The Veterinary Position
Wisconsin’s Stray Voltage Program

John Roberts, DVM
Wisconsin Dept. of Agriculture
Rural Electric Power Services Program
Farm Center- REPS
800-942-2474
farmcenter@wisconsin.gov

Ty Rohloff (608-224-5055)
John Dupuis (608-224-5138)

John Roberts (715-587-6561)
History
Veterinarians on SVAT/REPS Staff

SVAT (Stray Voltage Analysis Team)  REPS (Rural Electric Power Services).................

Volunteer Position

1 Full Time Veterinarian

2 Full Time Veterinarians

HBDP = Herd-Based Diagnostic Program

Complete Herd Analysis: 9-Farm, SVAT

HISTORY
FACILITY, MILK, AND LIVESTOCK PROFILE
   DHIA records
   Disease and Health Problem Inventory
   Management Procedure Inventory
   Body Condition Scoring evaluated across herd
   Cow Comfort evaluation:
      Stall Size, construction, bedding usage, sanitation
      Population density, Animal handling skills, Auditory environment
      Relative humidity (ventilation evaluation)
      Light level evaluation

VIDEO TAPE RECORD
   Eating and Drinking Behavior, including cud chewing activity
   Milking Time, Techniques, and Behavior
   Percent Standing or Laying (comfort)
   Entering and Leaving Behavior
   Feed Bunk and Water Trough Use and Behavior
   Specific Concerns (lameness, teat health, swollen hocks, etc.)

WATER
   24-hour Water Intake Metering
   94-element Water Quality Laboratory Analysis

NUTRITION
   Daily feeding schedule and Feed Bunk Management evaluation
   Evaluate Feed Scoops and determine actual amounts fed
   Laboratory analysis of rations and all ration ingredients
   On-site feed quality evaluation
   Measurement of ration dry matter content and percentage of fiber over 1.5” long
   Measurement of acidity of feed, manure and aspirated rumen fluid
   Manure screened for particle size
   Computer reconstruction of representative ration for ration performance analysis
   Laboratory blood testing of blood cells, serum profile, vitamins and minerals
   Laboratory evaluations of Mycotoxin levels in feeds

MILK MANAGEMENT
   Milking time and technique analysis
   Complete milk system analysis
      Milking Vacuum and vacuum drop at various locations
      Effective and Manual Reserve
      Air Usage by components
      Pump Capacity
      Regulator performance
      Pulsator performance
      Dynamic testing of vacuum level and stability at claw and locations
      Inflations and teat end evaluation
      Evaluation of claw weight, distribution, and positioning.
      Evaluation of system condition (rubber parts, air vents, liner twisting, and leaks)
      Pipeline slope, Inlet size and location (or angle), maximum lift
      Washing performance
   CMT testing of entire herd
   Laboratory bacterial culturing of all high CMT quarters
   Bulk Milk Tank Culture (including Mycoplasma)
   Teat-end Scoring immediately after milking machine is removed
   Evaluation of unit squawks and slippage

DISEASE PROFILE
   Laboratory screening for parasites in composite manure sample
   Blood tests for Johnes, BLV, and BVD
   Abortion work-up as needed
   Calf loss testing as needed
• Program changed from SVAT to REPS
• Goal: address farmer’s questions and concerns about why their herd is not performing as expected
• Resolution of farmer’s herd health and production concerns (no longer a complete farm analysis)
• Farmer preference for having electrical and veterinary visits at different times
• PSC phased out use of application
Today’s REPS Veterinary Assistance

- PSC effectiveness
- Doug Reinemann’s publications on animal response to SV
- Herd-base Diagnostics
- Dr. John Marks joins program
- WI Vet Diagnostic Lab accredited
- Application used for REPS vet diagnostic assistance
Veterinarians on SVAT/REPS Staff

SVAT (Stray Voltage Analysis Team) REPS (Rural Electric Power Services)........................

Volunteer Position

1 Full Time Veterinarian

2 Full Time Veterinarians

HBDP = Herd-Based Diagnostic Program

The Nature of REPS Veterinary Farm Visits
### Rolling Herd Averages (RHA)

**DATCP / PSC Cases**
- **N:** 110 / 6030
- **Ave.:** 20,124 / 19,429
- **Median:** 20,150 / 19,000
- **Max.:** 29,800 / 33,000

#### Percentage of sample

<table>
<thead>
<tr>
<th>Category</th>
<th>DATCP - REPS</th>
<th>PSC - REPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-14.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-19.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-24.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Somatic Cell Count (SCC)

**Datcp / Psc cases**
- N = 139 / 7,044
- Ave. = 458 / 352
- Median = 361 / 300
- Max. = 2,300 / 5,800
- Min. = 72 / 25

**Percentage of sample**

<table>
<thead>
<tr>
<th>SCC/1,000</th>
<th>Datcp</th>
<th>Psc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>250-499</td>
<td></td>
<td></td>
</tr>
<tr>
<td>500-749</td>
<td></td>
<td></td>
</tr>
<tr>
<td>750+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Herd Size

DATCP / PSC cases
N = 159 / 7,814
Ave. = 119 / 107 cows
Median = 79 / 60
Max. = 727 / 4,000
Min. = 12 / 3

Percentage of sample

Size of dairy herd

DATCP - REPS
PSC - REPS
USDA - 2007
Annual Loss of Herds Visted by REPS-VETS compared to annual rate of loss for all Wisconsin herds

- 2007: 20% (REPS), 4% (State)
- 2008: 47% (REPS), 3% (State)
- 2009: 18% (REPS), 4% (State)
- 2010: 14% (REPS), 3% (State)
- 2011: 10% (REPS), 5% (State)
- 2012: 5% (REPS), 5% (State)
- AVG: 19% (REPS), 4% (State)
REPS Veterinary Case Load per Year
(1997-2012 Average = 24 cases)
% of Farms with Cow Contact Voltage Over Wisconsin's Level of Concern
PSC DataBase 1988-2010
Farms per Year in PSC SV Database

Interval Between Last SV test and Seeking Veterinary Support
2011 - 2013

- Less Than 1 year: 58%
  - 42% less than 2 months
  - 50% less than 6 months
- Less Than 2 years: 73%
- Over 2 years: 27%
What We Have Learned About Farmer Concerns and What Herd Concerns Lead Farmers to Suspect Stray Voltage is a Problem on Their Farm
Ten percent of all herd owners, or 3,600 of the approximately 36,000 in Minnesota and Wisconsin, think that cows in their herd now have persistent health and/or milk production problems. These dairy herds tend to have lower rolling herd average milk production, higher somatic cell counts, and more frequently display certain clinical signs than herds for which no such problems were reported.
Perceived Causes of Herd Health and Production Problems:
The Degree of Change in Herds with Persistent Problems Compared to All Herds

Cash Flow
Insufficient Manpower or Time
Seasonal Weather Conditions
Cow Comfort
Animal Housing or Environment
Adequacy of Vaccination Program
Stray Voltage/Other Electrical Phenomena
Genetics
Quality of Outside Experts' Advice
Soil Type
Chemical Contamination of Feed or Water
Forage Quality
Milking Facilities/Procedures
Infectious Disease - Not purchasing Animals
Poor Communication Among Workers
Availability of Technical Information
Infectious Disease - Adding New Animals
Dry Cow Management
Water Quality
Fresh Cow Performance
Heat Detection
Ventilation
Human Interaction with Cows
Cows Access to Water
Feed Palatability
Cows Access to Feed
Clinical Signs in Herds with Health and Production Problems:
The Degree of Change in Herds with Persistent Problems Compared to All Herds

-100 -80 -60 -40 -20 0 20 40 60 80 100 120

Unwillingess to Enter Barn or Milking Area
Dancing or Foot Paddling
Poor Response to Veterinary Treatments
Unusual Behavior at Water Cup or Feed Source
Reduced Water Consumption
Foot or Lower Limb Lameness
Swollen Joints
Excessive Kicking
Nose Pressing
Excessive Mooing/ Bellowing
Poor Heat (Estrus) Expression
Poor Conception Rate
Mastitis
Excessive Tail Switching
Diarrhea - Chronic or Intermittent
Abortions
Retained Placenta/Vaginal Discharge
Slow, Uneven, or Incomplete Milk Letdown
Unhealed sore on Legs or Body
Reduced Feed Consumption
Coughing or Rapid Breathing
Twisted Stomach
What Farmers May Perceive as Evidence of Stray Voltage*

Performance Issues:

  Unresolved Low Milk Production
  Unresolved High Somatic Cell Count

Behavioral Issues:

  Reluctance to Enter,
  Dancing or Foot Paddling,
  Unusual Behavior at Water Cup or Feed Source,

  Reduced Water Consumption,
  Excessive Kicking,

  Nose Pressing,
  Excessive Mooing/Bellowing,

Symptoms:

  Foot or Lower Limb Lameness,
  Swollen Joints,

  Poor Response to Veterinary Treatment

*From MN Survey Results and Graph 12
What Farmers May Perceive as Evidence of Stray Voltage*

Performance Issues:
- Unresolved Low Milk Production
- Unresolved High Somatic Cell Count

Behavioral Issues:
- Reluctance to Enter,
- Dancing or Foot Paddling,
- Unusual Behavior at Water Cup or Feed Source,
- Reduced Water Consumption,
- Excessive Kicking,
- Nose Pressing,
- Excessive Mooing/Bellowing.

Symptoms:
- Foot or Lower Limb Lameness,
- Swollen Joints,
- Poor Response to Veterinary Treatment

*From MN Survey Results and Graph 12

How Stray Voltage Actually Effects Animals*

Performance Issues:
- Low production is either an unlikely or transient effect, but possible in extreme cases.

Behavior Issues:
- Flinch, Twitch, or Eye blink at contact with voltage above that animal’s annoyance threshold
- Avoidance of contact with voltage.
  - Altering time of use, frequency of use, duration of use, or alternative choice is more likely with exposure at water than with exposure during eating. Reluctance to enter another form of avoidance.

*From Dr. Reinemann’s article, What do we know about Stray Voltage
The clinical signs and performance issues that are not caused by stray voltage cannot be resolved by electrical mitigation.
Issues Needing Better Veterinary Answers

**Farmer Perceives as**

**Evidence of Stray Voltage**

Performance Issues:

- Unresolved Low Milk Production
- Unresolved High Somatic Cell Count

Behavior Issues:

- Reluctance to Enter,
- Dancing or Foot Paddling,
- Unusual Behavior at Water Cup or Feed Source,
- Reduced Water Consumption, Excessive Kicking,
- Nose Pressing,
- Excessive Mooing/Bellowing,

Symptoms:

- Foot or Lower Limb Lameness,
- Swollen Joints,
- Poor Response to Veterinary Treatment
Articles and Publications

- Laminitis, Rumen Acidosis, and Cow Comfort
- Understanding Stray Voltage, a Veterinarian’s Perspective
- Understanding Cow Behavior
- Stray Voltage and Water for Dairy Cattle
- Stray Voltage Education, A Veterinarian’s Perspective
- Water Intakes: A Meta-Analysis of Prediction Equations
Written Farmer Concerns from Applications from applications for REPS veterinary assistance 2009-2013 (N=76)

- Production: 51%
- SCC: 51%
- Cow Losses (cull and death): 26%
- Stray Voltage: 17%
- Clinical Mastitis: 16%
- Lameness: 14%
- Reproduction: 13%
- Feed Intake: 12%
- Abortions: 11%
- Calf Losses/Health: 11%
- Cow health: 9%
- Water Intake: 8%
- Nervousness during Milking: 8%
- Facilities: Comfort/Bunk: 5%
- Ketosis: 5%
- More Profitable: 4%
- Milk Out/let down: 4%
- Peak Production: 4%
- DA: 4%
- Pneumonia: 3%
- Reluctance to Enter Parlor: 3%
- Mycotoxins: 1%
- Farm Rewiring: 1%
- Cancer: 1%
- Calving problems: 1%
- Sores: 1%
- Retained Placenta: 1%
- Nose Pressing Behavior: 1%
- Milk Fever: 1%
- Loose Manure: 1%
- Behavior at Water Tank: 1%
- Butterfat Depression: 1%
- Milk System: 1%
Veterinary Diagnostic Capacity as a Driver to Effectiveness of REPS Veterinary Efforts
Ways that the Structure of REPS Enables Veterinary Diagnostic Capacity

• Individual-cow, task-oriented work patterns versus herd-based, problem-solving.

• Time

• No-fee basis

• Some dairy farmers operate with a bare minimum of local professional support.
Avg. REPS Veterinary Case Load/Month
average line for both groups at 1.6/month

- 1990-1999
  - PSC Scheduled Visit
- 2009-2012
  - REPS-vet Scheduled Visit
## BLOOD SERUM CHEMISTRY AND ELECTROLYTES

*(160 Cows Tested from 35 Herds)*

<table>
<thead>
<tr>
<th>SERUM CHEMISTRY</th>
<th>TP</th>
<th>ALB</th>
<th>CHL</th>
<th>GLU</th>
<th>BUN</th>
<th>CREAT</th>
<th>T BILI</th>
<th>GGT</th>
<th>ALK PH</th>
<th>CPK</th>
<th>SGOT</th>
<th>GLOB</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NORMALS</strong></td>
<td>6-9.4</td>
<td>3-5</td>
<td>50-240</td>
<td>45-90</td>
<td>2-20</td>
<td>.7-1.5</td>
<td>.13-38</td>
<td>9-40</td>
<td>15-95</td>
<td>15-160</td>
<td>60-150</td>
<td>2.6-5.4</td>
</tr>
<tr>
<td>Average</td>
<td>7.82</td>
<td>3.11</td>
<td>150.18</td>
<td>49.29</td>
<td>12.34</td>
<td>0.95</td>
<td>0.17</td>
<td>32.29</td>
<td>57.13</td>
<td>142.88</td>
<td>94.71</td>
<td>4.69</td>
</tr>
<tr>
<td>Median</td>
<td>7.80</td>
<td>3.10</td>
<td>134.50</td>
<td>52.27</td>
<td>12.00</td>
<td>0.90</td>
<td>0.14</td>
<td>31.00</td>
<td>51.00</td>
<td>106.00</td>
<td>90.00</td>
<td>4.60</td>
</tr>
<tr>
<td>% Low</td>
<td>1%</td>
<td>33%</td>
<td>0%</td>
<td>34%</td>
<td>1%</td>
<td>3%</td>
<td>34%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>% High</td>
<td>3%</td>
<td>0%</td>
<td>8%</td>
<td>0%</td>
<td>8%</td>
<td>0%</td>
<td>4%</td>
<td>15%</td>
<td>7%</td>
<td>22%</td>
<td>4%</td>
<td>13%</td>
</tr>
<tr>
<td>Lowest</td>
<td>5.30</td>
<td>0.70</td>
<td>62.00</td>
<td>12.00</td>
<td>1.00</td>
<td>0.40</td>
<td>0.00</td>
<td>11.00</td>
<td>24.00</td>
<td>35.00</td>
<td>10.00</td>
<td>2.30</td>
</tr>
<tr>
<td>Highest</td>
<td>10.20</td>
<td>4.10</td>
<td>342.00</td>
<td>90.00</td>
<td>26.00</td>
<td>1.40</td>
<td>0.94</td>
<td>79.00</td>
<td>395.00</td>
<td>955.00</td>
<td>268.00</td>
<td>7.90</td>
</tr>
<tr>
<td>Avg. in Herds with Stray Voltage</td>
<td>7.81</td>
<td>3.10</td>
<td>147.57</td>
<td>42.73</td>
<td>12.37</td>
<td>0.92</td>
<td>0.17</td>
<td>30.94</td>
<td>58.85</td>
<td>131.25</td>
<td>92.84</td>
<td>4.70</td>
</tr>
<tr>
<td>Avg. in Herds without Stray Voltage</td>
<td>7.82</td>
<td>3.11</td>
<td>152.14</td>
<td>54.43</td>
<td>12.31</td>
<td>0.97</td>
<td>0.17</td>
<td>33.31</td>
<td>55.83</td>
<td>151.67</td>
<td>96.12</td>
<td>4.68</td>
</tr>
<tr>
<td>DIFFERENCE</td>
<td>-0.02</td>
<td>0.00</td>
<td>-4.57</td>
<td>-11.69</td>
<td>0.06</td>
<td>-0.04</td>
<td>0.01</td>
<td>-2.37</td>
<td>3.02</td>
<td>-20.42</td>
<td>-3.28</td>
<td>0.01</td>
</tr>
</tbody>
</table>

## ELECTROLYTES

<table>
<thead>
<tr>
<th>ELECTROLYTES</th>
<th>NA</th>
<th>K</th>
<th>CL</th>
<th>CA</th>
<th>MG</th>
<th>PH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NORMALS</strong></td>
<td>141-150</td>
<td>4.3-6.2</td>
<td>97-118</td>
<td>8.6-11.1</td>
<td>1.9-2.9</td>
<td>4-9</td>
</tr>
<tr>
<td>Average</td>
<td>140.06</td>
<td>4.95</td>
<td>100.68</td>
<td>9.34</td>
<td>2.22</td>
<td>5.75</td>
</tr>
<tr>
<td>Median</td>
<td>140.00</td>
<td>4.80</td>
<td>100.00</td>
<td>9.35</td>
<td>2.20</td>
<td>5.70</td>
</tr>
<tr>
<td>% Low</td>
<td>59%</td>
<td>9%</td>
<td>9%</td>
<td>6%</td>
<td>15%</td>
<td>4%</td>
</tr>
<tr>
<td>% High</td>
<td>0%</td>
<td>7%</td>
<td>1%</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Lowest</td>
<td>134.00</td>
<td>2.60</td>
<td>89.00</td>
<td>7.00</td>
<td>1.40</td>
<td>0.70</td>
</tr>
<tr>
<td>Highest</td>
<td>147.00</td>
<td>7.60</td>
<td>124.00</td>
<td>10.60</td>
<td>5.60</td>
<td>9.40</td>
</tr>
<tr>
<td>Avg. in Herds with Stray Voltage</td>
<td>139.81</td>
<td>5.02</td>
<td>100.21</td>
<td>9.34</td>
<td>2.26</td>
<td>5.53</td>
</tr>
<tr>
<td>Avg. in Herds without Stray Voltage</td>
<td>140.24</td>
<td>4.89</td>
<td>101.04</td>
<td>9.34</td>
<td>2.20</td>
<td>5.91</td>
</tr>
<tr>
<td>DIFFERENCE</td>
<td>-0.44</td>
<td>0.13</td>
<td>-0.84</td>
<td>0.00</td>
<td>0.06</td>
<td>-0.37</td>
</tr>
<tr>
<td>HERD COUNT</td>
<td>WATER INTAKE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>--------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>MEASURED INTAKE</td>
<td>CALCULATED NEED</td>
<td>DIFFERENCE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SV AVERAGE</td>
<td>19.4</td>
<td>20.1</td>
<td>-0.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NON SV AVERAGE</td>
<td>20.6</td>
<td>20.6</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIFFERENCE</td>
<td>1.2</td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MINIMUM</td>
<td>8.7</td>
<td>11.7</td>
<td>-3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAXIMUM</td>
<td>31.5</td>
<td>31.4</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVERAGE</td>
<td>20.1</td>
<td>20.4</td>
<td>-0.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEDIAN</td>
<td>20.4</td>
<td>21.0</td>
<td>-0.6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### SUB CLINICAL RUMEN ACIDOSIS (pH)

373 Cows Tested from 57 Herds

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>5.84</td>
</tr>
<tr>
<td>Median</td>
<td>5.82</td>
</tr>
<tr>
<td>Lowest</td>
<td>4.92</td>
</tr>
<tr>
<td>Highest</td>
<td>7.10</td>
</tr>
<tr>
<td>% with Healthy pH &gt;5.8</td>
<td>49%</td>
</tr>
<tr>
<td>% Suspect (pH= 5.8-5.6)</td>
<td>23%</td>
</tr>
<tr>
<td>% with Hazardous pH&lt;5.6</td>
<td>28%</td>
</tr>
</tbody>
</table>

Avg. in Herds with Stray Voltage: 5.82
Avg. in Herds without Stray Voltage: 5.80

UNITs OF DIFFERENCE: 0.02

**RUMEN pH**

373 Cows Sampled in 57 Herds

![Histogram of Rumen pH Values](chart.png)
No veterinary diagnostic tests can be used to identify if stray voltage is or is not a problem on a farm.
How a vet looks at a concern will dictate what solutions are seen
Table 1—Distribution of locomotion scores during summer and winter for dairy cows in 30 herds in Wisconsin

<table>
<thead>
<tr>
<th>Variable</th>
<th>Summer</th>
<th></th>
<th></th>
<th>Winter</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Minimum</td>
<td>18.5</td>
<td>6.7</td>
<td>7.3</td>
<td>0.0</td>
<td>27.2</td>
<td>8.8</td>
<td>9.6</td>
</tr>
<tr>
<td>25th percentile</td>
<td>46.0</td>
<td>19.4</td>
<td>11.2</td>
<td>0.2</td>
<td>46.8</td>
<td>16.9</td>
<td>14.0</td>
</tr>
<tr>
<td>Mean</td>
<td>54.9</td>
<td>23.3</td>
<td>18.0</td>
<td>3.0</td>
<td>55.9</td>
<td>19.0</td>
<td>20.7</td>
</tr>
<tr>
<td>75th percentile</td>
<td>66.6</td>
<td>27.8</td>
<td>24.7</td>
<td>4.7</td>
<td>63.9</td>
<td>21.9</td>
<td>28.0</td>
</tr>
<tr>
<td>Maximum</td>
<td>80.0</td>
<td>31.9</td>
<td>35.2</td>
<td>16.7</td>
<td>79.3</td>
<td>29.4</td>
<td>35.1</td>
</tr>
</tbody>
</table>

Values represent percentages of cows in the herds that were assigned each locomotion score.
Conveying Herd-based Diagnostic Results with the Farmer

• “You cows are dirty”  
  
  versus  

• “For Wisconsin dairy herds in freestall barns, bedded with sand, in the winter, your herd’s hygiene score is worse than 75% of similar dairy farms.”
Figure 1. Interpretation of blood BHBA test results using 75% confidence intervals and an alarm level of 10% for test results from 12 cows sampled from within a group of 50 cows. Adapted from Oetzel, GR: Monitoring and testing dairy herds for metabolic disease. Vet. Clin. Food Anim. 20:651-674, 2004.
Growth in Veterinary Herd-Based Diagnostic Capacity

- WI Vet Diagnostic Lab New Facilities Open
- Transition Cow Index
- WISGRAPHS
- Cow Comfort Indices
- Hygiene Scoring
- Blood Tests for Types 1&2 SubClinical Ketosis
- Statistical Approach to Herd-based Testing
- Lameness Scoring
- NMC Milk System Evaluation Guidelines
- Rumenocentesis for SubClinical Rumen Acidosis
- Bulk Tank Cultures
- National Mastitis Council UW Milking Research Lab
- Body Condition Scoring
- WI Vet School 1st Graduates

Cow-side BHBA Testing


Herd-Based Diagnostic Program
Evaluating the Benefits
3. As a result of the visit, how has your business been affected?

<table>
<thead>
<tr>
<th></th>
<th>Better</th>
<th>Worse</th>
<th>No Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Profitability</td>
<td>✔️</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>B. Milk Production</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>C. Milk Quality</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>D. Herd Health</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>E. Culling Rate</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>F. Cow Behavior</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>G. Death Rate</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>H. Other: ______________________</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
AgSource: Profit Opportunity Analyzer (POA)  Example Herd

Farmer’s Concern was Production
Issues-Related Annual Economic Herd Benefit

$111,700
CASE 3

Farmer’s concern was an insidiously debilitating condition in lactating cows. This resulted in a decreasing herd size and frustrating farm finances. A variety of suspicions and accusations, including stray voltage, had developed.

DHIA downloads done by the REPS veterinarian clearly suggested a chronic subacute rumen acidosis problem. Testing for acidosis had not been done. The acidosis appeared to start after a TMR mixer was installed. The ration mix had not been professionally adjusted for a very long time.

When the REPS veterinarian did testing for subacute rumen acidosis on the farm, it confirmed that the ration was the source. The farmer called the nutritionist immediately. The nutritionist came out to the farm, but would not get out of his truck. The nutritionist believed that the farmer would not talk with him and had plans to sue the company he worked for. The farmer thought that the nutritionist was refusing to service him. REPS veterinary intervention allowed the misconceptions to be put on the table and clarified. The outcome was an improved service relationship and better (farmer) realization of the importance of regular nutritional service to the TMR ration. The farmer was pleased with the resulting increase in production and decrease in cow losses.
We want to thank you for all you've done for us. I can't tell you how grateful I am. No one has ever helped us like you have. Looking forward to seeing you again. Have a really nice Christmas and happy, healthy New Year.
Farm Center- REPS
800-942-2474
farmcenter@wisconsin.gov

Ty Rohloff (608-224-5055)
John Dupuis (608-224-5138)

John Roberts (715-587-6561)