Economics of Food Trends & Implications for Cooperatives

Glynn Tonsor
Dept. of Agricultural Economics
Kansas State University

My Goal Today

- Raise awareness of economics underlying food trends
  - ➢Facilitate discussion & highlight Coop implications

1. Outline Key Concepts of Trends
2. Note Room for Multiple Production Systems
   - Set stage for Chuck Wirtz
3. Clarify Technology Feasibility vs. Acceptance
4. Highlight Comparative Advantage Importance
5. Illustrate with U.S. Wheat Production "Case"

Situational Background

- Growing tension and interest around food production and role of technology in agriculture
  - Social challenge of feeding growing population, improving food safety, etc.
  - Growing interest in how food is produced
  - Increasing flow, speed, & reach of information from a range of sources

Classical Economic View on Benefits of New Technology Adoption

- Lusk, 2013 *Animal Frontiers* (pg 21):

➢ R&D reduces the marginal cost of food production, results in lower-priced, more widely available food

➢ Consumers benefit as they receive more food at a lower price.

➢ Producers who are early adopters tend to benefit.

➢ ***While appropriate for textbook discussions, things are more complicated today in global food & ag complex…***

Technology Feasibility vs. Acceptance

- The Center For Food Integrity (@foodintegrity) tweeted on Wed, Sep 04, 2013:

"Science tells us if we <u>can</u> do something.

(supply side – technical feasibility)

Society tells us if we <u>should</u> do it."

(demand side – societal acceptance)

- ***'Science working' is necessary but no longer sufficient for technology use…***

Technology Feasibility vs. Acceptance

- Consider host of examples in meat & livestock realm:
  - Partial disadoption
    - rbST, beta-agonists, LFTB
  - Limited adoption to-date
    - Irradiation of meat, immunocastration
  - Ongoing calls for bans, restrictions, &/or labeling
    - growth hormones, GM feedstuffs
      - gestations stalls, laying hen cages, …

Why Does this Matter?

- Direct/common reasons:
  - See classical view summarized by Lusk, 2013
  - Econ welfare of bans/regulations is well established
  - Given controversy and trends, opportunities persist…
- Indirect/unintended consequences:
  - Reduced R&D investment?
  - Shifts in global comparative advantage?
    - What about regional within US?
      - ***What about within Cooperative community?***
  - Increased scrutiny & conflict within industry given product differentiation & target marketing incentives

Related Concepts to Recognize

- Heterogeneity vs. Uncertainty:
  - Both concepts get at variation trends
- Consumer preference heterogeneity is well accepted
  - <5% mkt share of cage-free eggs, some countries have growth hormone bans on imported meat, etc.
  - leads to diverse consumer impacts
    - Signals value in multiple production styles/practices…
- Producer (& Cooperatives?) heterogeneity
  - Also exist given diverse situations, tolerance of risks, etc.
    - Again, signals value in multiple business styles and approaches

➢ Heterogeneity underlies:

➢ calls for change from "vocal minorities," vote-buy disconnects, & overall growth of contention in many situations…

Related Concepts to Recognize

- Uncertainty
  - Technology "working," products being accepted, R&D "paying off"
    - Lack of understanding on economic impact of uncertainty….
- Combined, heterogeneity & uncertainty underlie existence of food trends & economic relevance…

Take Homes of Wheat "Case" – Questions for Cooperatives Leadership

- Is wheat production, handling, marketing key to you?
- How does wheat fit in your Coop's comparative adv.?
- Does this discussion highlight or trigger thoughts on:
  - value in changing focus, investing in product segregation, etc.
    - *Change scenario*
  - leveraging base situation and growing comparative adv.
    - *Status quo scenario*

Tonsor's View on Industry Fit

- Suggestion to producers considering new technology or changes in production practices:

1. Get informed. Seek information from many sources with the goal of educating yourself on a specific topic.
2. Verify proof of concept. Determine feasibility in real-world applications by finding examples where a product or method has been used.
3. Consider the "no adoption" cost. Look at the competitive landscape to understand whether the cost of not adopting puts you at a disadvantage.
4. Communicate. Keep customers informed when implementing a new technology to obtain agreement and buy-in.
5. Understand your business and assess your risk tolerance. Are you generally willing to accept risk in return for expected higher returns, are you more interested in short-term or long-term impacts, and are you flexible about making production changes?

http://www.hpj.com/archives/2014/mar14/mar10/0228UnlockProfitabilitysr.cfm?title=Unlock%20new%20areas%20of%20profitability

Tonsor's View on Industry Fit: ***Cooperatives***

- Suggestion to Coop Leadership:

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Tonsor's Overall Take on Economics of Food Trends

- Given social challenges we need to:
  - Continue pursuit of new & improved technologies
    - as well as alternative (and conventional) production practices
  - Note communication is critical
  - Recognizing "grayness" (not black & white) is key
  - Appreciate economics of acceptance & adoption
  - See value in information flow & voluntary labeling

- I wish "KISS" applied but it doesn't…
  - *With this comes opportunity for those who recognize and accept it!*

Take-Home Points for Cooperatives

- Know & leverage your comparative advantage
  - Recognize export growth patterns
    - GM-wheat example:
      - Role of technology
      - Comparative advantage both domestically & globally
  - Infrastructure Implications?
    - Product segregation, identify preservation, and traceability: fits many trends
      - Consider during grain storage (re)investment assessments
      - Consider in establishing protocols on product acceptance, assuring customers, etc.
- Monitor and "accept" that change will continue
  - ***Don't try to sell that last one-bottom plow….***

More information available at:

This presentation will be available in PDF format at:
http://www.agmanager.info/about/contributors/individual/tonsor.asp

Glynn T. Tonsor
Associate Professor
Dept. of Agricultural Economics
Kansas State University
Email: gtonsor@ksu.edu
Twitter: @TonsorGlynn