Stocker vs Feedlot Health

Mark Alley, DVM, MBA
Zoetis Technical Services
Phases

• Two distinct stages of production:
  * Survival
  * Productivity

• The amount of time a pen spends in Stage I will vary greatly.

• Complete Stage I before trying to move on to Stage II.
Herd Health Goal

- Improve Immunity
  - Vaccines
  - Stress Management
  - Parasite Control
  - Nutrition

- ↓ Disease Challenge
  - BVD testing
  - Metaphylaxis / Control

Focus on 1st 21 days
REHYDRATION
## Water

- How much water does a 400 # calf need in 24 hours?
  - No stress about 3X DMI
  - Stress up to 5X DMI

<table>
<thead>
<tr>
<th>Lbs</th>
<th>50</th>
<th>58</th>
<th>70</th>
<th>80</th>
<th>90</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>4 gal</td>
<td>5 gal</td>
<td>6 gal</td>
<td>7 gal</td>
<td>10 gal</td>
</tr>
<tr>
<td>600</td>
<td>6 gal</td>
<td>7 gal</td>
<td>8 gal</td>
<td>9 gal</td>
<td>13 gal</td>
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<tr>
<td>800</td>
<td>7 gal</td>
<td>8 gal</td>
<td>9 gal</td>
<td>11 gal</td>
<td>15 gal</td>
</tr>
</tbody>
</table>
Considerations

- Is it clean?
- Can it be found?
- Is space available?
- Water pressure?
- Can they reach it?
REST
Rest

• Depends on length of transport

• More importantly .. Location of pen / pasture
  – Preferred
    • Not close to high traffic areas
PARASITE CONTROL
Disease Forms (Muirhead 1989)

Clinical Coccidiosis -- 5%

Subclinical Coccidiosis -- 95%
RE-ALIMENT
NUTRITION AND IMMUNITY ON ARRIVAL
Stressed Receiver Recommendations (Corners)

- Crude Protein 14-16%
- NEg – 40 to 45 Mcal / lb
- 
- Cu - 15+ ppm
- Zn - 45+ ppm (3x Cu)
- K- 1.2% to 1.4%
- Ca:P 0.7 / 0.45%
- Vit A 4,000 to 6,000 IU / kg
- Vit E 75 to 100 IU / kg
Nutrition and Immunity (Energy /Crude Protein)

• High concentrate diets are consumed at higher level, but increase morbidity.

• Increases in protein boost performance, but can increase morbidity.

• With all programs, moderation is best.
IMPACT OF DECREASING TRACE MINERAL STATUS ON BIOLOGICAL FUNCTION

- Decreasing Status
- Immunity & Enzyme Function
- Maximum Production/Reproduction
- Normal Production/Reproduction
- Deficiency
- Subclinical
- Clinical
Minerals

• Understanding of minerals in ruminants is not extensive
• Data to support Cu, Se and Zn
• Cu requirements higher for Sim, Char (?), Lim (?)
  – Jersey are most sensitive
• Chelated > Sulfates > Oxide
CONSIDERATIONS BEYOND RATION DESIGN
Non-Ration Design Considerations

• Phases
  – Survival
  – Growth

• Group Size
  – 25 to 40 (?)

• Dry Matter Intake
  – 1.5% DMI by day 7
  – 2 to 2.25% DMI by day 14
  – 0.5 lb/hd/day every 3rd day

• Feed 2X / day on new cattle

• Use Entire Bunk
Vaccine Summary

• Focus on pathogens that can be controlled via vaccines
  – Use MLV IBR, BRSV, BVD, PI3

• Minimize number of gram negatives
  – Ex: Pasturella, Mannheimia, Pinkeye, Histophilus (somnus)

• Vaccine effectiveness can be overcome with poor attention to details
Herd Immunity

- Human or Animal?

- Form of indirect protection when a large % of population becomes immune to an infection, providing a measure of protection for individuals who are not immune

- Best immunity natural exposure....if they survive

https://en.wikipedia.org/wiki/Herd_immunity
ELEMENTS NECESSARY FOR CLINICAL BRD

Key respiratory viruses
- IBR
- BRSV
- PI3
- BVD

Primary cause of bacterial pneumonia
- Mannheimia haemolytica

Additional bacterial infection
- Mycoplasma bovis
- P. multocida
- H. somni
- A. pyogenes
- And others
ANTIBIOTICS FOR CONTROL
Antibiotics Summary

• Bacteria multiply rapidly once entering lower respiratory system

• ISU ranking of antibiotics for treatment
  – Draxxin and Baytril as better choices
  – Tetracycline as worst choice

• KSU ranking of antibiotics for control
  – Draxxin, Zactran, Micotil, Excede reduced 60 day morbidity
  – Draxxin reduced mortalities and re-pulls as compared to others

• Multiple pathogens reduce effectiveness of any treatments / control

Abell, Theurer, et al, JAS, 95, 2017
Summary

• Starter rations is not place to save $$
  – Yeast, Chelated Minerals, Deccox, etc.

• Best Health Program Doesn’t Work Without Good Nutrition Program

• Devil is in Details
  – Rehydrate, Rest, and Re-aliment

• Vaccines and Antibiotics can be effective when used appropriately