


Economic Value of Managing Genetics— *How to Capture the Value?*


Range Beef Cow Symposium XXIII
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Optimal Beef Genetic Management

1. Genetic Management
2. Organizational Design
3. Market Differentiation

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Problem: Beef Supply Chain—Spot markets

- Transaction Costs/Market Failures
 - Opportunism (asset specific investment)
 - Specialized human capital
 - Inadequate risk-sharing
 - Horizon investment problems
 - Uncertain product differentiation signals
 - Buyers
 - Consumers

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Alternative to Market Mechanisms: Vertical Integration Organizational Types

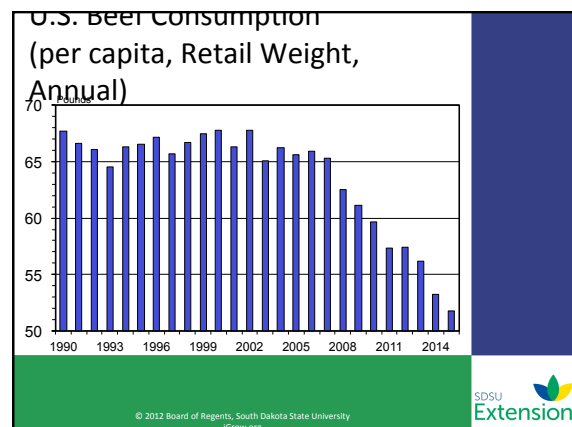
- Reduce Transaction costs
- Potential Bureaucratic costs
 - Difference in beef production
 - Scale
 - Geography
 - Producer objectives
 - Operation types

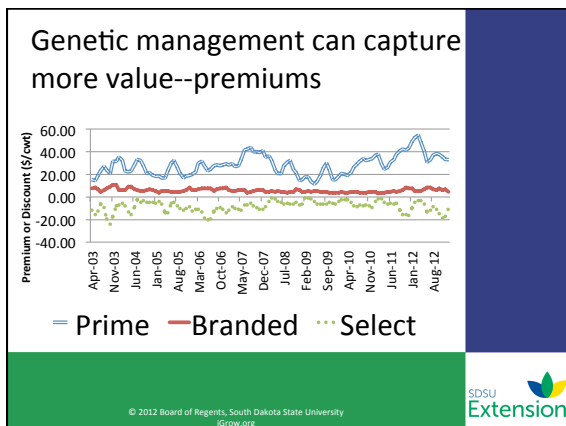
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The Challenge

- Reduce sub-optimal investment in genetic management
- In order to meet challenge----
 - Identify complimentary organization and market differentiation mechanisms (James, Klein, Sykuta, 2007)

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Genetic management can capture more value--segregation

- Packer/Feedlot capacity more utilized
 - Coordinated, consistent production system
- Genetic Management Strategies (proven genetics)
- Reproductive Technologies (AI/Estrus Synch.)
 - Coordinating/Developing higher quality cattle/beef products
 - » Consistency
 - » Uniformity
 - Lower sorting costs (feedlots/packing plants)

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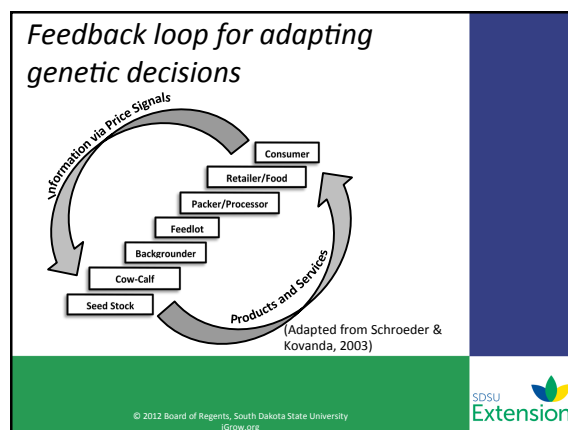
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Technology Supporting Genetic Management

- 29% University of Missouri Thompson Farm calves (2008-2011) grades prime vs. 3% national average

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Beef Supply Chain and Evolving Organizational Arrangements and Market Differentiation Mechanisms

- Limited integration
 - Strategic alliances
- Higher utilizations of market differentiation mechanisms

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Strategic Alliances Benefits

- Bulk input purchases
- Reducing transaction costs (commission fees, trucking)
- Information sharing (management, carcass and performance data)
- More value-based pricing for products (grid pricing formulas)

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Market Differentiation Mechanisms

- Brand awareness strategies
 - Signaling quality and consistency
- Show-Me-Select Heifer Replacement Program
 - Genetic, Management, and Production
 - Tier II--2008- Minimum EPD accuracies for Heifer's sire must be met
- Verified Beef's Reputation Feeder Cattle Program
 - Genetic merit to estimate average daily gain, carcass weight, feed per grain, ribeye area
 - Third party verification of genetics and valuation of genetics

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Buyer Assurances

- Clearly communicating market differentiation mechanisms
 - Third party verification
 - Internal monitoring
 - Avoid poor marketing terms
 - New genetic protocols/management techniques (market differentiation mechanisms)
 - Advertising
 - Educating buyers on potential benefits of a new value-added product

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Conclusion---Opportunities for Northern Plains

- Feedlots moving northerly
- Higher technology adoption rates
- Higher cattle quality
- Larger operation size
- More readily kept records

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Recommendations for capturing added-value through genetic management

- Improve genetic protocols
 - Transparency
- Be creative—new strategic alliances
 - Proper feedback mechanisms
- Partner with producers that have similar operation and genetic management characteristics
- Market differentiation
 - Clear and transparent

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