

**Owning the
Agribusiness Value Chain:
The Impact of Biotechnology on the
Production Sector**



Will Farmers be Winners or Losers?

Robert Napier
Orange Agricultural College
The University of Sydney

1. Introduction:

Change:

- **Re-definition of the role of agriculture**
- **Early days for biotechnology**

Presentation outline:

- **Biotechnology developments in the context of other changes in agri-industry**
- **Impact of biotechnology on the production sector**
- **Will farmers be winners or losers?**
- **Conclusion - the new industry maxi-yacht**

2. Developments in biotechnology in the context of other changes in agri-industry

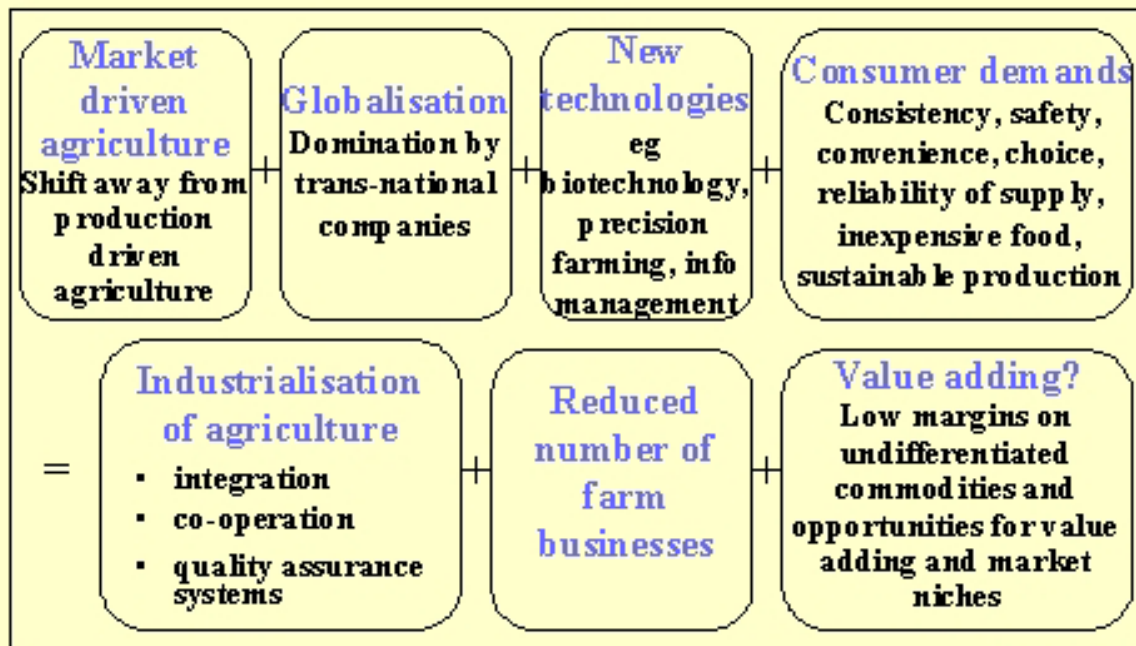
→ The effect of global trends
on farm management



→ The 'hour-glass' structure
of the agri-industry system



3. The effects of global trends on farm management



Rob Napier

The 'Double hour-glass structure of the Emerging Agri-industry System



5. Areas of impact on production sector

- Information management
- On-farm research - causes & effects
- Cropping patterns
- Cropping management
- Costs & yields
- Economies of size
- Risk management
- Quality assurance
- Identity preservation
- Loss of independence
- Marketing skills
- Image - professionalism



Rob Napier

6. Components of successful farm businesses beyond 2000



Rob Napier

7. Will farmers be winners or losers?

- Farmers are not homogeneous
- Many winning farmers are adopting GMO's - other winners exploit the alternatives
- Haves and have nots - structural change
- Beware the treadmill effect
- Value added supply chains or low margin commodities?



Rob Napier

8. Characteristics of the winners

- Attitude
- Managerial capabilities
- Learning capabilities
- Flexibility
- Change managers
- In bed with researchers
- Economies of size
- The power of groups
- Win-win negotiations in integrated supply chains
- Professionals



Rob Napier

9. Conclusions

→The agri-industry maxi-yacht

→The destination

- Safe products
- Satisfied customers
- Sufficient value in the chain
- Sustainability

→The turbulent environment

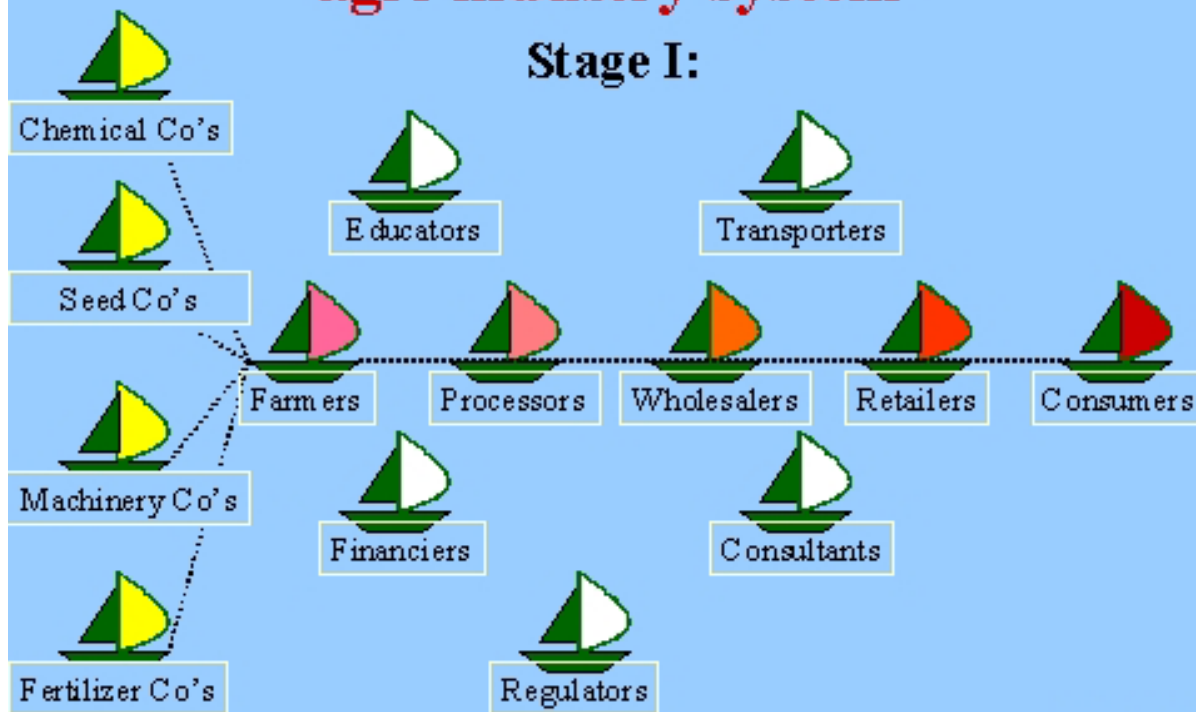
→The crew - supply chain teamwork - a new paradigm

→The imperatives of change



10a. The stages in development of the agri-industry system

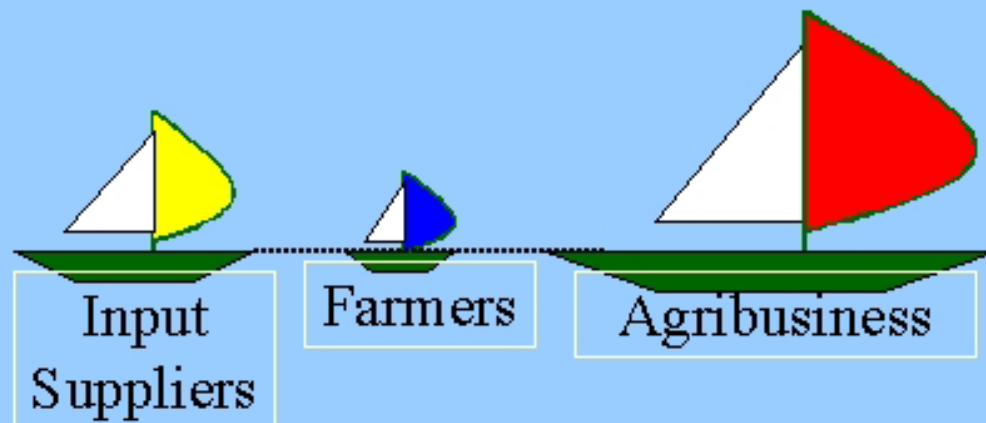
Stage I:



Rob Napier

10b. The stages in development of the agri-industry system

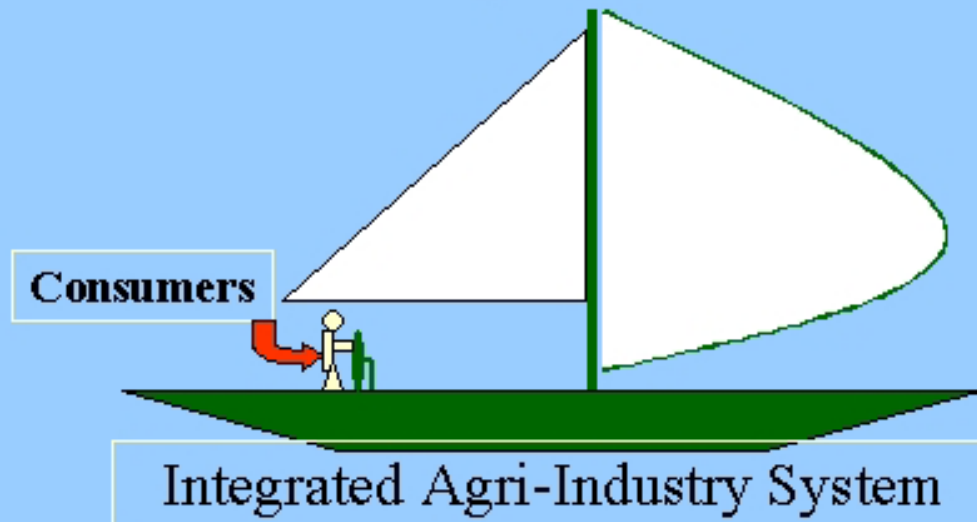
Stage II:



Rob Napier

10c. The stages in development of the agri-industry system

Stage III:



Rob Napier

**Owning the
Agribusiness Value Chain:
The Impact of Biotechnology on the
Production Sector**



Will Farmers be Winners or Losers?

Robert Napier
Orange Agricultural College
The University of Sydney