Receiving Stocker Cattle
Tri-State Beef Conference

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VMCVM
Receiving Cattle

- It’s more than drugs and bugs
Objectives

- Discuss receiving herd health programs
  - Nutrition, vaccination, and metaphalaxis
- Discuss stocker production economics in today’s market
- Discuss any other topic you would like
Value of Gain Per Pound Spring Stockers
March 5 weights-Oct 8 weights

<table>
<thead>
<tr>
<th>Year</th>
<th>Gain Per Pound</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>$0.57</td>
</tr>
<tr>
<td>2006</td>
<td>$0.39</td>
</tr>
<tr>
<td>2007</td>
<td>$0.61</td>
</tr>
<tr>
<td>2008</td>
<td>$0.29</td>
</tr>
<tr>
<td>2009</td>
<td>$0.44</td>
</tr>
<tr>
<td>2010</td>
<td>$0.66</td>
</tr>
<tr>
<td>2011</td>
<td>$0.74</td>
</tr>
<tr>
<td>2012</td>
<td>$0.19</td>
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<tr>
<td>2013</td>
<td>$1.09</td>
</tr>
<tr>
<td>2014</td>
<td>$2.23</td>
</tr>
<tr>
<td>2015</td>
<td>$1.25</td>
</tr>
<tr>
<td>Avg</td>
<td>$0.77</td>
</tr>
</tbody>
</table>

* 2015 Projected
What are my goals for stocker production?

- Sickness <10%-33%
  - Depending on the type of cattle purchased
- Death loss 1%-4%
  - Depending on the type of cattle purchased
- > 1.5 lbs ADG
Receiving Cattle

1. Cattle purchasing
2. Arrival program
   1. Feeding and environment
3. Arrival Processing program
4. Arrival Disease recognition and treatment program
What is the first step in the cattle receiving program?
Cattle Purchasing
Cattle Purchasing

- Must match cattle purchasing to farm resources and abilities

- Large Stocker operators must be willing to stop purchasing cattle in the face of a train wreck
Arrival Program

Environment

- BRDC loves lots of calves and a crowded environment
Farm D

**Pre-weaning Management**

- Nutrition
  - Pasture and milk
- Herd Health
  - Pyramid 5 + Presponse, Vision 7 July
  - Cydectin July
Farm D

**Steer Weaning Management**
- Calves weaned into barn
- Calves fed brewers grain/com silage/haylage mix
- Calves fed 2 grams CTC per day for 5 days

**Heifer Weaning Management**
- Calves weaned in dry lot
- Calves fed brewers grain/com silage/haylage mix
- Calves fed 2 grams per day CTC for 5 days
Farm D

- 72 Steers weaned 22 days
- 63 Heifers weaned 14 days

Graph showing ADG:
- Steers in Barn: 3.67
- Heifers in field: 2.92
Percent Calves treated for BRDC

Steers: 60%

Heifers: 0%
Arrival Program

Feeding

- Feed should be palatable (taste good to the calf)
- Feed needs to not have too much starch
  - Corn, barley, wheat, oats less than half the total grain content
- Wet feeds and ensiled feeds are hard to manage in starter rations
What about special branded starter grains vs homemade ones?
Backgrounded early weaned calves

- Drought Summer 2014
- 400 calves weaned end of July
- Grain fed free choice
  1. Branded starter product
  2. Generic ration
Observations

Cost/Ton of Ration

|$0.00|
|$100.00|
|$200.00|
|$300.00|
|$400.00|
|$500.00|

Branded Product

Generic Product

37% Cheaper

$433

$276
ADG and Feed Cost of gain
Branded starter feeder vs generic

Branded Product Homemade ration

ADG
Feed Cost of gain

2.55 $0.86 2.51 $0.53

$65 additional profit
“Bull Ration” vs. 3-Way Ration

- **Group 1 ADG**: 2.01#
- **Group 2 ADG**: 2.28#
- **Group 3 ADG**: 2.10#

Groups:
- 92 ASA
- 113 Tel-O-Auction
- 105, 106 Circle 5
- 94 Circle 5
- 114 Tel-O-Auction
- 97, 98 Circle 5

Legend:
- Red: Group 1 ADG
- Orange: Group 2 ADG
- Yellow: Group 3 ADG
“Bull Ration” vs. 3-Way Ration

Conclusion:

<table>
<thead>
<tr>
<th>Cost/# of Gain</th>
<th>Bull Ration</th>
<th>3-Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.00</td>
<td>$0.20</td>
<td>$0.40</td>
</tr>
<tr>
<td>$0.20</td>
<td>$0.40</td>
<td>$0.60</td>
</tr>
<tr>
<td>$0.40</td>
<td>$0.60</td>
<td>$0.80</td>
</tr>
<tr>
<td>$0.60</td>
<td>$0.80</td>
<td>$1.00</td>
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<td>$1.00</td>
<td>$1.20</td>
</tr>
<tr>
<td>$1.00</td>
<td>$1.20</td>
<td>$1.40</td>
</tr>
</tbody>
</table>

$0.51 Difference

$57 difference in net return
Starter Rations
Fancy Grain mixes or generic by-products

**Group 1**
- 2 lbs medicated starter + 4 lbs corn gluten & soy hulls and grass and mineral per day
- ADG 2.2
- Feed Cost of Gain $0.77

**Group 2**
- 6 lbs corn gluten & soy hulls + free choice grass and mineral per day
- ADG 2.8
- Feed Cost of Gain $0.44
All Calves Are Not The Same

- **Class 1**
  - Preconditioned, Backgrounded calves
- **Class 2**
  - Calves transferred from farm A to farm B
- **Class 3**
  - Fresh market calves
- **Class 4**
  - Stale calves
Class 3
Processing Plan

Within the first 24 hours

- 4-way MLV (IBR, BVD, PI3, BRSV)
  or
- Vaccinate with a 3 way MLV (IBR, PI3, BRSV) IN
- Blackleg
- Parasite control
- +/- Mannheimia toxoid vaccine
- Selenium (+/- copper, zinc, manganese)
- Start on palatable grain
- Consider Metaphalaxis
Class 4

- Too late to vaccinate
- Most of these calves would benefit from METAPHYLAXIS
- Parasite control
## Drugs Approved for Metaphalaxis

<table>
<thead>
<tr>
<th>Drug</th>
<th>Antibiotic Drug Class</th>
<th>Cost (500# calf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micotil® (tilmicosin)</td>
<td>macrolide</td>
<td>$8.00 ($16.00)</td>
</tr>
<tr>
<td>Nuflor® (florphenicol)</td>
<td>phenicol</td>
<td>$21.00</td>
</tr>
<tr>
<td>Norbrook 300® (oxytetracycline 300 mg/ml)</td>
<td>tetracycline</td>
<td>$4.80</td>
</tr>
<tr>
<td>Excede® (ceftiofur 200mg/ml)</td>
<td>B-Lactam</td>
<td>$14.25</td>
</tr>
<tr>
<td>Draxxin® (tuluthramycin)</td>
<td>macrolide</td>
<td>$23.00</td>
</tr>
<tr>
<td>Zactran® (gamathromycin)</td>
<td>macrolide</td>
<td>$18.00</td>
</tr>
<tr>
<td>Zuprevo® (tildipirison)</td>
<td>macrolide</td>
<td>$21.75</td>
</tr>
<tr>
<td>Baytril® (enrofloxacin)</td>
<td>fluoroquinolone</td>
<td>$17.00</td>
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Drug Classes for Metaphylaxis
Did metaphylaxis work?

<table>
<thead>
<tr>
<th>Study</th>
<th>Non-Medicated</th>
<th>Tilmicosin</th>
<th>% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Mochor¹⁰</td>
<td>10.8⁺</td>
<td>2.9⁴</td>
<td>73.2</td>
</tr>
<tr>
<td>2 McCoy¹¹</td>
<td>16.1⁺</td>
<td>5.9⁹</td>
<td>63.4</td>
</tr>
<tr>
<td>3 Schumann¹²</td>
<td>20.0⁺</td>
<td>2.0⁴</td>
<td>90.0</td>
</tr>
<tr>
<td>4 Mechor¹³</td>
<td>20.7⁺</td>
<td>10.7⁹</td>
<td>48.3</td>
</tr>
<tr>
<td>5 Klemesrud¹⁴</td>
<td>22.3⁺</td>
<td>12.9¹⁰</td>
<td>42.2</td>
</tr>
<tr>
<td>6 Schumann¹⁵</td>
<td>23.0⁺</td>
<td>5.6⁶</td>
<td>78.3</td>
</tr>
<tr>
<td>7 Galvean¹⁶</td>
<td>32.8⁺</td>
<td>12.1⁹</td>
<td>63.1</td>
</tr>
<tr>
<td>8 McCoy¹⁷</td>
<td>33.2⁺</td>
<td>11.8⁹</td>
<td>65.0</td>
</tr>
<tr>
<td>9 Mechor¹⁸</td>
<td>35.2⁺</td>
<td>21.5⁹</td>
<td>38.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study</th>
<th>Non-Medicated</th>
<th>Tilmicosin</th>
<th>% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 Brazio²⁸</td>
<td>65.1⁺</td>
<td>39.8''</td>
<td>38.9</td>
</tr>
<tr>
<td>23 Duff²⁷</td>
<td>57.3⁺</td>
<td>33.3⁶</td>
<td>50.7</td>
</tr>
<tr>
<td>24 Goe¹⁹</td>
<td>58.9⁺</td>
<td>36.5⁺</td>
<td>58.4</td>
</tr>
<tr>
<td>25 Duff²⁰</td>
<td>71.9⁺</td>
<td>46.9⁺</td>
<td>34.8</td>
</tr>
<tr>
<td>26 Brazio²⁶</td>
<td>75.6⁺</td>
<td>59.7⁺</td>
<td>21.0</td>
</tr>
<tr>
<td>27 Kreikemeier²⁹</td>
<td>79.2</td>
<td>59.4⁺</td>
<td>25.0</td>
</tr>
<tr>
<td>28 McClary¹⁶</td>
<td>88.2⁺</td>
<td>70.0⁺</td>
<td>20.6</td>
</tr>
<tr>
<td>29 Mechor³⁰</td>
<td>90.0⁺</td>
<td>31.0⁺</td>
<td>65.6</td>
</tr>
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When do calves treated on arrival get sick?

**Metaphylaxis Continued from Page 1**

<table>
<thead>
<tr>
<th>Table 1. Comparison of health parameters between metaphylaxis treatment groups.</th>
</tr>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Number</td>
</tr>
<tr>
<td>% treated for BRD</td>
</tr>
<tr>
<td>Median Days to 1st Tx</td>
</tr>
</tbody>
</table>

**%** 9 18 22
Early identification and treatment are the most important factor in successful treatment of BRDC
When do I switch antibiotics? (Calf)

- Should give most modern long acting antibiotics 24-48 hours to work.

- What is working?
  - 2-4 degree drop in temperature.
Stocker Production Economics
Scenario

- 500 pound LM1 $2.33/lb March 1
- Grain Cost $225/ton
- Hay Cost $100/ton
- Pasture Cost $8/month
- Treatment Cost $25/treatment (drugs and labor)
- 30 day confinement feeding
  - 2% bodyweight grain .5% bodyweight hay
  - ADG 1.5 lbs
- Grazing April 1 - Sept 15
What is the impact of death loss on profitability?
Baseline VQA calves 15% Treatment Rate 1% Mortality

<table>
<thead>
<tr>
<th>Mortality</th>
<th>Profit</th>
<th>Change in Profit per head</th>
</tr>
</thead>
<tbody>
<tr>
<td>1%</td>
<td>$290</td>
<td></td>
</tr>
<tr>
<td>2%</td>
<td>$278</td>
<td>+$34</td>
</tr>
<tr>
<td>3%</td>
<td>$266</td>
<td></td>
</tr>
<tr>
<td>4%</td>
<td>$254</td>
<td></td>
</tr>
<tr>
<td>5%</td>
<td>$242</td>
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</table>
What is the impact of gain on Profitability?
Baseline 1.75 ADG on grass $0.06 Slide

<table>
<thead>
<tr>
<th>ADG</th>
<th>Sale Weight</th>
<th>Profit</th>
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<tbody>
<tr>
<td>1.75</td>
<td>814</td>
<td>$213</td>
</tr>
<tr>
<td>1.55</td>
<td>783</td>
<td>$167</td>
</tr>
<tr>
<td>1.35</td>
<td>753</td>
<td>$130</td>
</tr>
<tr>
<td>1.15</td>
<td>722</td>
<td>$75</td>
</tr>
<tr>
<td>.95</td>
<td>695</td>
<td>$24</td>
</tr>
</tbody>
</table>
What is the impact of gain on profitability?

Baseline 1.75 ADG on grass $0.06 Slide
What is the impact of supplementing grazing cattle with grain?

- 2 pounds of supplemental grain $200/ton
- Feed conversion 7:2:1 (2 pounds as fed resulting in 0.25 pounds additional gain)
- $0.06 slide
- $65/ head return to feeding labor and infrastructure
Average Daily Gain is the most important factor in profitability

1. Potential for growth in calves purchased
2. Pasture quantity/quality
   1. Supplementation program
3. Deworming program
4. Implant program
Pasture Quality/Quantity
A new approach to grazing cattle in Virginia
How can I achieve an ADG of ~2 pounds?

- April-May 0 pounds supplemental grain*
- June-July 2-3 pounds supplemental grain*
- August-September 2-5 pounds of supplemental grain*

* Adjusted based on grass quality and quantity
Maximizing Average Daily Gain

1. Quality Feed
2. Deworming Program
3. Implant Program
4. Ionophore
5. Fly Control
Deworming Program

- 1 dose of Longrange
- 2 doses of Ivomec, Dectomax, Eprinex, or Cydectin
  - 5-7 weeks apart
- 3 doses of Safeguard, Valbazen, Synanthic
  - 3 weeks apart
Implant Program

- At least 1 implant
- Consider double implanting
  
or
- Using a long lasting implant
  
  - Compudose or Encore
### 150 Stocker Cattle
**Purchased January 500 lbs $2.60 3% Death loss**

<table>
<thead>
<tr>
<th></th>
<th>Hay Diet</th>
<th>1% Bodyweight Grain</th>
<th>2% bodyweight grain</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 Days Backgrounding Gain</td>
<td>25 lbs</td>
<td>100 pounds</td>
<td>175 pounds</td>
</tr>
<tr>
<td>Grazing gain</td>
<td>285 lbs</td>
<td>250 lbs</td>
<td>220 lbs</td>
</tr>
<tr>
<td>Sell Weight</td>
<td>810 (September)</td>
<td>850 lbs August</td>
<td>900 lbs July</td>
</tr>
<tr>
<td>Sell Price</td>
<td>$1.95</td>
<td>$2.00</td>
<td>$1.95</td>
</tr>
<tr>
<td>Net Profit</td>
<td>-$32</td>
<td>$31</td>
<td>$66</td>
</tr>
</tbody>
</table>
What is changing in antibiotic usage?
Residue vs Resistance
Residue vs Resistance

Examples of How Antibiotic Resistance Spreads

- Animals get antibiotics and develop resistant bacteria in their guts.
- Drug-resistant bacteria can remain on meat from animals. When not handled or cooked properly, the bacteria can spread to humans.
- Fertilizer or water containing animal feces and drug-resistant bacteria is used on food crops.
- Vegetable Farms
- Drug-resistant bacteria in the animal feces can remain on crops and be eaten. These bacteria can remain in the human gut.
- Patients go home.
- Drug-resistant bacteria spread to other patients from surfaces within the healthcare facility.
- Resistant bacteria spread to other patients or indirectly on unclean hands of healthcare providers.
- Healthcare Facility
- Resistant germs spread directly to other patients or indirectly in the general community. Spreads resistant bacteria.
- George stays at home and in the general community.
- George gets care at a hospital, nursing home or other inpatient care facility.
- George gets antibiotics and develops resistant bacteria in his gut.
- Simply using antibiotics creates resistance. These drugs should only be used to treat infections.
The sky isn’t falling just yet
Changes are coming

- There is a lot of pressure from outside sources to limit (eliminate) use of antibiotics in food animals.
Antibiotic Classifications

**Medically important**
- Tetracyclines
- Macrolides
- Sulfa's
- Fluorquinolones
- etc

**Not medically important**
- Ionophores
- Bacitracins
Have companies voluntarily remove all antibiotic labels for production purposes* within the next three years from medically important antibiotics

*Increased rate of growth or improvement in feed efficiency
FDA Guidelines

- Use of antibiotics in feed for disease prevention will be allowed
- VCPR (Veterinary Client Patient Relationship) will be required for all use of antibiotics in feed
VFD

- Identify premise, species, and production class
- Duration of use and approximate number of animals to be fed
- VFD can be written for up to 6 months
- No longer requires specific number of cattle and tons of feed
What does all this mean for you?

1. You will have to have a relationship with a veterinarian if you want to use antibiotics in feed, mineral, or water.

2. Chlorotetracycline (CTC) mineral will require a label for a specific disease
   1. Anaplasmosis
   2. BRD Prevention or treatment

3. CTC crumbles and other feed and water antibiotics will require producers to have a VFD
How much price difference is there between Front 40 cattle and back 40 cattle?

<table>
<thead>
<tr>
<th></th>
<th>Preconditioned Calves</th>
<th>Good Market Calves</th>
<th>Back 40 calves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase Price</td>
<td>$2.43</td>
<td>$2.33</td>
<td>$2.15</td>
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<tr>
<td>Sickness</td>
<td>10%</td>
<td>20%</td>
<td>40%</td>
</tr>
<tr>
<td>Death loss</td>
<td>1%</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>ADG</td>
<td>1.65</td>
<td>1.50</td>
<td>1.35</td>
</tr>
<tr>
<td>Selling Price</td>
<td>$1.95</td>
<td>$1.95</td>
<td>$1.95</td>
</tr>
<tr>
<td>Selling Weight</td>
<td>775</td>
<td>760 lbs</td>
<td>730 lbs</td>
</tr>
<tr>
<td>Profit</td>
<td>$157</td>
<td>$157</td>
<td>$157</td>
</tr>
</tbody>
</table>
Conclusions

- Current cattle prices provide producers the opportunity to make more money than ever before.
- Current cattle prices have greater risks than ever before.
- Stocker producers have never been better compensated for doing things right.
- Stocker cattle need to gain weight well to make money.