Key issues impacting on the future competitiveness of Australian agriculture.

Mick Keogh
Australian Farm Institute
The ‘environment’

How competitive?

Enhancing competitiveness

Implications for agrichemical suppliers
UN World population statistics and projections.

Source: UN
Protein consumption and per capita income

[Graph showing the relationship between animal protein intake (Kcals/capita/day) and GDP per capita ($ ppp ) for various countries, including China, Australia, Japan, India, and Indonesia.]
Global food price trends

FAO monthly food price indices

Index (2002-04 = 100)

0 50 100 150 200 250 300 350 400


- Food
- Meat
- Dairy
- Cereals
- Oils
- Sugar
Projected future global food demand

<table>
<thead>
<tr>
<th>Category</th>
<th>2007</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables and fruit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cereals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dairy products</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other food</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetable oils</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetable meal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish meal and oil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Billion (2007 US$)</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
China’s demand for milk powder becomes a white gold rush on Aussie dairy farms

Richard Guilliatt | The Australian | March 15, 2014 12:09AM

Figure 34 Australian beef exports to China

Figure 35 Lamb exports to China

Will China’s thirst for infant milk powder revive Australi, industry?

Chinese are buying up infant milk powder everywhere the China. And that has led to shortages in at least a half-dozen. The New York Times, July 25, 2013

Source: DA, MLA forecasts

f = forecast

Source: DA volumes, MLA forecasts

f = forecast
Number of farm businesses, Australia.
Crop area per farm

Hectares


Australia
NSW
Vic
Qld
SA
WA
Players and businesses

Percent of businesses in each commodity group:

- Horticulture
- Broadacre livestock
- Crops
- Dairy
- Intensive livestock

Commodity groups:
- 0-$99,000
- $100-$200k
- $200-$350k
- $350-$500k
- $500k-$1m
- $1m +
The 70:30 rule distorts averages
Relative volatility of Australian industries

Volatility of Australian industry GDP ($ (1975-2013))

- Agriculture
- Mining
- Finance and insurance
- IT, Media and telecommunications
- Construction
- Administrative services
- Wholesale trade
- Accommodation and food services
- Professional services
- Retail trade
- Rental and real estate services
- Transport, postal and warehousing
- Manufacturing
- Health care and social assistance
- Other services
- Education and training
- Electricity, gas, water and waste
- Public administration and safety
Index of volatility - Australian agriculture sub-sectors

Relative volatility of agriculture sub-sectors ($) 1961-2009

- Grains and oilseeds
- Beef
- Sugar
- Sheepmeats
- Dairy
- Wool
- Pork
- Vegetables
- Poultry
- Fruit and nuts
Farm performance - by farm size

- All farms
- <$100k
- $100-200K
- $200-$400k
- $400k+

% ROI vs. years 1990-2013.
OECD farmer support estimate 2013

% of farm income from support measures

- New Zealand
- Australia
- Chile
- United States
- Israel
- Canada
- Mexico
- OECD - Total
- Turkey
- EU (27)
- Iceland
- Switzerland
- Korea
- Norway
- Japan
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Annual growth in value of agricultural exports to regions (1996-2012)

CAGR (% pa)

- North Asia
- ASEAN
- Europe*
- North America (NAFTA)
- Africa and Middle East
- Oceania
- Central and South Asia
- South and Central America

Australia
World
Value of major agricultural exports and their growth rates

- Wheat: $6,000, CAGR 18.0%
- Beef: $4,000, CAGR 16.0%
- Wool: $3,000, CAGR 14.0%
- Cotton: $2,000, CAGR 12.0%
- Wine: $1,000, CAGR 10.0%
- Sheep meat: $1,000, CAGR 8.0%
- Barley: $1,000, CAGR 6.0%
- Canola: $1,000, CAGR 4.0%
- Milk concentrate: $1,000, CAGR 2.0%
- Legumes: $1,000, CAGR 0.0%
- Cheese & Curd: $1,000, CAGR 0.0%
- Live Cattle: $1,000, CAGR 0.0%
- Offal: $1,000, CAGR 0.0%
- Forage: $1,000, CAGR 0.0%
Source of agricultural imports, major Asian importers*

China, India, Indonesia, Japan, Korea

Source: UN Comtrade
<table>
<thead>
<tr>
<th>City</th>
<th>City</th>
<th>Freight Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Houston</td>
<td>Shanghai</td>
<td>$0.44 / Kg</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>Shanghai</td>
<td>$0.32c/kg</td>
</tr>
<tr>
<td>San Antonio</td>
<td>Shanghai</td>
<td>$0.36c/kg</td>
</tr>
<tr>
<td>Buenos Aires</td>
<td>Shanghai</td>
<td>$0.39c/kg</td>
</tr>
<tr>
<td>Santos (Brz)</td>
<td>Shanghai</td>
<td>$0.32c/kg</td>
</tr>
<tr>
<td>Melbourne</td>
<td>Shanghai</td>
<td>$0.20c/kg</td>
</tr>
</tbody>
</table>
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Implications for agrichemical suppliers
Productivity in Australian agriculture

Broadacre total factor productivity in Australia, 1953-2011

- 1953 to 2011: 1.8%
- 1953 to 1994: 2.2%
- 1994 to 2011: 0.2%

ABALES
Production limits?

Monthly cattle and calf slaughter

Monthly sheep and lamb slaughter

Wool receivals (seasonally adjusted)
Wheat yields

Canola yields
Crop input costs

![Crop input costs chart]

- Freight
- Handling & marketing
- Fuel & oil
- Fertiliser
- Chemicals

$ 2012

[1990 to 2012]
Real private-sector advisor costs – Australian broadacre farms
Sustainable intensification

Sustainable Intensification: A New Paradigm for African Agriculture

Sustainable intensification and the food security challenge

Brian Keating, Peter Carberry and John Dixon
Presentation to CIALCA Conference
Kigali, Rwanda - October 2011

Sustainable Crop Production Intensification

The need to feed a growing population is a constant pressure on crop production, as is coping with an increasingly degraded environment and uncertainties resulting from climate change - and the need to adapt farming systems to these. Sustainable crop production intensification provides opportunities for optimizing crop production per unit area, taking into consideration the range of sustainability aspects including potential and/or real social, political, economic and environmental impacts.

Recent trends would indicate that the incorporation of scientific principles of ecosystem management into farming practices can enhance crop production (yield). With a particular focus on environmental sustainability through an ecosystem approach, sustainable crop production intensification aims to maximize options for crop production intensification through the management of biodiversity and ecosystem services.

Integrated Cropping Systems
Ecosystem Services in Agricultural Production
Sustainable Mechanization Strategies and Conservation Agriculture
Integrated Weed Management
Going from volume to value

Index of volume of Australian production

Index of value of Australian production

Index: 1997-98 = 100

Crops
Livestock

Australian Farm Institute
$33.99/kg

$23.99/kg
Branded consumer products
Worlds largest supermarket chains

- Tesco
- Carrefour
- Woolworths
- Wesfarmers Ltd
- Wal-Mart
- Metro
- Group Auchan
- Edeka Zentrale
- Rewe Combine
- Aeon Co.
- The Kroger Co.
- Costco
This year is a great year for Australian families,
because this year Coles is proud to announce a supermarket first for all Australians. No added hormones in Coles beef. From now on, all the fresh beef you find in our meat departments, in any Coles, anywhere in Australia, will be nothing but 100% Australian beef, with no added hormones. So all that great Aussie beef you love to feed your family will now be even more tender than ever. And whilst this announcement has been years in the planning and cost Coles tens of millions of dollars, we’ve saved the best for last. No added hormones. And no added cost to you.

Because when we say quality food costs less at Coles, we mean it.
HGP checks tightened for China

MATTHEW CAWOOD

08 May, 2014 11:20 AM  A+  A-

THE Australian beef industry has moved quickly to provide China
Down with Factory Farms

To purchase, choose style, color, size, & then click "Add to cart".

Factory Farming Hurts Everyone

Farms Should Not Be Factories

Stop Factory Farming
For the animals. For the people. For the planet.
The ‘environment’

How competitive?

Enhancing competitiveness

Implications for agrichemical suppliers
Implications

• Production concentrated on fewer farms, larger scale, more business oriented.

• Lack of productivity growth looms as the major challenge.

• Farmers are becoming better at optimising inputs, but the lemon is being squeezed ‘dry’.

• Access to new technologies and systems will be essential to sustain future agriculture sector growth

• Technologies and systems will need to be sold to ‘consumers’ as well as farmers.
There is nothing ‘inevitable’ about the so-called dining boom. Australian agriculture has great opportunities available, but considerable effort will be required to capture some of those opportunities via improved productivity and market positioning.
Platinum & Gold Corporate Partners:

Corporate Partners: