Developing a Milk Quality Program for a Dairy Herd

S. Portner and L. Timms, Iowa State University (sportner@iastate.edu)

Introduction
- Mastitis incurs greatest cost of any disease on dairies
- Port-Haven Dairy’s Mycoplasma outbreak and less than ideal somatic cell count levels called for new mastitis treatment and prevention program

Objective
- Create a milk quality profile of 230 cow herd
- Develop focused prevention and treatment program for prevalent mastitis organisms
- Establish immediate and long term udder health goals

Materials and Methods
Herd Sampling
- Monthly DHIA SCC data used to select cows requiring further evaluation
- Following CMT paddle testing of individual quarters, aseptic milk samples taken from CMT+ (high SCC) quarters and clinical mastitis cases
- Milk samples cultured on sheep blood auger, incubated for 48 hours
- Organisms analyzed visually, identified with subsequent tests
- Antibiotic sensitivity test ran for organisms found

Mycoplasma Sampling
- Composite milk samples from each fresh cow cultured on mycoplasma agar

Further Evaluation
- Visual evaluation of barn environment, milking procedures
- Teat end scoring of entire milking herd

Results

<table>
<thead>
<tr>
<th>Staphylococcus aureus</th>
<th>CMT Tests</th>
<th>Barn Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 positive</td>
<td>10 cows with positive CMT tests but no culture growth=self-cure</td>
<td>67 square feet/lactating cow</td>
</tr>
<tr>
<td>Environmental Species</td>
<td>6 Streptococcus 3 E.coli positive 1 yeast positive 30 Skin staph Staph Mycoplasma 0 positive</td>
<td>Sawdust Compost Bed-Pac</td>
</tr>
<tr>
<td>Teat scores</td>
<td>Percent scoring 3 or 4: 11% Goal &lt;15%</td>
<td>Stirred 2x/day</td>
</tr>
</tbody>
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Conclusion
- Immediate Herd Goal: eliminate mycoplasma threats, enhance milking practices, keep bulk tank SCC below 300,000
- Long-term Herd Goal: increase square footage per cow to decrease environmental organisms and SCC
- Environmental Streptococcus and skin Staphylococcus prevalent mastitis organisms in herd
- Cull or treat Staph aureus cows Pursue, Spectramast, or Cefa-lak 5-8 days
- Test bulk tank sample for mycoplasma, cull myco positive cows
- Maintain consistent, proper milking procedures and clean, dry barn environment

Sample of Herd Culture Results

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Teat End Scoring System

- Degree of hyperkeratosis or callousing
  - None
  - Smooth ring
  - Rough ring
  - Cracked rough ring

Figure 1 Step aiberic, Step dysgalactiae, Staph aureus Antibiotic Sensitivity