ARGOS
2010 Annual Kiwifruit Workshop

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31 March 2010

Outline

- Introductions
- Workshop Programme
- ARGOS overview
- Sustainability – A Business Case for the Kiwifruit Industry

8.15 am	**Coffee & tea upon arrival**
8.30 am	Welcome *Jayson Benge*
8.35 am	Introduction to ARGOS and the importance of the research *Jon Manhire*
9.00 am	Production and management features of ARGOS orchards *Jayson Benge*
9.20 am	Comparative financial performance of farmers/orchardists *Glen Greer*
9.45 am	Farmer/orchardist attitudes to sustainability *John Fairweather*
10.15 am	**Morning tea**
10.30 am	Social features of orchardists and the implications for Industry *Chris Rosin & Lesley Hunt*
11.00 am	Environmental outcomes of orcharding and implications for Industry *Henrik Moller & Others*
12.00 pm	**Lunch**
1.00 pm	Synthesis of all the ARGOS results & discussion of pathways to a more sustainable/resilient kiwifruit industry *ARGOS Panel*
2.00 pm	End

Purpose of Workshop

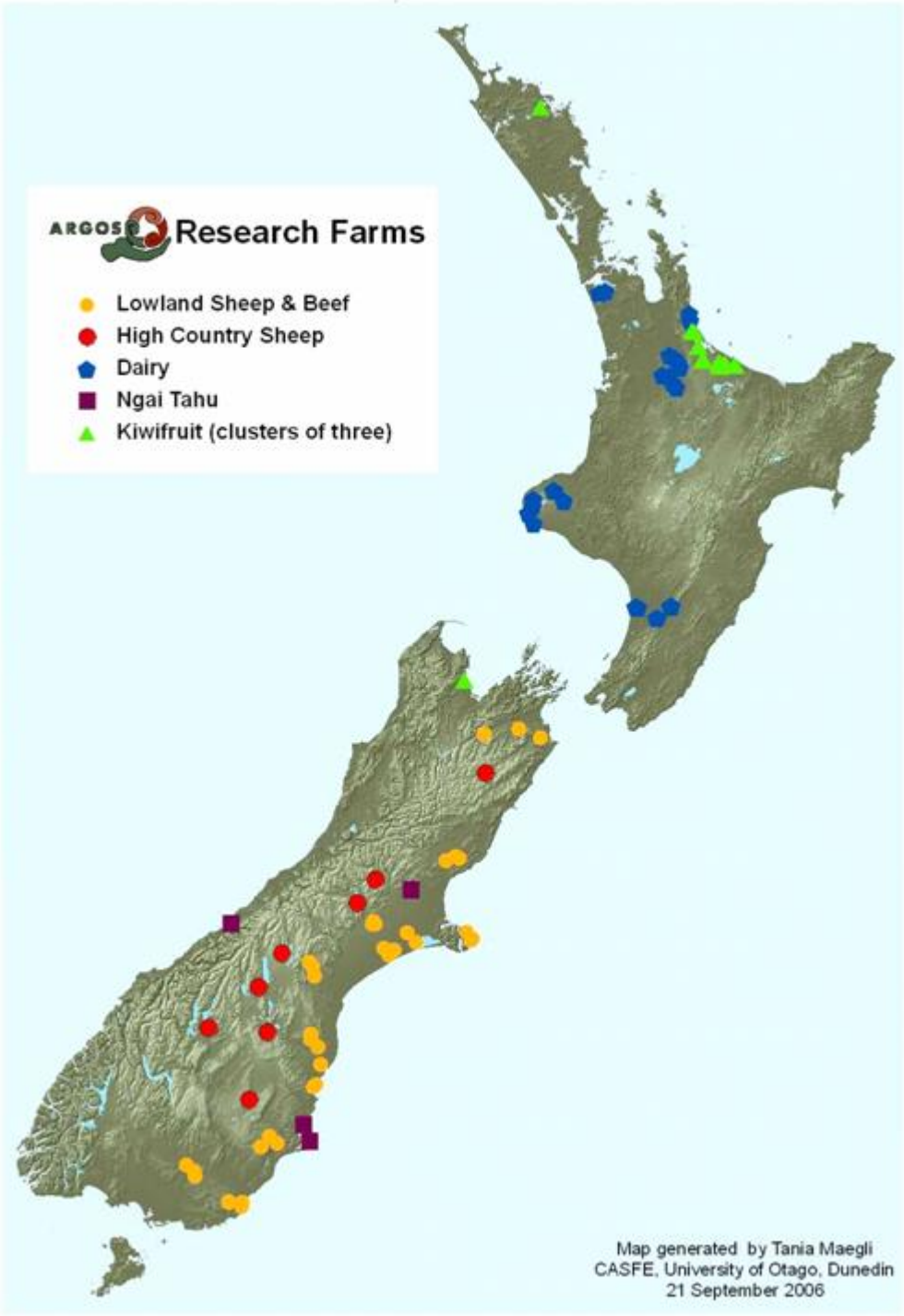
- Review progress to date and some results
- Get feedback from stakeholders who are contributing to, participating or obtaining outputs from the ARGOS Programme
- Provide an opportunity for the various stakeholders to meet and learn from each others experiences.
- Meet each other, network – interactive approach

ARGOS Project Background

- Agriculture Research Group on Sustainability (ARGOS) - Otago University and Lincoln University and The AgriBusiness Group
- Commercial Partners and Funding
  - Kiwifruit – Zespri International
  - High Country – Merino New Zealand Inc, NZ Merino Co
  - Maori – Ngai Tahu
  - Sheep/Beef – Canterbury Meat Packers, MAF SFF
  - Dairy – Fonterra, MAF SFF

ARGOS Monitoring Structure

- Matched pairs/triplets with management system as the ‘treatment factor’.
  - **Kiwifruit**; 36 orchards in 12 clusters – Green, Gold and Organic.
  - **Dairy**; 24 farms in 12 clusters – conventional and organic.
  - **Sheep and Beef**; 36 farms in 12 clusters – conventional, integrated, and organic.
- Case studies
  - 8 **High Country stations**.
  - 8 **Ngai Tahu whanau/hapu land holdings**


ARGOS
Research Farms
Lowland Sheep & Beef
High Country Sheep
Dairy
Ngai Tahu
Kiwifruit (clusters of three)
Map generated by Tania Maegli
CASFE, University of Otago, Dunedin
21 September 2006

ARGOS Values

- To strengthen the three inter-locked pillars of sustainability: social, environmental and economic outcomes.
- To affect real positive changes for the stakeholders.
- To provide the highest quality research output.
- To maintain a strong respect/tolerance for others, positions – researchers and stakeholders.
- To maintain a commitment to a transdisciplinary approach.

Overall Aims/Outcomes

- To identify the environmental, economic and social impacts of different farming/production systems (and practices)
  - To encourage the use of farming systems in NZ which are more sustainable/resilient.
  - To improve export performance, the returns to farmers and growers, and to meet enhanced environmental and quality standards.
- It is not a competition between systems.

Sustainability
A Business Case for the NZ Kiwifruit Industry

Outline

- Review rationale for a Sustainability Focus for the kiwifruit industry
- Review possible options and strategies

Rationale

1. Business management and resource use efficiency
2. Market drivers
3. Regulatory drivers

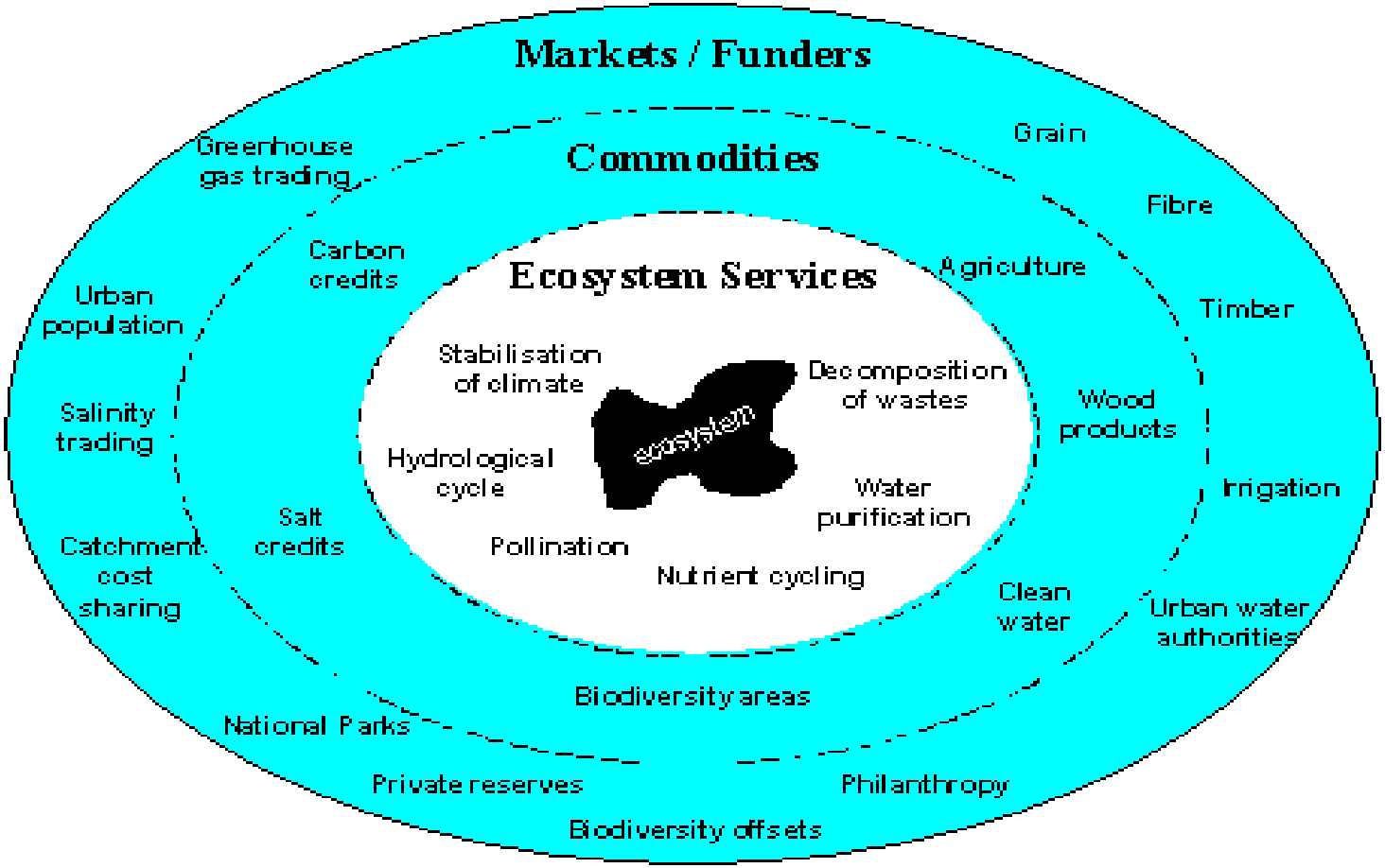
Business Management and Resource Use

- Business Environmental Performance positively linked:
  - Business performance (OECD 2008)
  - Innovation (Harvard Business Review 2009)
  - Risk management (Swiss Re 2009)
  - Business operations and staffing (WCDSD 2009)
- Business expectations eg WalMart, 100,000 suppliers, 20m tonne GHG reduction

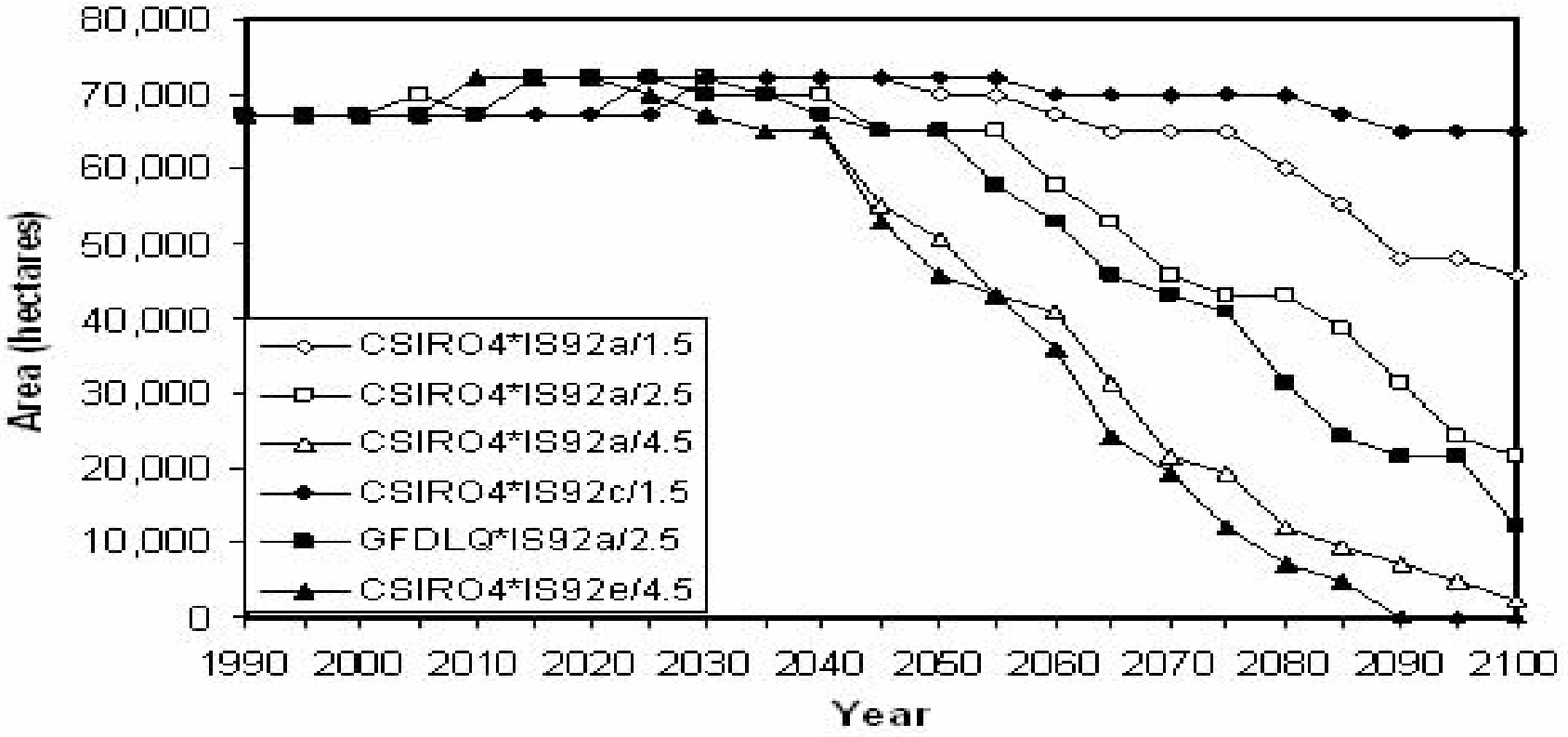
Resource Use Optimisation

- Efficient use of production resources = more profit
- Broaden focus to also recognise the environmental services supporting the business as well as the environmental services used as a receiving environment from the production system

New Markets and Incentives



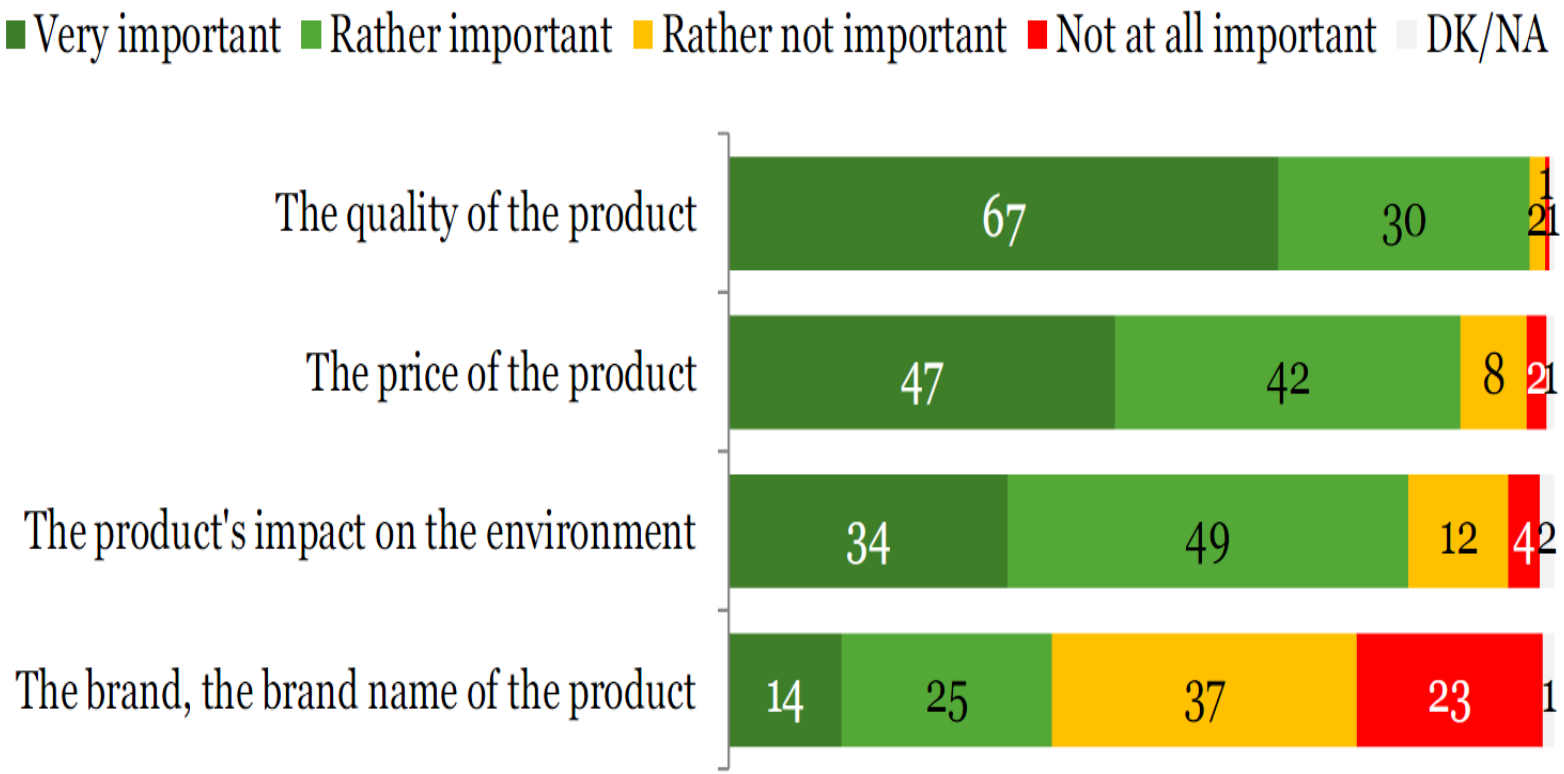
Potential Climate Change Impacts on Bay of Plenty Kiwifruit Production



2. Market Drivers

- Consumer trends
- Influence of NGO`s
- Emerging issues

Importance of various aspects of products to European consumers when deciding which ones to buy



Issue, campaign theme	Fish and Game	Greenpeace	Oxfam	Royal Forest and Bird	SAFE	Soil and Health
Resource Use						
○ Water quality protection	X	X	X	X		X
○ Water conservation	X	X		X		X
○ Protection of soil		X				X
○ Biodiversity protection	X	X		X		X
○ Ethical use of farm inputs e.g. Palm Oil		X				
○ Chemical inputs e.g. pesticides		X				X
○ Anti intensive farming		X			X	X
○ Promote Organic farming		X				X
Climate Change						
○ Advocacy for action		X	X			
○ Include agriculture – with restrictions on production		X	X			
Food Consumption						
○ Promote vegetarian diets					X	
○ Anti - genetic modification		X			X	X
○ Country of Origin labelling – buy local						X
○ Food ingredients – natural focus						
Trade						
○ Promote Fair Trade			X			
○ Rising food prices – poverty, food crisis			X			
○ Animal welfare e.g. Live sheep exports, anti vivisection, mulesing					X	X

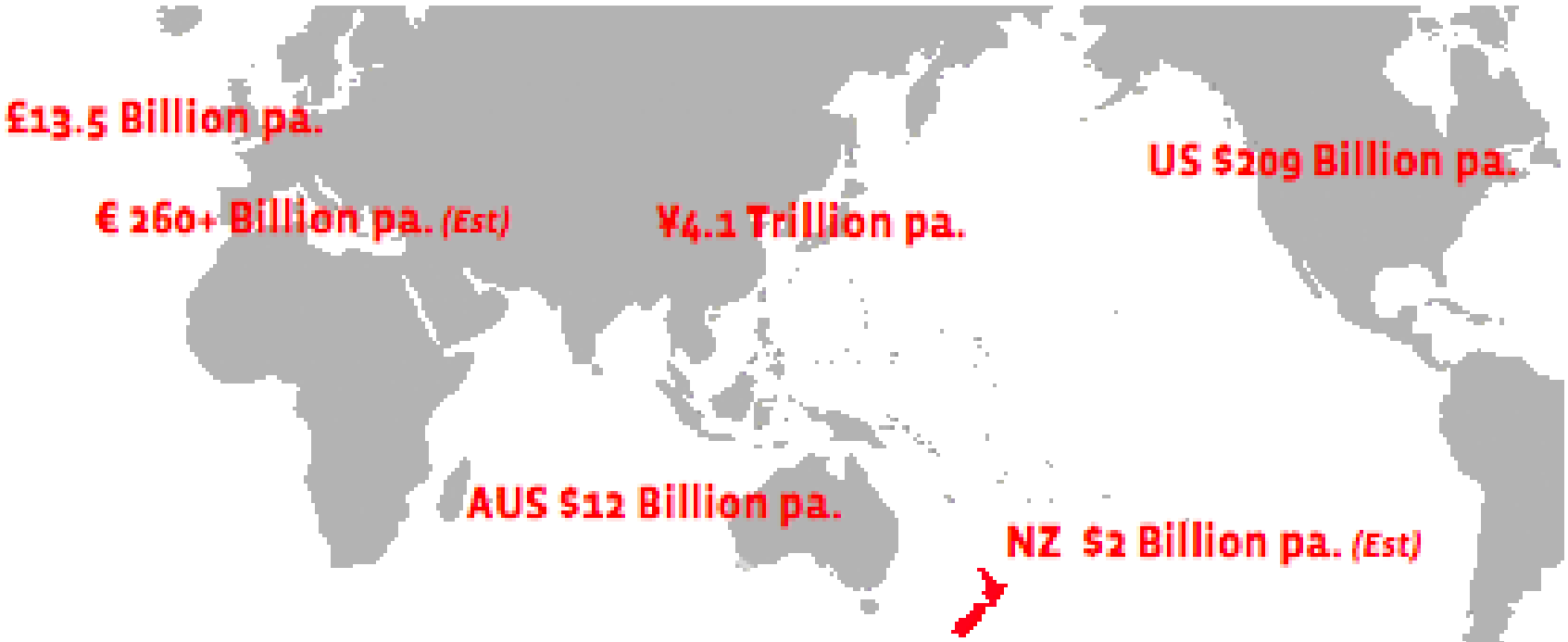
LOHAS

- Lifestyles of Health & Sustainability
- Consumers who seek out goods/ services focus on health, the environment, social justice, personal development, sustainable living.
- Becoming mainstream, rather than fringe.
- LOHAS market – USD$550b (2008)
- Organic – USD$50.9b (2008) – 97% EU, USA

LOHAS Market

Estimated % of Consumers: Australia 25%:

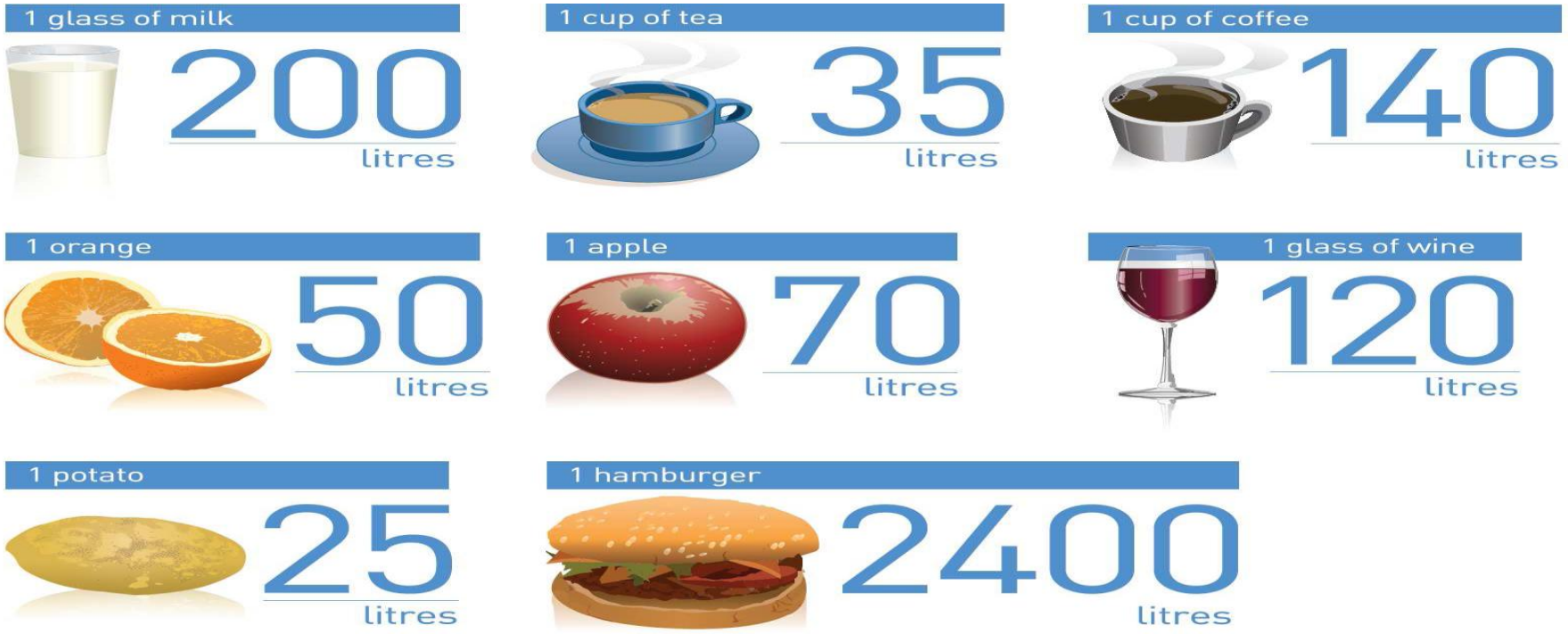
Japan 22%: USA 19%: China – traditional



Market Trends and Issues

- Local food consumption – buying in season, local, Country Of Origin Labelling, Alternative Food Markets – *support local growers*, *foodmiles*, *carbon*, *food experience*
- Ecological Foot-printing – carbon, water, labelling - *climate change*, *resource depletion*
- Biodiversity – impact of production on wildlife – palm oil, birds, rain forest.

Global average figures for the virtual water content of foods and beverages



Market Trends

- Waste
  - value chain waste stream management
  - Food waste – impact of high quality standards and supermarket policies – *food shortages*

Regulatory Drivers

- New Zealand
  - More stringent regulatory tools and management emerging
  - Kiwifruit good vs other sectors eg dairy – but could get caught up in generic responses.
  - Managing impacts– weeds, noise, spraydrift
  - Future restrictions on inputs?
- International
  - WTO, Regional, national environmental regulations, private sector controls

Possible Industry Responses

- Whole of industry approach
- Proactive response – can influence the drivers
- Broaden scope of assurance programmes to address issues
  - the amount of inputs eg energy used in production.
  - climate change impacts of production.
  - environmental impacts of production.
  - the source and treatment of labour.

- Research on environmental and other impacts of kiwifruit production – defensive as well maybe new points of difference
- Traceability –
  - new technologies
  - report card label/info for consumers
- ARGOS

Acknowledgements

- Participating Growers
- Funders
  - FRST, Zespri, COKA, others
- Researchers
- Others
  - Volunteers, students.