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Institutional reforms of AKS in New Zealand and International Networks in AKS

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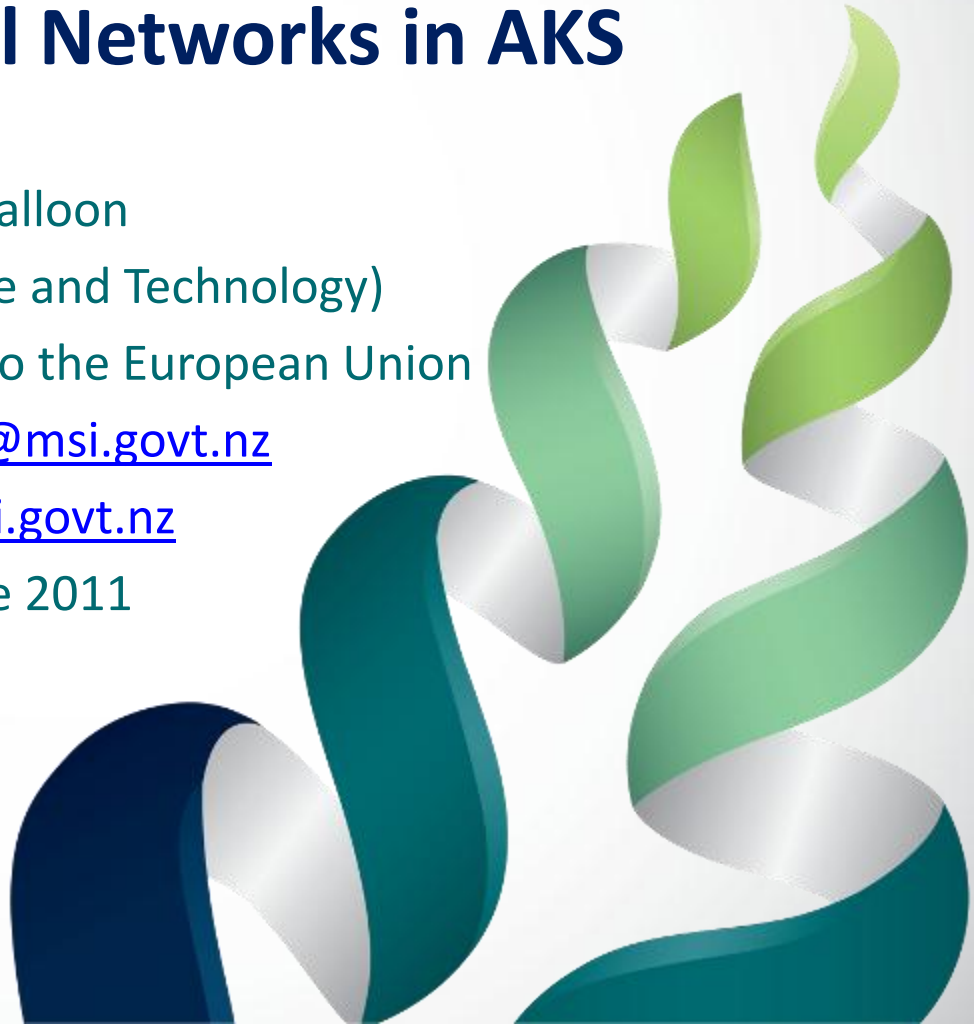

Overview

- Key institutions and their role in New Zealand's AKS
- Role of government and its investment
- Trends in AKS
- International networks in AKS
  - Global Research Alliance on Agricultural Greenhouse Gases
  - International KBBE Forum

Context

- NZ's agriculture exports 55% of total merchandise exports (to June 2010)
- Agriculture contributes around 5% of GDP
- 16 % GERD on R&D related to the primary industries
- 34 % GOVERD on R&D related to primary industries
- Research for primary industry continues to be a significant strength in NZ

Crown Research Institutes (CRIs)

- Companies that receive funding from both government and industrial sources to do research for the benefit of New Zealand
  - AgResearch
  - Plant & Food Research
  - Forest Research (Scion)
  - Landcare Research
  - National Institute of Water and Atmospheric Research (NIWA)

agresearch

Plant & Food RESEARCH
RANGAHAU AHUMĀRA KAI

SCION
Next generation biomaterials

Landcare Research
Manaaki Whenua

NIWA
Taihoro Nukurangi

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Universities and Centres of Research Excellence

- Massey University
- Lincoln University

- National Research Centre for Growth & Development
- National Centre for Advanced Bio-Protection
- The Riddet Institute

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Staying ahead of the game….

- New Zealand's strengths:
  - temperate growing environment
  - relatively disease free status
  - effective biosecurity regime
  - reputation for quality, safety and innovation

….within a changing domestic and global context…

- Business models constantly evolving
- In-market production, export of integrated production systems and retention of IP
- Success through industry cohesion; supply chain innovation; control of supply; decades of investment in R&D; smart IP management; branding in the global marketplace and quality, consistency, and safety of our products

….in a sustainable manner

- NZ currently the second most emissions intensive economy in the OECD due to agricultural sector
- Increases in intensive pastoral land use
- Pressure on water quality and quantity

Government and industry working together

- Partnership approach
- Government investments involve active prioritisation of research needs by industry
- Co-investment eg Research Consortia

Government supports

- Long term investments in science capabilities
- Higher risk research further from market
- Bearing the risk in early stage investment
- Partnering industry & investing in high-potential firms
- Research to underpin policy and environmental, social impacts

Trends

- Increasing research critical mass and enhancing collaboration
- greater direct funding to CRIs
- Partnership with industry, eg Primary Growth Partnership
- A more networked approach both domestically and internationally
  - FINNZ
  - Global Research Alliance on Agricultural Greenhouse Gases
  - KBBE International Forum

Global Challenges

- Very few mitigation options identified or difficult to implement
- One-off technological fixes won't work for agriculture
- For many, the priority is not mitigation but adaptation and food security
- So how can we reduce agriculture emissions, AND at the same time…
  - Ensure development
  - Safeguard food security
  - Enhance resilience

Global Opportunities

- These global challenges are immense, but there are opportunities. It is believed that:
  - We can meet the multiple objectives of food security, adaptation, mitigation, development, through increased agricultural productivity and efficiency
  - In many cases this is positively correlated with reduced emissions intensity, resilience and food security opening a wide potential field for research and technology development

Importance of R&D

- The global agriculture sector needs good information and viable options
- R&D is core to this:
  - Critical to measurement and estimation of emissions
  - Critical to improving our knowledge of production systems
  - And the only way we can develop mitigation options that are real, low-cost and fulfil multiple objectives of climate change and food security

The response…Global Research Alliance

Aim:

- Bring countries together to find ways to grow more food (and more climate-resilient systems) without growing greenhouse gas emissions

Specifically, the Alliance will help:

- Find ways to reduce the emissions intensity of agricultural production while enhancing food security
- Improve understanding, measurement and estimation of agricultural emissions
- Improve access to mitigation technologies and best practices.

Members

Global Research Alliance on Agricultural Greenhouse Gases

Argentina
Australia
Canada
Chile
Colombia
Costa Rica
Denmark
Finland
France
Germany
Ghana
India
Indonesia
Ireland
Italy
Japan
Malaysia
Mexico
Netherlands
New Zealand
Norway
Pakistan
Peru
Philippines
Russia
Spain
South Africa
Sweden
Switzerland
Thailand
United Kingdom
United States
Uruguay
Vietnam

34 partner countries

Observers: Brazil, China, European Commission, Korea

Structure

Three Research Groups

- Livestock (New Zealand/Netherlands)
- Paddy Rice (Japan)
- Croplands (USA)

Two cross-cutting issues

- Soil carbon and nitrogen cycling (France/Australia)
- Inventories and measurement (Canada/Netherlands)

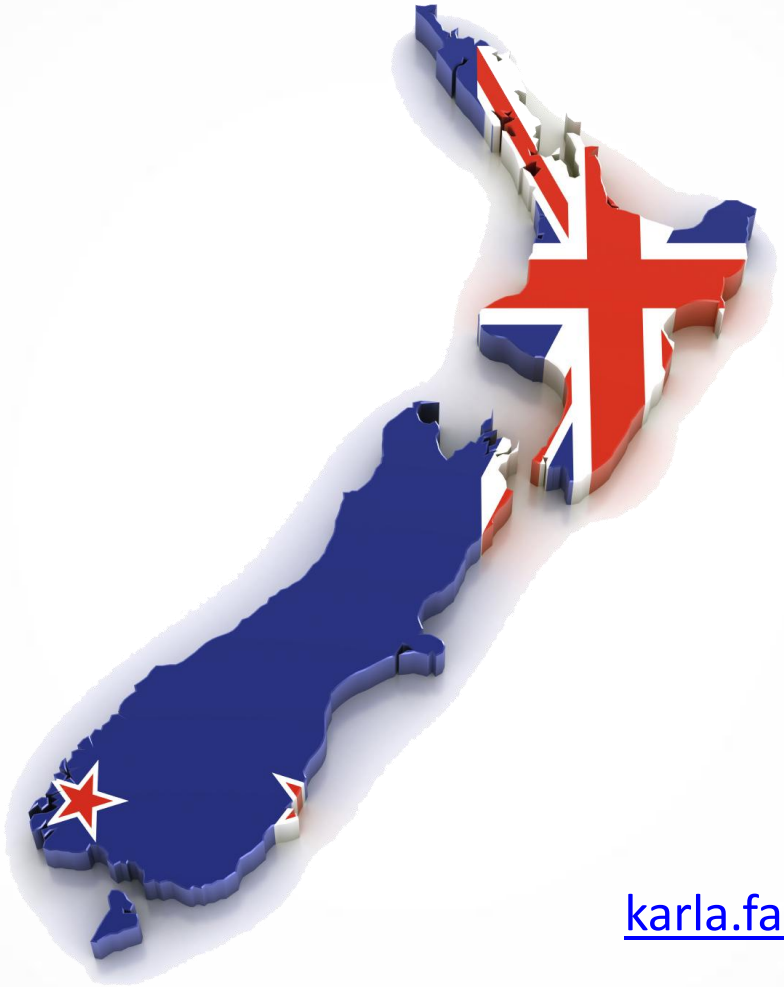
But also

- Governance structure and Partnership Network
- Held together by a Charter and supported by a Secretariat

KBBE International Forum

- Enhance the policy dialogue and scientific cooperation between the EU, New Zealand, Australia and Canada regarding the Knowledge-Based Bio-Economy
- Align research in common areas, through twinning, staff exchanges etc
- Currently four different thematic strands: food and health; non-food biobased products; sustainable agriculture; and fisheries and aquaculture

Thank you



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