Antibiotic Stewardship: Collaborative Strategy for Animal Agriculture and Human Health

October 31st to November 2nd

Antibiotic Stewardship
Does this Mean Better?

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Sanderson Farms

Who are We?
Who We Are

• Organized in 1947
• Incorporated in 1955
• Vertically integrated in 1961
• Initial public offering in 1987
• 3rd largest poultry processor in the U.S.
• Current capacity 12M head/week
### Strong Track Record of Organic Growth

**Pounds Processed (millions)**

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</tr>
</thead>
<tbody>
<tr>
<td>Pounds Processed (millions)</td>
<td>722</td>
<td>795</td>
<td>986</td>
<td>1,077</td>
<td>1,167</td>
<td>1,308</td>
<td>1,437</td>
<td>1,530</td>
<td>1,580</td>
<td>1,802</td>
<td>2,025</td>
<td>2,441</td>
<td>2,426</td>
<td>2,567</td>
<td>2,805</td>
<td>2,959</td>
<td>3,041</td>
<td>3,058</td>
<td>3,441</td>
<td>3,765</td>
<td>4,157</td>
<td>4,321</td>
<td>4,446</td>
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</tbody>
</table>

* Estimated.

Assumes St. Pauls, NC reaches full production in 1st Quarter 2018.
Assumes Tyler, TX opens 1st Quarter 2019 and reaches full production in 2nd Quarter 2020.
## Poultry Plants

<table>
<thead>
<tr>
<th>Plant</th>
<th>Year</th>
<th>Full Capacity Per Week (1)</th>
<th>Live Pounds Per Week (2)</th>
<th>Processed Pounds Per Week (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Bird Deboning</td>
<td></td>
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<td></td>
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<tr>
<td>Hazlehurst, MS</td>
<td>1961</td>
<td>625,000</td>
<td>6,250,000</td>
<td>5,765,750</td>
</tr>
<tr>
<td>Laurel, MS</td>
<td>1965</td>
<td>625,000</td>
<td>5,781,250</td>
<td>5,333,250</td>
</tr>
<tr>
<td>Hammond, LA</td>
<td>1974</td>
<td>625,000</td>
<td>5,781,250</td>
<td>5,333,250</td>
</tr>
<tr>
<td>Collins, MS</td>
<td>1981</td>
<td>1,250,000</td>
<td>11,582,500</td>
<td>10,886,500</td>
</tr>
<tr>
<td>Waco, TX</td>
<td>2007</td>
<td>1,250,000</td>
<td>11,582,500</td>
<td>10,566,500</td>
</tr>
<tr>
<td>Palestine, TX</td>
<td>2015</td>
<td>1,250,000</td>
<td>11,582,500</td>
<td>10,566,500</td>
</tr>
<tr>
<td>St. Pauls, NC</td>
<td>2017</td>
<td>1,250,000</td>
<td>11,582,500</td>
<td>10,566,500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>6,875,000</strong></td>
<td><strong>64,062,500</strong></td>
<td><strong>59,098,250</strong></td>
</tr>
<tr>
<td><strong>Retail</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>McComb, MS</td>
<td>1993</td>
<td>1,250,000</td>
<td>8,437,500</td>
<td>7,425,000</td>
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<tr>
<td>Bryan, TX</td>
<td>1997</td>
<td>1,250,000</td>
<td>8,437,500</td>
<td>7,425,000</td>
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<tr>
<td>Moultrie, GA</td>
<td>2005</td>
<td>1,250,000</td>
<td>8,437,500</td>
<td>7,425,000</td>
</tr>
<tr>
<td>Kinston, NC</td>
<td>2011</td>
<td>1,250,000</td>
<td>8,437,500</td>
<td>7,425,000</td>
</tr>
<tr>
<td>Tyler, TX</td>
<td>2013(4)</td>
<td>1,250,000</td>
<td>8,437,500</td>
<td>7,425,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>6,250,000</strong></td>
<td><strong>42,187,500</strong></td>
<td><strong>37,125,000</strong></td>
</tr>
<tr>
<td><strong>Expected Capacity</strong></td>
<td></td>
<td><strong>13,125,000</strong></td>
<td><strong>106,250,000</strong></td>
<td><strong>96,223,250</strong></td>
</tr>
</tbody>
</table>

### Prepared Chicken Plant

<table>
<thead>
<tr>
<th>Plant</th>
<th>Year</th>
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</thead>
<tbody>
<tr>
<td>Jackson, MS</td>
<td>1986</td>
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</tbody>
</table>

Note:
1. Capacity measured in head/week.
2. Based on target live weights.
3. Based on historical yields.
Sanderson Farms, Inc.’s primary responsibility is to provide our customers and consumers with safe, wholesome, high quality chicken
Why Sanderson Farms does not plan to stop the judicious use of antibiotics

• Animal Welfare
  – We have a responsibility to relieve and prevent animal suffering, **Humane thing to do**

• Food Safety
  – Healthy chickens means safe food

• Sustainability
  – Animals that take longer to reach market need more feed, land, fuel, water, etc and produces more fecal matter (more waste)
“Raised Without Antibiotics” is the new “No Hormones Added”

• Implication that anything without this label is unsafe
• “Raised Without Antibiotics” really No Antibiotics Ever?
  – What fears are driving “Raised Without Antibiotics”?
    • Fear of antibiotic residues?
    • Fear of contribution to human antibiotic resistance?
  – “Raised Without Antibiotics” producers claim they want sick flocks treated as needed.
    • Treatment undermine the benefits of “Raised Without Antibiotics”?
    • Will antibiotics even be available?
Poultry Specifics: *what are we fighting for?*

- Most commonly used antibiotics are ionophores:
  - Treat eimeria infections ubiquitous around world, regardless of rearing environment.
  - Not classified as antibiotics in Europe, but they have antibiotic activity.
  - *Not used in human medicine, so what’s the risk to human health?*
- Antibiotics used to control ubiquitous clostridial challenges:
  - Bacitracin – not classified as medically important.
  - Virginamycin – streptogramin family considered medically important, but which drug?
- *E. coli* most common chicken killer:
  - Gentamicin administered in ovo saves chicken lives (*all lives matter*).  
    - Classified as medically important, but only given one time during product and it is weeks before harvest.
  - Sulfadimethoxine/Ormetaprim  
    - In feed medication difficult to manage even when available (Q4 ‘18?)
  - Fluroquinolones  
    - Poultry approval withdrawn 2005: where’s the benefit to humans? Chickens die (*all lives matter*?)!
- Acid, air and prayer!
What damage are we doing to our industry?

• We need to take a honest look at how this is affecting us as an industry vs. just making a dollar today
  – What will this do to the industry tomorrow?

• E.g. Hormone Issue in Chicken Production
  – Most consumers believe that hormones are used in chicken production in the US
    • All because of marketing

  – Slow Growing Chickens?
  – Cage free Chickens?
  – GMO free Chickens?
What’s Different between Conventional and RWA?

Surprisingly little, actually

What both programs have in common:

- Both use non-ionophore anticoccidials
- Antibiotics in breeding stock where necessary, to maintain healthy parents that are capable of producing healthy progeny.
- First control disease by always utilizing best management practices
- Provide clean hatcheries, adequate down time, optimal poultry house management to minimize disease
- Vaccination programs to minimize disease
- Use water acidifiers and probiotics to minimize antibiotic use
- Avoid antibiotic treatment unless necessary for the health and well being of the birds and safety of the food supply
What’s Different between Conventional and RWA?

*Products Used*

- Who decides what products can/cannot be used?
  - Conventional = FDA and Veterinarian
  - RWA = Marketing Department

- Who decides when to treat with an antibiotic?
  - Conventional = Veterinarian
  - RWA = Marketing/Sales Department and Veterinarian

- What kind of pressure comes into play for the veterinarian when trying to determine if it is appropriate to treat?
  - Conventional = Based on animal need and consumer safety.
  - RWA = Tension between supplying the product that the market demands and doing the right thing for the animal
Does a no-antibiotics-ever program actually produce a healthier bird than conventional production?
Veterinary Feed Directives (VFD)

Governments Way to Enforce Judicious Use of Antibiotics
Already doing this?

• Most major companies were already doing this
  – Have Veterinarians and Nutritionist on staff

• Veterinarians were already scripting any medication used in water to monitor and control of what is being used
Changes Due to New Regulations (VFD)

• Any use levels that were indicated for gain or improved feed efficiency were **eliminated**

• Only the use levels indicated for **prevention** or **control** of a disease are allowed
Changes Due to New Regulations VFD

• Only the use levels indicated for prevention or control of a disease are allowed
  – Thus, use levels increased
  – E.G. BMD
    • Use level 4 to 50g/t for gain or improved feed efficiency
    • Minimum use level is now 50 g/t
      – Thus any use has to be at 50 g/t or above
Practically Implications of the VFD in the field?

• More Paperwork
• Increased in inclusion rates

• Does this mean better?
Do you want your neighbor to determine your child's health care or your physician?
Is it responsible to NOT use antibiotics JUST to get a higher price for your product?
Positive Outcome

• Consume now believe we are taking care and having veterinarian oversight
  – PR thing, because this was already the case