Financial Perspective: Impact of Tomorrow's Technology Trends and Developments on Animal Agriculture

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April 2013
Contents

Section 1: Key Drivers Behind Technology Developments

Section 2: Factors Affecting Uptake of Technology

Section 3: Implications from a Financier’s Perspective
Demand for agricultural commodities is increasing

- World population growing at 1.1\%p.a.
- Concentrated on emerging economies
- Global income has been improving mostly in emerging markets
- Urbanization leading to westernization of diet and demand for higher value added foods

- Food production to grow over 40\% by 2030 and over 70\% by 2050
- Bio-fuels increasing the demand for sugarcane, grains and oilseeds
While productivity growth is in decline

World corn yield % change, 5 yr moving avg

World wheat yield % change, 5 yr moving avg

World soybean yield % change, 5 yr moving avg

World rice yield % change, 5 yr moving avg

Source: USDA
Land is availability is limited

World Agricultural Land per Capita

- Agricultural land area
- Agricultural land area per capita
Globalization and trade are both increasing
Food safety has become increasingly important
Weather events have a significant impact
Sustainability is a key business driver
Uptake of technology
Access to innovation is necessary for adoption
Sufficient scale is necessary to be able to access technology.

- **Number of farms, '000**
- **Farm size, Acres**
- **Years:** 1997, 2002, 2007

- **<500 Acres:**
  - 1997: 1,800
  - 2002: 1,800
  - 2007: 2,000

- **500-2,000 Acres:**
  - 1997: 1,400
  - 2002: 1,400
  - 2007: 1,600

- **>2,000 Acres:**
  - 1997: 1,200
  - 2002: 1,200
  - 2007: 1,400
Dedicated supply chains are changing the way farmers access technology

Source: Rabobank, 2013
The value proposition is about adding value rather than chasing price

| **Reduce risk** | • Reduce exposure to market price volatility through longer term, more stable pricing agreements  
|                | • Improve resilience to market shocks |
| **Improve productivity** | • Optimise production through increased certainty on inputs and outputs  
|                       | • Improve process innovation through better insights into chain requirements  
|                       | • Work with partners to optimise resource flows and valorise waste flows |
| **Improve access to capital** | • Improve investment opportunities through more stable cash flow and longer-term supply agreements  
|                       | • Access new models that provide leverage from chain partners, such as supplier finance |
| **Access new markets** | • Improve product innovation—working alone or with chain partners—through better insights into downstream needs and opportunities |
| **Enhance brand and reputation** | • Work with chain partners on other product attributes, such as quality and sustainability |

Source: Rabobank, 2013
Changing consumer demands impact which technologies will be adopted
Technologies with a positive impact on profitability will be attractive to players all along the chain.
What does it mean?

- Pick the winners
- Capital expenditure
- Increased working capital requirements
- Risk management
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