Corn Ethanol and Soy Diesel:

Not Chicken Feed to Chicken Feeders!

Dan Smalley

Transition to a Bioeconomy: Integration of Agricultural and Energy Systems

February 12–13, 2008
Westin Atlanta Airport Hotel, Atlanta, GA
Rising Costs Obscure Tyson's Future
Andrew Farrell, 01.28.08, 4:20 PM ET

- Booming ethanol production is eating through corn supplies and forcing meat producers to pay more to feed their livestock. Such rising costs clobbered Tyson's profits and are obscuring the company's future.
- "The continued escalation of grain prices, driven largely by government mandates for corn-based ethanol, has caused a domino effect for other inputs," said Tyson Chief Executive Richard Bond.
Shares of Chicken Producers Fall

Producers Fall After Pilgrim's Pride Blames Feed Prices for Wider Loss

- NEW YORK (AP) -- Chicken producer shares dropped Tuesday after high feed prices led Pilgrim's Pride Corp. to report a wider loss in its fiscal first quarter. Pilgrim's Pride shares led the drop, falling $1.69, or 6.6 percent, to $24.04 in midday trading.

- Before the market opened, the company said a 24 percent boost in animal feed ingredient prices led to its loss. The higher prices are mostly a function of skyrocketing costs for corn and soybeans, which are used to make the feed.

- Corn prices have reached record levels due to demand for the alternative fuel ethanol.

Associated Press, January 29, 2008
## Average Broiler Diets 2006

<table>
<thead>
<tr>
<th>Component</th>
<th>Lbs./Ton</th>
<th>% of Diet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>1,294</td>
<td>64.7 %</td>
</tr>
<tr>
<td>Soybean Meal</td>
<td>510</td>
<td>25.5 %</td>
</tr>
<tr>
<td>Other Grains and Proteins</td>
<td>165</td>
<td>8.3 %</td>
</tr>
<tr>
<td>Calcium</td>
<td>10</td>
<td>0.5 %</td>
</tr>
<tr>
<td>Phosphorous</td>
<td>8</td>
<td>0.4 %</td>
</tr>
<tr>
<td>Amino Acids/Vitamins etc.</td>
<td>13</td>
<td>0.6 %</td>
</tr>
<tr>
<td>Total</td>
<td>2,000</td>
<td>100 %</td>
</tr>
</tbody>
</table>

Source: Mike Donahue, Economist, Agri Stats
Feed Ingredient Expense per Lb. of Live Chicken up 46% from October 2006 to April 2007

Source: Mike Donahue
Economist, Agri Stats
Live Cost and Broiler Feed Ing. Cost
September 16, 2006 through September 1, 2007

Source: Mike Donahue
Economist, Agri Stats
Corn Use for Ethanol under the Renewable Fuel Mandate

Source: Mike Donahue
Economist, Agri Stats
% of U.S. Corn Used for Ethanol under the Renewable Fuel Mandate

Source: Mike Donahue
Economist, Agri Stats
USDA Weekly Volume of Live Lbs. of Chicken Processed
October 14, 2006—August 12, 2007

Source: Mike Donahue
Economist, Agri Stats
Weekly additional cost to the broiler industry in broiler feed ingredient expense October 2006–August 2007

Source: Mike Donahue
Economist, Agri Stats
## Relative Costs of Live Production
### U.S. Broiler Industry

<table>
<thead>
<tr>
<th></th>
<th>October 2006</th>
<th>October 2007</th>
<th>April 2008 Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chick Cost</td>
<td>15.2%</td>
<td>13.8%</td>
<td>12.2%</td>
</tr>
<tr>
<td>Grower Cost</td>
<td>20.0%</td>
<td>16.7%</td>
<td>13.9%</td>
</tr>
<tr>
<td>Feed Ing. Cost</td>
<td>52.7%</td>
<td>59.0%</td>
<td>67.9%</td>
</tr>
<tr>
<td>Catch &amp; Haul</td>
<td>4.9%</td>
<td>4.3%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Other</td>
<td>7.2%</td>
<td>6.2%</td>
<td>2.7%</td>
</tr>
</tbody>
</table>

Source: Mike Donahue
Economist, Agri Stats
Cumulative additional cost to the broiler industry in broiler feed ingredient expense since October 2006–August 2007

Total over the last 47 weeks: $1,848,565,579

Source: Mike Donahue
Economist, Agri Stats
Secretary Johanns on the Impact of Ethanol

“Because so many factors go into making food, consumers probably will not see a direct impact. “

December 14, 2006

Source Dr. Paul Aho, *The Emperor Has No Corn*, January 2007
"I started wearin' this when I realized how much money there is in ethanol."
Impact on the World Poultry Industry

- Increase the cost of whole (RTC) poultry meat by 4.5 cents/lb and eggs 10 cents per dozen
- Increased Cost to the US poultry meat industry:
  - $2 billion per year – World $8 billion per year
- Increased Cost the US Table egg industry:
  - $750 Million per year – World $9 billion per year

Source: Dr. Paul Aho, *The Emperor Has No Corn*, January 2007
From a grower perspective, having average per capita chicken consumption increase only 1 pound per year during 2007 through 2012, rather than 2 pounds per year, results in the equivalent of 800 contract broiler grow–out farms sitting–out production on average each year for 2007 through 2012.

Source: Bill Roenigk article, *Poultry Times*
More questions than answers at this point!

- What safeguards, if any, are in place to protect the food supply and grain *users*, as well as ethanol plants, if there is a drought in the corn belt?
  - Should there be such safeguards?
- Will ethanol mandates be eased if there is a shortfall in corn harvest?
- How soon will cellulosic ethanol be practical?
- Considering the high margins for ethanol, should ethanol production be subsidized?
- If so, should corn *users* be subsidized for artificially created market prices?
Poultry Industry Energy User as Well

- Despite this pessimistic presentation, I actually support renewable energy initiatives such as “25 X 25”
- Chickens not only large grain users, but large energy users as well
- On farm utilization of poultry litter as an energy source could revolutionize the broiler industry
The abiding question is how and when does it all balance out!