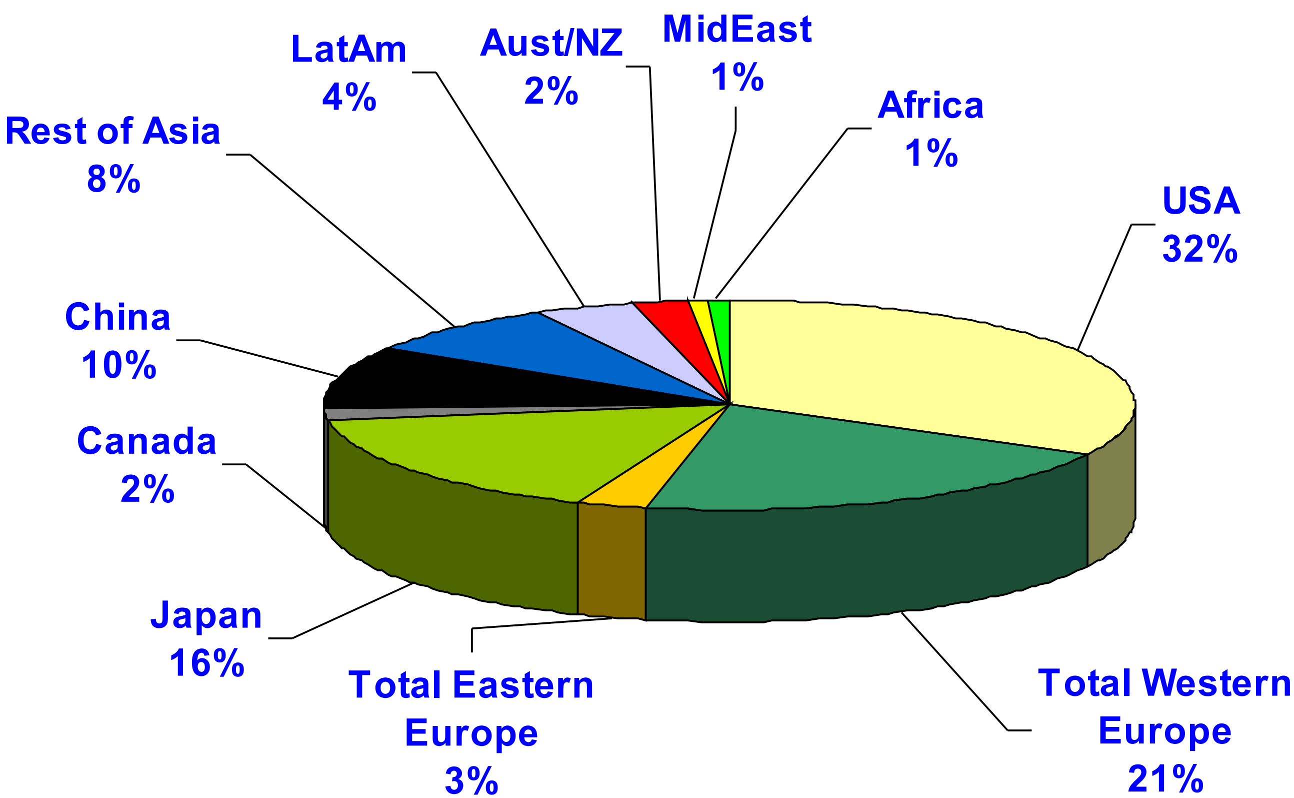
Global Nutrition Industry Sales By Product Category, $228 Billion in 2006



Global Nutrition Industry Sales By Product Category

Nutrition Industry Category	2005 Sales in $Mil	2006 Sales in $Mil	2005-2006 Growth
Total Supplements	65,301	68,267	5%
Natural/Organic Food	49,000	53,780	10%
Natural Personal Care/Household	18,790	21,270	13%
Functional Food	79,400	85,013	7%
Total Nutrition Sales	212,491	228,330	7%

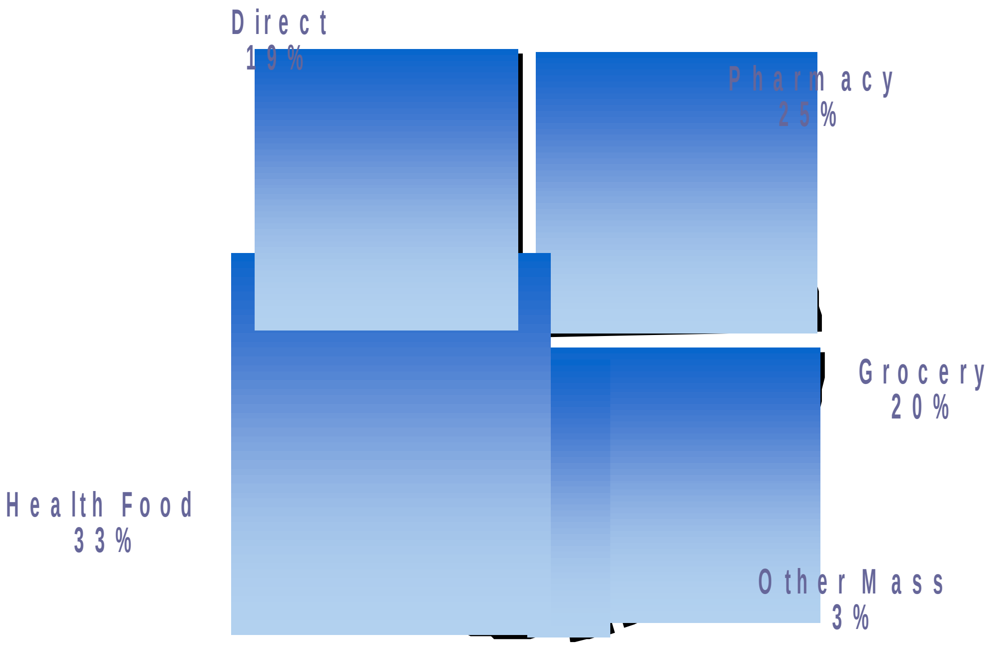
Global Supplement Sales By Region, $68.3 Billion in 2006



Global Supplement Sales By Region

Region	2005 Sales in $Mil	2006 Sales in $Mil	2005-2006 Growth
USA	21,320	22,460	5%
Total Western Europe	12,940	13,520	4%
Total Eastern Europe	1,630	1,910	17%
Japan	11,640	11,180	-4%
Canada	1,750	1,820	4%
China	6,300	6,660	6%
Rest of Asia	4,860	5,440	12%
Latin America	2,400	2,700	13%
Australia /New Zealand	**1,440**	**1,530**	**6%**
Middle East	500	560	12%
Africa	460	490	6%
Global Supplement Sales Total	**65,240**	**68,280**	**5%**

Supplement Sales by Distribution Channel Australia & New Zealand (2003; US $Million)



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NBJ's Global Nut Ind. Websem. 2005

Key Trends in the Global Dietary Supplement Industry

Niche countries with high value products

- New Zealand (green lipped mussel, colostrum, honey, kiwi/exotic fruits)
- Finland (functional ingredients)
- Israel (high value-added functional ingredients)
- Thailand (mangosteen)
- Tahiti (noni)
- Goji in Himalayas

NZ Health and Nutrition Unique Product Benefits

- Unique biologic diversity
- High quality primary products production
- Clean, unpolluted source of actives
- Strict policies re GMO's, BSE, quarantine, disease free status (EU's Cat. 1 status)
- World leader in traceability
- Access to world-class R&D
- Well developed research organizations and medical facilities
- Specialized and well developed export business
- High growth health ingredient and functional food companies
- Close proximity to Asia-Pacific region
- Good innovation and success in food and beverage production

New Zealand Health and Nutrition Markets

- Revenues for ingredients, supplements and functional foods:$760 million NZ
- Ingredient sales:$50 million NZ
- Approximately 50% exported
- All sectors of value chain well established
- Close trade links to Australia and health regulations developing between these countries

Consumer & Active Ingredients Sales

(NZ Dollars)

- Health ingredient sales exceed $50 million
- Estimated Natural Products (retail sales); ~$400 million (12% ratio assumption)
  - Local sales (42%): ~$170 million
  - Export Sales(58%):~$230 million. (Japan is 20%)

- Consumer Functional Food Sales:$270 million
  - Local sales (47%): $127 million
  - Export sales (53%): $143 million

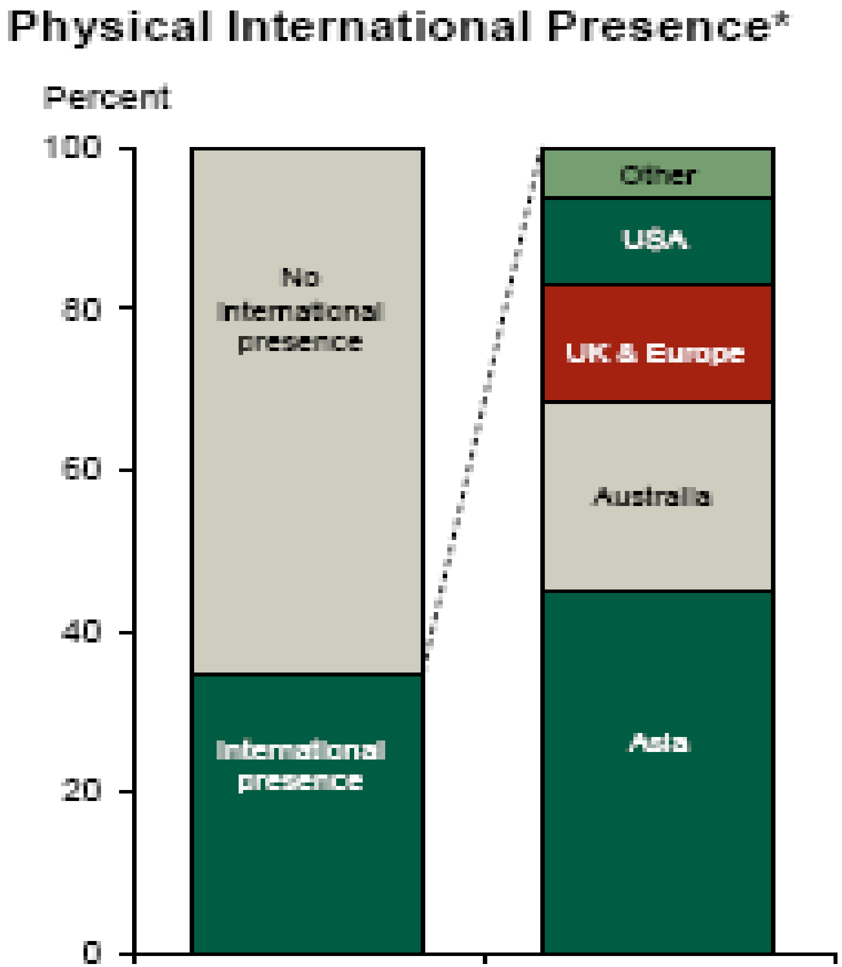
New Zealand Relies on Exports

- 58% of Health ingredients exported
- 53% of Functional foods exported

- Asian Markets: 56% of earnings from Health Ingredients and 64% of Functional foods.
- Japan accounts for 20% of all NZ Health Ingredients exports

International Presence

35% of NZ companies have a physical presence outside NZ. Key area is SE Asia Region and Australia.



Note: *Companies were allowed to specify more than one country

Source: L.E.K. Analysis

NZ Health & Nutrition Companies

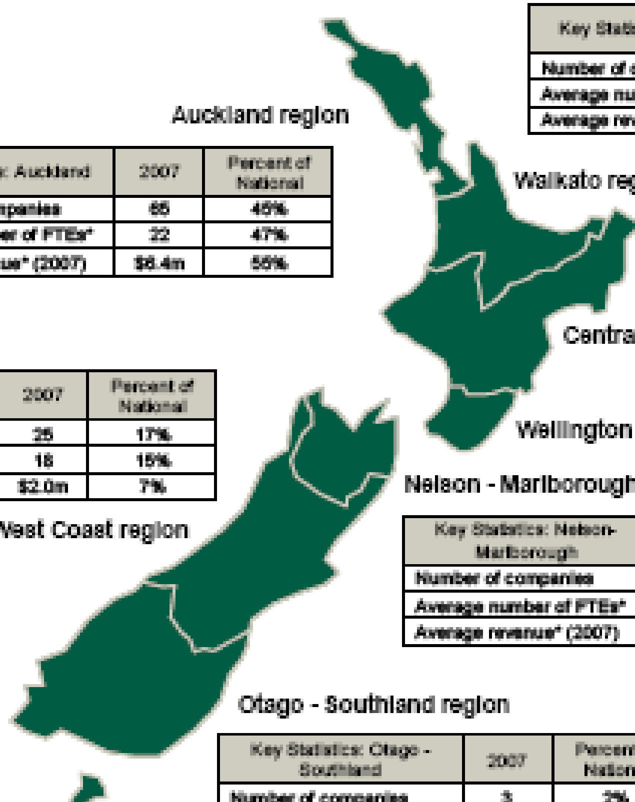
Industry Makeup:

150-200 Natural Products Companies

- ~60 Health Ingredient Companies
- ~100 Functional Food Companies
- Supplement marketers
- Toll production companies
- Importers/exporters
- Revenues all sources NZ $760 mio.

Bioactives by Region

Bioactives Activity by Region



Key Statistics: Auckland	2007	Percent of National
Number of companies	65	45%
Average number of FTEs*	22	47%
Average revenue* (2007)	$8.4m	56%

Key Statistics: Waikato	2007	Percent of National
Number of companies	14	10%
Average number of FTEs*	33	15%
Average revenue* (2007)	$7.6m	14%

Key Statistics: Central	2007	Percent of National
Number of companies	10	7%
Average number of FTEs*	17	5%
Average revenue* (2007)	$4.5m	6%

Key Statistics: Wellington	2007	Percent of National
Number of companies	11	8%
Average number of FTEs*	33	12%
Average revenue* (2007)	$10.3m	16%

Key Statistics: Canterbury - West Coast	2007	Percent of National
Number of companies	25	17%
Average number of FTEs*	18	15%
Average revenue* (2007)	$2.0m	7%

Key Statistics: Nelson-Marlborough	2007	Percent of National
Number of companies	16	11%
Average number of FTEs*	10	5%
Average revenue* (2007)	$1.3m	3%

Key Statistics: Otago - Southland	2007	Percent of National
Number of companies	3	2%
Average number of FTEs*	11	1%
Average revenue* (2007)	$3.6m	1%

Note: * Average of companies that specified the metric, ** Includes companies located in Palmerston North

Source: L.E.K. Analysis

Classes of Active Ingredients

Key Ingredient for Co.	#'s Co's	Actives
Plant Oils & Seeds	15	Avocado, Olive, Flax
Plant Extracts	15	Blackcurrant, Aloe, fungal
Herbs/Botanicals	12	Arnica, horopito
Marine Animal Extracts	11	Fish, shark, mussel
Manuka Honey/Bee prods.	18	Honey, venom, jelly, propolis
Dairy/Colostrum	10	Bioactive milk, yoghurt, colostrum

Range of other companies with Vit/Mins, deer products, animal extracts as ingredient producers or retail marketers.

Source: LEK Bioactives Report 2009

Product Range on Market

<u>Products Offered</u>

Nutraceuticals & Supplements	66%
Functional Ingredients	22%
Cosmeceuticals & Ingredients	12%

Some 6600 products on the market, 630 in development.

Source: LEK Bioactives Report 2009

Science Support for Products

Companies Commitment to Science Support

14% Basic: (anecdotal, literature)

66% Intermediate: (Rely on others work, animal or human, some in vitro studies)

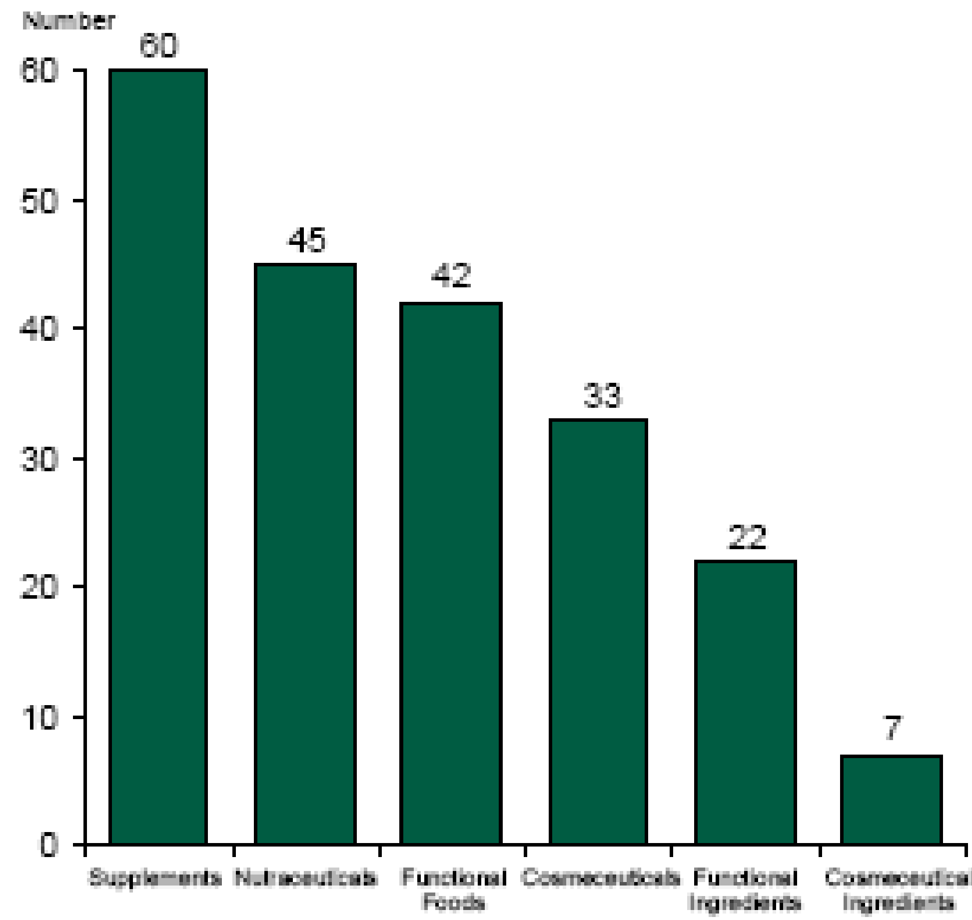
20% Advanced: (Do own human/animal studies, conclusive results)

Reasons for not undertaking R&D: Too costly, field well researched, benefits already known, some products for general health and well being

Source: LEK Bioactives Report 2009

Bioactives Companies by Sector

Bioactives Organisations by Sub-Sector, n=119*



Note: * Multiple answers were allowed to reflect overlap in industry

Source: L.E.K Interviews, L.E.K Analysis

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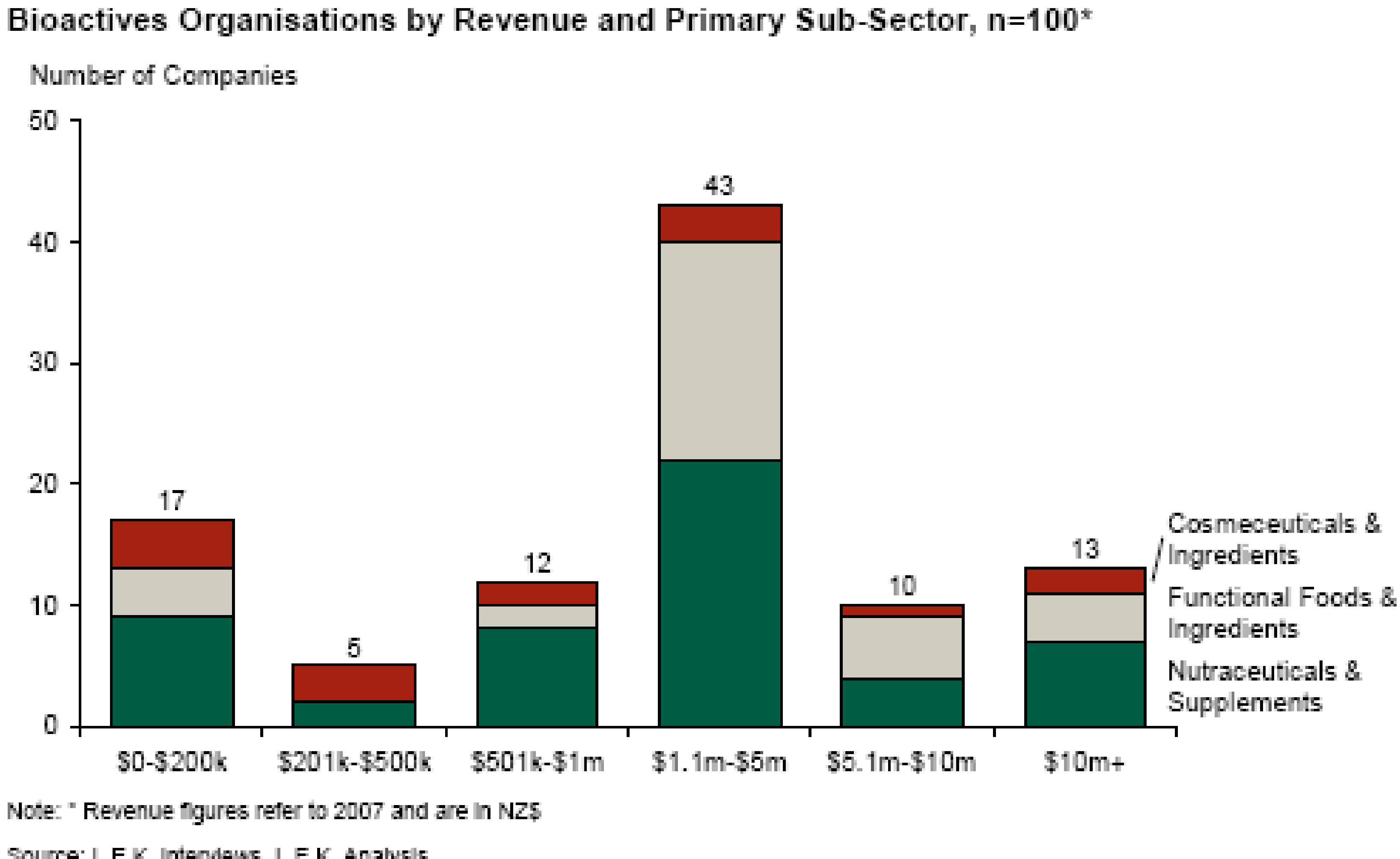
Source: LEK Bioactives Report 2009

Bioactives Companies by Revenues and Sector



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Source: LEK Bioactives Report 2009

Intellectual Property Protection

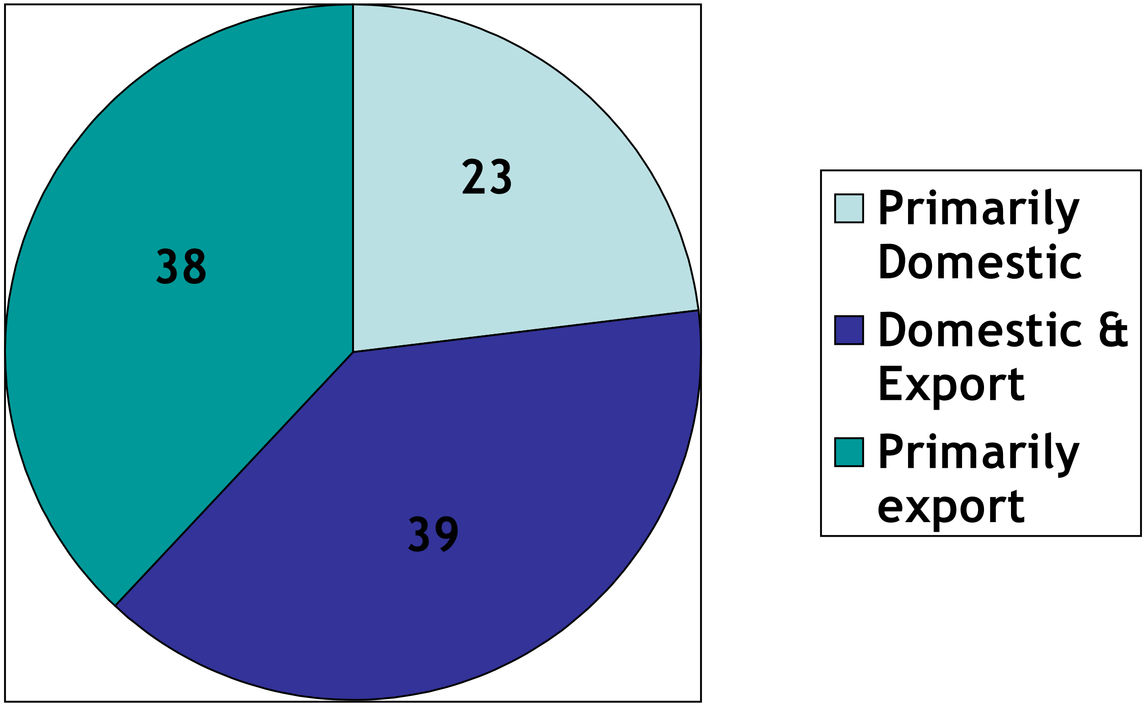
- ~80% of companies have protection
- Of these, 60% TM's, 40% Pats/Pat Pend.
- Geographic area covered is NZ, Aust., USA, China, few have global protection

Source: LEK Bioactives Report 2009

Sales & Marketing Focus for NZ Co's.

- 70% companies consider sales/marketing their key area
- 40% of companies consider distribution as their key area

Percentage of business for Export or Domestic markets



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Source: LEK Bioactives Report 2009

NZ Health & Functional Food Companies Activities

Sector	Percent.
Body Care	35%
Dietary Supp.	32%
Bee products	27%
Honey products	26%
NZ production botanicals	23%
Veterinary	23%
Fish/marine	21%
Importation botanicals	21%
Vitamin/minerals products	20%
Deer velvet	18%

NZ Health & Functional Food Companies
(selection)

Active Ingredient Co's.	Supplement/ Functional Food Co's
Keratec	Horley's (Fonterra)
Extracts NZ	Comvita
Olivado	Healtheries of NZ Ltd.
Extract Solutions	Vital Foods
SeaDragon/Merinova	Little Karoo
Blis Technologies	Functional Nutrition
RMF Nutraceuticals	Nutralife
Avocado Oil NZ Ltd	
Functional Nutraceuticals	CUSTOM MANUFACTURING PACKAGING
Speirs Technology	Alaron Products
Grapeseed Extract Co.	GMP Pharmaceuticals
Waitaki Biosciences	
NutriZeal	
Forest Herbs Research	
Fonterra	

New Zealand's Unique Product Offerings

Botanical Origin

- Manuka honey
- Horopito (botanical)
- Barley beta glucans
- Flax
- Kumara (NZ sweet potato)
- Avocado
- Boysenberry
- Feijoa
- Gold Kiwifruit
- Kiwiberry
- Tamarillo
- Olive extracts
- Grapeseed extracts
- Pip fruits (apple/pear)

Animal Origin

Green lipped mussel extracts
Wool keratin
Colostrum, immunoglobulins
Animal organ extracts
Fish/marine oils
Deer velvet

Barriers to Growth

Barriers to Growth of NZ Industry

- Regulation related, 30% of companies.(both as to NZ/Aust. Regulations and foreign country Regs.)

- Funding related, 60% of companies (for a range of functions with R&D high)

- Barriers to commercial & exports (access to distrib. channels, experienced overseas partners and contacts)

- Capability and resource barriers (human resources, R&D support, high quality RM's)

NZ Bioactives Report 2009

Table 15. Ranking of Barriers in Exporting

Export Barrier	% of Companies
Establishing Offshore Contacts	66%
International Regulations	66%
Lack of Available Capital	52%
Required Documentation	47%
Joint Therapeutic Agency	35%
MAF	32%
Shipment Costs	29%
Product Classification	29%
Quarantine Procedures	24%
Customs Duties	21%
Legal Issues	19%
Language barriers	14%
Cultural Factors	11%
Other *	27%

Natural Products NZ Report 2004

Natural Products NZ

- National industry organization representing the natural and functional foods industry.
- Founded in 2002
- Membership of over 60 companies representing >80% of NZ's natural products output
- Well respected by government agencies
- Founded to be the voice of the NZ natural and health products industry.

www.naturalproductsnz.org

Research Organisations Supporting Health & Nutrition

More than 15 R&D Organisations from Gov., Crown Res. Institutes (5 CRI's), Univ. based centres and clinical schools.

CRI's

- AgResearch; www.agresearch.co.nz
- Crop and Food Research; www.crop.cri.nz
- HortResearch; www.hortresearch.co.nz
- Industrial Research Ltd; www.irl.cri.nz
- Nat. Institute of Water & Atmospheric Research

Research Organisations Supporting Health & Nutrition (Contd.)

Other R&D Organisations:

- Agriquality
- Formula Foods
- Meat Biologics
- Biodiscovery Investigation Group
- BioActivity
- Riddet Centre, Massey Univ; www.riddetcentre.massey.ac.nz
- Bioactives Research Centre
- Bioactivity Investigation Group; (Univ based)

Key NZ Universities in Health & Nutrition

- Lincoln University, agriculture
- Massey University, agriculture
- Otago Univ. medicine
- Auckland Univ. medicine/clinical trials

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"World-class science ~ creating strategic opportunities for New Zealand by advancing knowledge in foods and biologicals"

agresearch

CROP & FOOD RESEARCH Mana Kai Rangahau

THE UNIVERSITY OF AUCKLAND NEW ZEALAND

Massey University

UNIVERSITY of OTAGO Te Whare Wānanga o Otāgo

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Formulation and Extraction Centres

- Extracts New Zealand; extractions, formulations
- Extract Solutions; SFE extractions
- Spiers Technology; formulations, manufacturing
- Riddet Centre; formulations, encapsulation
- **IRL**, Industrial Research Ltd.

NZ Government Supporting Health & Nutrition

- Industry NZ
- NZTE
- CRI's (now becoming private corps.)
- Investment funding
- Agriculture research

The bottom line is to add value to NZ's agriculture and food industries and to producers and manufacturers

BLIS Technologies

- Spin out from Otago Univ. research
- Company formed 2000 with new unique probiotic bacteria to fight Strep. throat infections.
- Launched retail in NZ and SE Asia area Blis K-12 OTC product
- Commercial collaboration with Frutarom USA to launch in US and applying for food ingredient status.
- Possible other applications of using these bacteria to fight other infections in humans anc animals and reduce use of antibiotics medications.
- Next generation products in the pipeline

COMVITA NZ Ltd.

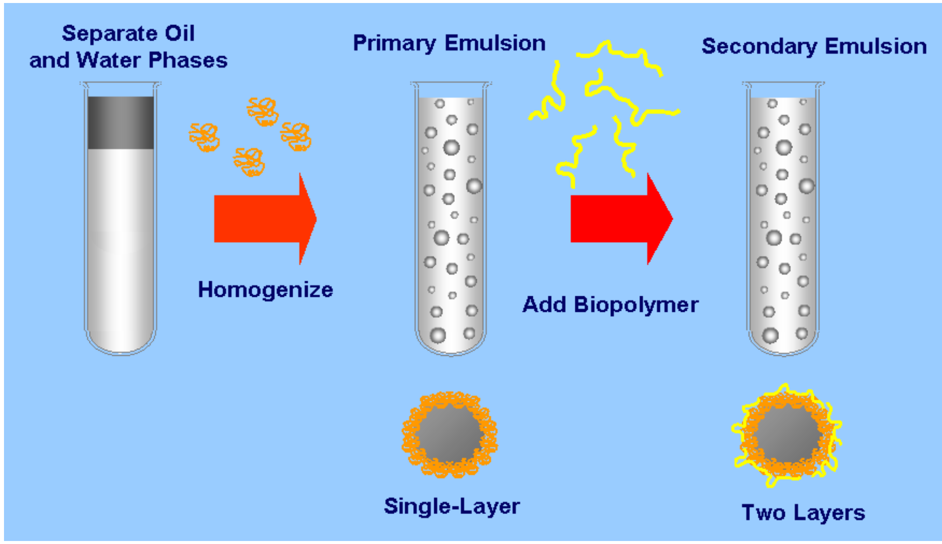
- Developed medical use of Manuka (NZ native species) honey, MediHoney for external and internal use
- Honey has unique antibacterial properties
- Comvita with Univ. R&D developed specific tests for antibacterial strength (UMF) ratings based on phenol equivalents.

- Clinical studies based on folklore proved the antibacterial properties and benefits in wound healing
- University research and published papers
- Comvita now launching new supplement products based on Olive leaf extracts

Speirs Nutritionals

- Part of Speirs Food Group founded over 100 years ago
- Collaboration with Riddett Cntr. developed new encapsulation technology
- Uses applicable to LC Omega-3's, other unstable actives
- Multi-layered emulsion system
- Uses in variety of foods
- GRAS for USA
- Initiated own launch strategy but recently announced partnership with CRODA to go worldwide starting with LC omega-3

Multi-layered Emulsion



Anlene™ EXPERT IN BONE NUTRITION

Bone Health Products

- Developed by Fonterra NZ dairy cooperative
- Dairy based with added vit/min/proteins
- Clinical studies support benefits claims
- Major uses in SE Asia, AU,NZ, 13 countries in total
- Range of products with Health professional support in each country

New Zealand …. New Thinking!

- Major focus on export activities
- NZTE has identified agricultural extracts to add benefit to NZ food companies and for export
- Major initiatives is to build alliances supporting NZ companies in many sectors but especially health and nutrition
- Looking to support NZ companies to forge relationships in key areas for health and nutrition products

Thank You

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