A Team Approach to Milk Quality

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My Background

- Grew up on a family dairy in Pennsylvania
- Spent 5 years doing milk quality troubleshooting, training and sales support for a milking equipment company
- Decided to go back to vet school in 2008 and graduated from Minnesota in 2010
- Joined a 13 doctor all dairy practice in eastern Wisconsin
- Currently 60-70% of my time is spent consulting in milk quality
PROTEIN & TDN

Lock 'em in... or lose 'em!

HARVESTORE Multiples Manpower and Landpower

FE Smith HARVESTORE Products, Inc.
Teach them to make quality milk
In Change there is Opportunity

To be successful you have to influence people and build relationships

The world is full of salesman and fly by night consultants, yet there is a real shortage of difference makers

You and I can be the difference makers on dairies! What is keeping you from becoming indispensable to your clients?
Value of Milk Quality

• Premiums
  – 1,000 Cow dairy producing 90lbs. of milk
    • 900 CWT shipped per day or 27,000 CWT per month
    • Monthly Gross Revenue = $432,000 at $16/CWT
    • $0.10 bonus is $2,700 or additional $2.70 per cow/month

• Clinical Cases
  – 1,000 Cow dairy with a 4% Monthly Clinical Rate
    • 40 Cases per month at $200/case is $8000 per month
      – $96,000 per year
    • What is the effect of lowering the case rate 0.5%
      – $1,000/month or $12,000 per year
    • What is the value of lowering protocol cost to $175?
      – $750 per month or $9,000 per year
Well, I guess that answers that!
What is the Business of Dairy?

- Daily manage a complex interaction of:

  The Cow
  
  The Facilities
  
  The People

  Milk
  Leche
  Milch
  МОЛОКО

Rarely is the cow the limiting factor!
What is the skillset for success?

• Strong Observational Skills
• Professional Presentation Skills
• Flexible and Open Minded
• Detail oriented and thorough
• Always looking for opportunity
  – For The Dairy
  – For ABS
  – For Yourself
Miss the forest for the trees!
REMEMBER THAT TIME YOU FORGOT TO THINK?
Functioning within a Team
(A Consultants Approach)

• Everybody has products but few people bring true solutions

• No problem can be solved before it is identified and defined

• Before making/suggesting any changes on the dairy you need to be aware of:
  – The risks of making the change?
  – How will progress be monitored?
  – What happens if it does not work?
Famous Veterinary Quotes

You will miss more for not looking than for not knowing! –(Unknown)

All bleeding stops sometime...
Partnering with Veterinarians

• Vets are people too!
• We tend to be data driven and very logical decision makers
• We need to understand before we can decide...
• But we tend to be very decisive and deliberate
• We consider them to be “our” herds and like to be kept in the loop and be informed
How Much Turmoil Does the Science Project Cause Families?

Materials:
- At least 1 kid
- At least 1 grudging parent
- Half-baked idea of very dubious merit
- Procrastination

Results:
- 75% of kids cry
- 90% of parents yell
- An average of 15 hrs. of family time due to science fair
  - Everyone hates it
  - Sacrificed by Susan Messia
"SHOULD YOU EAT THAT BACON?"

FLOWCHART

SHOULD YOU
EAT THAT BACON?

DO YOU
WANT TO
FEEL LIKE ANGELS
ARE FROLICKING ON
YOUR TASTE BUDS?

YES!
EAT IT

NO
YOU'VE
CLEARLY
NEVER
TASTED BACON

YES, BUT I'M
AFRAID BACON
WILL KILL ME

ARE YOU A
COWARD?

YES, I AM A
COWARD

BACON WILL
TURN YOU INTO
A TRUE
WARRIOR

I AM NOT!

THEN
EAT IT

EAT IT
My Take on Milk Quality

• Make an excuse to get in the parlor
• Use your observation skills to identify areas that seem wrong
  – Cow movement and handling procedures
  – Cow Behavior
  – Opportunities to improve parlor efficiency
  – Issues affecting the technician performance
• Document everything with a picture or video
• Every visit generates a written report to management
• Know when to say, I need another opinion or when you are in over your head.
“We do not have an opinion, we have data!”

When gut feeling and clinical impression are not enough...there’s QMAX!
QMS in Action in our Practice

• I utilize Dan in three ways
  – “The Detective” I recognize an issue and I need Dan to document it so we can motivate management to act
  – “The Politician” I need a second outsider to say what I have been saying in a different way
  – “The Mole” I need a second opinion so I send him inside as a covert operative

• My practice has an interest in on-farm research trials and Dan is an active participant in these.

• My practice is very strong in records analysis and does not utilize Dan in that capacity
  – Might be a large need in other practices
Example Dairy One

- 750 cows milking
- Older 2x14 parallel basement parlor
- Prolonged history of increased clinicals and higher than desired SCC
- During my visits I noted poor teat end health on many cows and uneven milk-out
- We brought in Dan to score teats in each pen and perform strip yields
- Dairy has become a monthly milk quality visit for me and successfully navigated a switch to solids bedding.
Example Dairy Two

• 1100 cow dairy that recently switched to teat scrubber automated cow prep system

• Dairy consistently averaged 120,000 SCC for years and now was at 250,000 SCC

• Could not consistently get the cows through the parlor despite excellent milking equipment set up.

• I needed my QMS to spend time in the parlor figuring out why the cow flow was so poor.

• We identified one particular technician that was very “vocal” pushing the cows and other technicians
Example Dairy Three

• 1800 cow dairy that did not do business with us

• My QMS helped me set up a visit to discuss a research trial on teat end health
  – Collected teat scores and correlated them to quarter level mastitis and cow level SCC

• Received an email this summer asking...
  – “When are you coming back to continue the research”
  – Invited our clinic to be the veterinary representatives at his “Breakfast on the Farm”
Teat End Scores

The goal is to have >80% of teats with a score of 1 and 2
This table summarizes the Strip Yields that were taken at the time of the evaluation. Many of the teats had little if any milk left in them immediately after milking.
Stocking Density

The goal is to be at no more then 110%

Note: Stocking Density compares the number of cows in the pen to the number of freestalls available.
Stall Contamination

The goal is to have <5% of the freestalls with contamination

Note: Stall Contamination Rate evaluates how well the stalls are designed and how clean they are as a result of this.
Hygiene Scores

The goal is to have < 20% of the cows evaluated with scores of 3 and 4

Three areas of hygiene were evaluated – udders, legs, and flanks. Of the three areas evaluated, udder hygiene has the biggest influence on milk quality. Dirty legs are a concern when they carry manure into the stalls or a dirty leg comes in contact with the teats or udders.
Teat Cleanliness Scorecard

1. Clean: No manure, dirt, or dip
2. Dip Present: No manure or dirt
3. Small amount of dirt and manure present
4. Larger amount of dirt and manure present

- Teats scoring 3 & 4 have an increased risk of mastitis as compared to scores of 1 & 2.
- Milkers tend to get scores of 1 & 2 on smoother teat ends and trend toward 3 & 4's as hyperkeratosis is more prevalent. For this reason, it is very important for milkers to make a physical pass across teat ends, making sure to pinch the end of the teat with the towel.

Number of teats scoring 1 ________________
Number of teats scoring 2 ________________
Number of teats scoring 3 ________________
Number of teats scoring 4 ________________
Total scores ________________

Percent of teats scoring 3 & 4 ________________

Farm Name:
Date:
<table>
<thead>
<tr>
<th>Score 1</th>
<th>Score 2</th>
<th>Score 3</th>
<th>Score 4</th>
<th>Score 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Udder</strong>&lt;br&gt;Includes fore and rear udders, and udder floor and teats.</td>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td><strong>Lower rear legs</strong>&lt;br&gt;Area from point of hock to floor including hoof.</td>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
<tr>
<td><strong>Herd Tally:</strong> Use to score herd or pen of cows when individual cow ID is not important. Score each cow and place check mark in cleanliness score box for each cow's overall cleanliness score.</td>
<td><img src="image9.png" alt="Image" /></td>
<td><img src="image10.png" alt="Image" /></td>
<td><img src="image11.png" alt="Image" /></td>
<td><img src="image12.png" alt="Image" /></td>
</tr>
<tr>
<td>Score</td>
<td>Description</td>
<td>Illustration</td>
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<td></td>
</tr>
<tr>
<td>1 (N)</td>
<td>No Ring. The teat-end is smooth with a small, even orifice. This is a typical status for many teats soon after the start of lactation.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 (S)</td>
<td>Smooth or Slightly Rough Ring. A raised ring encircles the teat orifice. The surface of the ring is smooth or it may feel slightly rough but no fragments of old keratin are evident.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 (R)</td>
<td>Rough Ring. A raised, roughened ring with isolated fragments of old keratin extending a short distance from the teat orifice.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 (VR)</td>
<td>Very Rough Ring. A raised ring with rough fragments of old keratin extending out from the teat orifice. The rim of the ring is rough and may be cracked, often giving the test-end a “flowered” appearance.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Open Lesions or Scabs.</td>
<td>Not pictured.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Questions?