Introduction

In the attached report, we present general management and facility, cow therapeutics and calf related information gathered from WI and IL dairy farms served by veterinarians in 24 participating practices that were part of the UW School of Veterinary Medicine’s ambulatory rotation this year. Thank you for your cooperation and assistance. We look forward to your feedback on this project, comments on the report and good ideas for the Class of 2014 ambulatory experience.
Question 1

Do cows on the dairy go through a footbath? If so, provide the following information:
   a. How many times a week do the cows go through the footbath?
   b. What solution is used in the footbath?
      i. Copper sulfate
      ii. Formalin/formaldehyde
      iii. Soap
      iv. Other

Responses: Figures 11.1-11.4

These data come from 267 farms. The majority of farms (183/267=68.5%) utilize footbaths but 31.5% (84 farms) report no footbath use.

![11.1: Presence of footbaths on farms](image)

The frequency of footbath varies greatly amongst the 120 farms that responded to this question. The majority of respondents use a footbath between 1 and 5 times per week. Two to 3 times weekly is the most commonly reported frequency of footbath use.

![11.2: Frequency of foot bath use per week](image)
From 129 farms that use footbaths, copper sulfate alone (67.4%) or in combination (10.9%) is the primary footbath ingredient on 78.3% of the farms.
Question 2
In which of the following areas do you find rubber flooring on the dairy?

a. Feed alley
b. Stall alley
c. Feed & stall alleys
d. Transfer lanes to the parlor
e. Holding area
f. Milking parlor
g. Another location – specify
h. No rubber flooring is found on the dairy

Responses: Figures 12.1 – 12.3

From data collected on 307 farms, 152 had no rubber flooring (49%) while 155 had rubber flooring (51%) present somewhere on the dairy. Other areas where rubber flooring was found were the calving area, freestalls or tiestalls.

The milking parlor appears to be the priority area for rubber flooring when it is present. Forty percent of 155 farms with rubber flooring had it in the milking parlor.
12.3: Rubber flooring on farm

Question 3
Are first lactation cows grouped separately from mature cows? If not, report the stage of lactation or the approximate number of days in milk (DIM) that the first and older lactation cows are mixed together for the first time.

Responses: Figures 13.1 and 13.2

Data from 176 herds are included, with 41 herds (23.3%) indicating that first lactation cattle are separated from the older cows. In 134 herds (76.7%), the younger animals are not separated from mature cows.
As to the timing or stage of lactation when the younger and older cattle are mixed, 28 herds did not report and 23 herds were tie stall herds for which the question was not applicable. Of note is that one herd indicated that there was mixing of first and later lactation cows for up to 30 DIM after which first lactation cows were in a group of their own.

13.2: When are 1st lactation cows mixed with older cows?

*In this graph, prefresh includes bred heifers at all stages of gestation

**Question 4**

What is the most important role that the veterinarian plays on this farm? Ask this question of the veterinarian and the herds person, manager, or owner independently and without prior knowledge of each other’s response. For the non-veterinarian respondent, indicate the work classification title.

- a. Sick cow work
- b. Reproductive examinations
- c. Vaccinations & treatment protocols
- d. Quality milk enhancement & mastitis protocols
- e. Worker training
- f. As part of the management team
- g. Other – describe

**Response: Figures 14.1 – 14.2**

Veterinarians for 128 dairy herds report a number of different roles (Figure 4.1), the most common of which is reproductive herd work. Worker training and milk quality enhancement are the least common role that the veterinarian reports. Herds persons (96 herds) and owners/managers (61 herds) acknowledge the importance of the veterinarian’s role in reproductive work but have different views of the other roles of the veterinarian. Sick cow work and vaccination and treatment protocols are valued by the herds person whereas the owner/manager prioritizes the veterinarian’s role in management. Similar to the veterinarians, milk quality management is not prioritized as a role for the veterinarian by herd workers,
owners or managers. Included in the category labeled other are preparing health certificates, computer record entries, review and monitoring, consulting and small ruminant work.

### 14.1: Veterinarian Responses

- Sick cow work: 21.1%
- Reproductive examinations: 11.7%
- Vaccination & treatment protocols: 5.5%
- Quality milk enhancement & mastitis protocols: 12.5%
- Worker training: 45.3%
- As part of the management team: 3.1%
- Other: <1%

### 14.2: Perspectives on roles of veterinarians

- Veterinarian
- Herd person
- Manager/owner
Question 1

What is the primary lactating cow mastitis tube used on this dairy? For a single case, how frequently is the tube used (e.g. once, twice, or three times daily) and for what duration of time (e.g. one, three, eight days)? What is the primary dry cow mastitis prevention tube used on this dairy? Is Orbeseal used at dry off?

Responses: Figures 21.1 – 21.6

Amongst the 212 farms that provided data, the majority (116/212=54.7%) used Spectramast LC as the primary lactating cow mastitis treatment. Today followed with 24.1% (51/212) of the dairies reporting that it was the primary lactating cow mastitis tube. Other mastitis treatments reported included generic antibiotics, organic, natural and compounded products.

Of the 66 farms that reported on their frequency of mastitis treatment, the majority treated once a day (40/66=60.6%), another 31.8% (21/66) treat twice a day, responses consistent with the choices of Spectramast LC and ToDay as the primary tubes used for lactating cow therapy.
Amongst the 81 farms that reported on the duration of mastitis treatment on their dairy, there was great variability as shown in Fig. 21.4. A 3-day course of treatment was most common (23/81=28.4% of the dairies) followed by 2 days (14/81=17.3%) of treatment.

For the dry cow intramammary infusion tube, Quartermaster (63/195=32.3%), Tomorrow (63/195=32.3%), or Spectramast DC (41/195=21.0%) was selected by the majority of the 195 farms that provided data. Only 4% (8/195) of the dairies surveyed used no dry cow therapy.
Data obtained from 177 dairies showed that 62% (110/177) use Orbeseal at dry off; 1.7% (3/177) report intermittent use, while 36.2% (64/177) never use Orbeseal.
Question 2

What is the primary confirming test used to diagnose ketosis in a lactating cow?

a. None
b. Ketone odor on breath
c. Urine dipstick
d. Urine powder
e. Milk dipstick
f. Milk powder
g. Blood BHBA sticks
h. Blood test to lab
i. Other

Responses: Figures 22.1 and 22.2

Amongst the 261 farms that provided information on ketone testing, the urine dipstick is the primary ketosis test (123/261=47.1% of the dairies). The use of urine ketone test strips was also the primary ketone test used in 2011 (65.3%), the year of our first ambulatory student survey. Blood BHBA testing is still used infrequently when compared to other ketone test methods but the reported use has increased from 4.0 to 6.5% (16/261) of the dairies between 2011 and 2013, respectively. Unfortunately, ketone odor on the breath is still used as a diagnostic test for ketosis. In 2011, 14% and in 2013, 10.3% of dairies use this method to detect ketosis, a test which is neither sensitive nor specific. Forty-eight dairies (18.4%) have no screening test for ketosis. A few dairies call the veterinarian if ketosis is suspected (other category).
22.2: Ketosis Diagnostics

- None: 18.4%
- Ketone odor on breath: 10.3%
- Urine dipstick: 6.5%
- Urine powder: 6.1%
- Milk dipstick: 5.8%
- Milk powder: 3.1%
- Blood BHBA sticks: 2.3%
- Blood test to lab: 47.1%

Question 3

For cows that are second lactation and older, is there a routine milk fever prevention protocol used at or around calving on the dairy?

a. Anionic salts in transition cow diet
b. Routine IV or SQ administration of a calcium product (which product, by what route, and number of cc’s given)
c. Routine use of an oral calcium product (which product)
d. Other

Responses: Figures 23.1 – 23.4

Data on milk fever prevention was obtained from 247 herds. There was a routine milk fever prevention protocol reported on 140/247 (56.7%) of the dairies.
Amongst the 140 herds with a milk fever prevention protocol, 83/140 (59.3%) used an oral calcium product. Anionic salts were used on 25.7% of the dairies.
On the 75 farms using oral calcium products, Bovikalc (61/75=81.3%) was the most common oral calcium product used.

![Bar chart showing oral calcium products usage](image)

**Question 4**

If banamine is used in adult cows, what is: 1) the primary route of administration; 2) the usual dose used (in cc’s); 3) the duration of administration (e.g. single dose, daily, more than one day?) and 4) milk and meat withdrawal placed on banamine-treated cows?

**Responses: 24.1 – 24.5**

Responses were obtained from 69 farms that used banamine (flunixin meglumine). Compared to the 2011 student survey when 54.4% of the dairies used the intramuscular (IM) route for banamine administration, only 9/69 (13.0%) dairies that responded use the IM route for banamine administration. Amongst the responding dairies in this survey, 79.7% (55/69) report IV administration and 7.2% (5/69) use a subcutaneous route for banamine administration.

![Bar chart showing route of banamine administration](image)
As reported in the 2011 student survey, the banamine doses used on dairies are variable but the majority of respondents (32/59=54.2%) that provided data for this question reported a dose range between 15 and 20cc.

![24.2: Banamine dosages](image)

For the majority (32/54=59.2%) of the reporting farms, banamine is administered as a single dose but 40% indicated that the duration of treatment was more likely to be multiple days. Only 1 farm reported more than once per day banamine injections.

![24.3: Duration of banamine use](image)
These data come from 18 farms, the majority of which (9/18) indicated their milk withhold time of 36 hours follows the label recommendation. Of note are 2/18 farms that report no milk withholding and 7/18 that withhold milk for longer than the label recommendation.

On 20 reporting farms, 50% (10/20) use the recommended 4-day meat withholding after banamine use while 2/20 do not use the recommended withholding period. The remaining 8/20 farms abide by a prolonged meat withholding period.
Question 1

Is there any regular health screening done — observation, examination process, etc. for preweaned calves? If yes, what is the primary basis for detecting a sick calf? It could be one or more of the following:

a. Abnormal appetite
b. Attitude or mentation change
c. Actual exam parameter is used or screened: fecal consistency, fever, coughing, etc.
d. Other

Responses: Figures 31.1 – 31.2

A total of 197 dairy producers provided information about routine calf health screening procedures. The majority of responding dairies (166/197=84.3%) report that routine health screening is done in order to find calf health problems.

![31.1: Regular health screening for calves](image)

On the 166 farms with a health screening process, 41.8% (69/166) use a change in appetite as the primary basis for detecting sick calves. Another 28.2% (47/166) of the dairies report that rectal temperature, fecal consistency, respiratory rate and/or coughing are routine parts of the calf health screening procedure. Attitude change was used by 16.4% (27/166) of reporting farms to detect calf illness. Other parameters used to find sick calves are general appearance, droopy ears, dull eyes, nasal discharge, low serum total protein concentration and calf weight. These data provide good incentive for veterinarians to provide tools and training in calf health screening parameters that are more sensitive indicators of calf disease.
Question 2

After calving, when is the calf removed from the calving area or pen? If it is different for day and night time calving or weekday and weekend calving, answer for a typical daytime calving. Answers may include one of the following:

a. Within 10 minutes  
b. Between 10 minutes and 1 hour  
c. Between 1 and 4 hours  
d. Greater than 4 but less than 12 hours  
e. Greater than 12 hours

**Responses: Figures 32.1 – 32.2**

These data about the time of calf removal from the calving area come from 235 farms. Most (173/235=73.6%) farms report that calves are moved within 4 hours of birth, with the most frequent response (68/235=28.9%) being calf removal between 10 minutes and 1 hour after birth. Too many farms (20/235=8.5%) report that the calf stays in the calving area for more than 12 hours after birth.
32.1: Time to removal of calf from calving area

32.2: Time intervals to calf removal from calving area (%)
Question 3

Is there a routine test used to determine the quality of the colostrum on this dairy? If so, what is it?

a. Colostrometer
b. Brix refractometer reading
c. Another colostrum quality cow side kit (Specify which one)
d. Other

Responses: Figures 33.1 – 33.2

Using responses from 217 farms, a large majority (189/217= 87.1%) perform no test for colostrum quality.

When colostrum quality testing is done, the majority of the testing farms (22/28= 78.5%) use a colostrometer. A growing interest in Brix refractometer use on dairies shows in 8 of 28 farms (28.6%) that use that instrument to test colostrum quality. Other testing methods were reported as use of an outside service, serum total protein concentration and unknown tests.
33.2: Colostrum quality tests

Question 4

What is the primary or first antibiotic used to treat respiratory disease (BRD) in just weaned heifers on the dairy? What is the routine dose used, route of administration, and duration of treatment of this antibiotic? What meat withholding guidelines are used for the treated heifers?

Results: Figures 34.1 – 34.6

The use of 13 different primary antibiotics was reported on 87 farms (Figures 34.1 and 34.2). Draxxin was the antibiotic selected most often for the first treatment (28/87=32.2% of respondents), followed by Nuflor/Resflor (16/87=18.4%), and Baytril (13/87=14.9% of responding dairies).
34.1: Primary antibiotic for BRD in weaned dairy heifers

34.2: Primary antibiotic choice for BRD in weaned dairy heifers
Only 45 farms commented on the dose of the primary antibiotic that was used for BRD in weaned heifers. From the data obtained, 84.4% (38/45) use label dose or choose an antibiotic that requires a small volume injectate (1 to 6 cc). Antibiotic doses over 4 cc’s were used on a limited basis (7/45=15.5% of respondents).

For the route of administration of BRD antibiotics, the great majority (34/43=79.1%) of farms select the subcutaneous route of administration, compared to only (9/43=20.1%) of farms that use an intramuscular route for administration of the BRD antibiotic.
Single dose BRD antibiotic administration is preferred by 62.8% (27/43) of responding farms.

In responding the question about meat withholding times used for BRD heifers treated with antibiotics, the most frequent response (14/44=31.8% of farms) was “treated calves are not for sale”. On 40.9% (18/44) of the responding dairies, the withholding time for slaughter after BRD antibiotic administration is at least 21 days and appears to be consistent with the antibiotic selected for primary use.