Carrying Capacity

• Northern Great Plains:
  – 16.2 ha for 6-7 months for cow-calf pair
• Lower Michigan
  – 0.8 ha for 6-7 months for cow-calf pair
Southern Canada, US, Northern Mexico
Dairy Cow Numbers and Production

2007 Census of Agriculture

United States Total
9,266,574

1 Dot = 2,000 Milk Cows

6.3 B
13.4 B
41.6 B
8.1 B
9.1 B
27.6
9.2 B
13.5 B
10.6
Coordination and Pricing in the Value Chain

- Price: spot (cash) and futures markets
- Price: cash forward contracts and pricing rules
- Pricing and coordination: bilateral contracts across firms at different stages
- Vertical integration across stages
Herbruck’s Poultry Ranch

Always striving for the best.
Some Metrics

- 6 M laying hens
- 400 employees
- 160,000 MT corn / year
Products and Services

Retail & food service

– Provide
  • Specialty and premium eggs
– To:
  • Independent local grocers
  • Nationwide restaurants and retailers.
Whatever product, packaging or delivery need you have, we can meet it.
Procurement choices

Eggland’s Best
• Classic white
• Classic brown
• Cage free
• Organic / cage free
• Hard cooked peeled

Green Meadow
• Cage free
• Organic cage free
Private Label

• Safe Food Quality Institute (SQF) certified.

• All egg sizes and carton styles.

• Specially packaged under the customer’s brand.
Herbruck Brand Premium Eggs

- SQF certified.
- All egg sizes and carton styles.
- Unique packaging options.
- Part of a complete egg solution of where and in what quantity products are placed on a shelving unit.
Private Label Specialty Eggs

- Cage-free and organic/cage-free eggs
- Packaged under the customer’s brand.
- All egg sizes and carton styles.
- SQF certified.
Service and Support for Retailers

• Inventory management and out-of-stock reduction
• Direct store delivery (DSD)
• Local, regional, and national distribution
• Private labeling and specialty packaging
• Scan-based trading (Herbruck’s maintains ownership of inventory within retailers' stores until items are scanned at the point of sale)
• Dating, barcoding, and traceability
• Retail support
Products and Services (Continued)

- Grain purchasing (160,000 MT corn/year)
  - Conventional
  - Organic
- Dried fertilizer
Environmental Sustainability

Theme

– Care about the people, land, air, and the waterways impacted by their scope of business.

– Meet or exceed gov’t regs
• Reduce, Reuse, Recycle
• Energy efficiency
• Landscape Design
• Environmental monitoring
  – National Pollutant Discharge Elimination System permit (Federal: Clean Water Act)
  – Michigan Agricultural Environmental Assurance Program (State)
  – National Air Emissions Monitoring Study
Social Sustainability

• Deep-rooted culture of community
• Cooperation with the surrounding community on our corporate environmental quality program
• Sourcing locally first
• Contractual partnerships with many smaller family farms -- cage-free and organic laying hens
• Employee wellness program, training and development opportunities, competitive wages and incentives
Dan Gorsky, senior VP
North American Supply Chain Management
McDonald’s Corporation

• Valued supplier to the McDonald’s system, delivering high-quality eggs.
• Consistently, Herbruck’s have shown respect for the environment, their employees, and their laying hens.
Coordination Challenges

- Price system is a pretty good information system for coordination across stages and with consumers for simple ‘signals’
- Price system struggles as a coordination mechanism when:
  - Complex signals
  - Complex systems integration across stages
  - Transactions costs (costs of monitoring, transacting contracts, legal system) are large
Coordination Challenges

• The US value chain has seen a complete reshaping of the livestock and poultry sectors over the past 50 years:
  – Approaches to coordination
  – Transportation
  – Technologies to support monitoring and information flows
  – Economies of scale within and across stages and capacity to coordinate across stages
  – Gov’t regulatory environment and voluntary schemes by commodity organizations
Cool Tools for Water, Air and Nutrients
MSU Extension In-service
September 4 & 5, 2014
MSU Kellogg Biological Station
People Per Mile$^2$ in US
(per 2.6 km$^2$)