Competition and Sustainability in the Poultry Industry

A look at where we are and how we got here.
About me

• I was the 4th generation in a large family owned chicken business, GNP Company.
  • Focused on sustainability while at the company
• I have an MBA and undergraduate business degrees
• Personally interested in protecting the environment
• Dabble with grandiose social entrepreneurial ideas
GNP Company’s History

- Founded in 1926 by E.M Helgeson
- Started selling day old chicks in central Minnesota
  - Over 300 other hatcheries in the state.
  - Sold through to Sears Catalog and delivered through the US mail.
  - Common customer was a farm wife, raising a small flock for additional income or food. Supported a small diversified farms.

- After WWII, they built feed mills and signed contracts with farmers to grow meat chickens at scale.
  - Refrigeration enabled greater meat consumption.

- In 1983 GNP purchased a processing plant, becoming a vertically intergraded company.
GNP Company Today

- The Midwest’s leading provider of premium quality chicken under the Gold’n Plump® Just BARE® Chicken brand labels
- Partnerships with over 350 family farmers and operations in Minnesota and Wisconsin
- Process approximately 100 million chickens in 2014
  - Sales: $457 million
- Sold to Maschhoff’s in 2013 and resold to JBS/Pligrim’s Pride 2017
Broiler Chicken Business Key Facts

• Approximately 40 “vertically integrated” companies are involved in the business of raising, processing and marketing chickens in the US.
  • Top 5 companies control over 80% of the market
• In 2011, approximately 9 billion broiler chickens were produced.
• Almost 37 billion pounds of chicken product will be marketed, measured on a ready-to-cook basis.
• Americans consume over 85 pounds of chicken per person.
  • Most popular protein

Source: National Chicken Council
The Value Chain
Poultry Barns, Then and Now

1965

2010

Image source: USDA. 1967. Commercial Broiler Production


Source: A Comparative Lifecycle Assessment of US Broiler Production for Years 1965 and 2010, Greg Thoma, Marty Matlock, Ben Putman University of Arkansas
Chickens, Then and Now
Broilers (meat chickens) at 56 days of age


1957  

2005

Source: A Comparative Lifecycle Assessment of US Broiler Production for Years 1965 and 2010, Greg Thoma, Marty Matlock, Ben Putman University of Arkansas
Phones, Then and Now
The 4 P’s of Sustainability

Diagram showing:
- People
- Planet
- Poultry
- Progress
American Humane Certification

- 3rd party animal welfare certification
- Verified processes and practices
- Customer driven (grocery stores)
- Consumer confidence
Since 2010 GNP Company has purchased renewable energy credits for the electricity uses in the production of Just Bare Chicken, a $50k investment.
• Scalable approach to protecting water quality on agricultural lands
• Cost-effective supply chain sustainability
• Creates a financial incentive for farmers to protect water quality
How it Works: Third Party Certified

- A whole farm threshold based standard based on the Minnesota Agricultural Water Quality Certification Program
- Flexible standard for all types of farming systems
How it Works: The Offset Approach
The Process: Calculating the Offset

How do you get from food product to commodity crop acres?

Averages are calculated using public data sets and industry standards for feed conversion and processing. Goal is transparency and replicability.
## Estimates for Field Steward Credits

<table>
<thead>
<tr>
<th></th>
<th>Net Sales Pounds</th>
<th>Number of Birds</th>
<th>Pounds of Feed</th>
<th>Pounds of Corn</th>
<th>Pounds of Soybeans</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GNP Company</strong></td>
<td>457,000,000</td>
<td>76,166,667</td>
<td>799,750,000</td>
<td>463,855,000</td>
<td>247,922,500</td>
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<tr>
<td><strong>Per Person</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Consumption</strong></td>
<td>85</td>
<td>14</td>
<td>149</td>
<td>86</td>
<td>46</td>
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<tr>
<td><strong>Pounds of Chicken</strong></td>
<td>2,700</td>
<td>450</td>
<td>4,725</td>
<td>2,741</td>
<td>1,465</td>
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<tr>
<td><strong>Estimate of</strong></td>
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</tr>
<tr>
<td><strong>Corn Bushels</strong></td>
<td>8,283,125</td>
<td>4,132,041.67</td>
<td>63,037.48</td>
<td>100,380.87</td>
<td>163,418.35</td>
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<tr>
<td><strong>Soy Bushels</strong></td>
<td>1.54</td>
<td>0.77</td>
<td>0.01</td>
<td>0.02</td>
<td>0.03</td>
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<tr>
<td><strong>Pounds of Chicken</strong></td>
<td>48.94</td>
<td>24.41</td>
<td>0.37</td>
<td>0.63</td>
<td>1.00</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Credit Price per Acre</th>
<th>Total Credit Cost</th>
<th>Admin Expense</th>
<th>Payment to Farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GNP Company</strong></td>
<td>$6.50</td>
<td>$1,062,219.29</td>
<td>$245,127.53</td>
<td>$817,091.76</td>
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<td><strong>Per Person</strong></td>
<td>$6.50</td>
<td>$0.21</td>
<td>$0.05</td>
<td>$0.16</td>
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<tr>
<td><strong>Consumption</strong></td>
<td>$6.50</td>
<td>$6.50</td>
<td>$1.50</td>
<td>$5.00</td>
</tr>
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Feeding the Industry

• ~14 to 21 million acres of farm land is used to support the US meat chicken industry.
  • 11% of ~180 million total acres of US corn and soy
  • Slightly more crop production is exported.
  • About 4 times more corn goes in ethanol than chicken feed.

• 57 million tons of chicken feed produced on 2011
  • 1.2 billion bushels of corn
  • 500 million tons of soybean/meal

• Per capita consumption of 85 pounds requires 1,300 to 2,100 square feet of crop land for the chicken feed.
  • Each person requires an area about the size of the foundation for a typical home to support the feed production for their share of broiler production.

Source: National Chicken Council, EIA.gov & U.S. Grains Council
Conclusion

• The food system and poultry industry are highly consolidated.
  • Big customers like to work with big suppliers.
  • Example: McDonald’s and Tyson
• Largest environmental impacts are in the supply chain.
• Solutions are known, but often dismissed or ignored.
• Local and/or small scale agriculture can play a critical role in demonstrating innovation and sustainability.