In this program, we’ll cover the calf care audit we developed and evaluated as part of a USDA grant, how to use the audit form and list the tools to evaluate practices for calf rearing on dairy farms or calf ranches. Why are we doing this? We are convinced that preventive medicine practices and monitoring are key to reducing our use of antimicrobials on the farm and that veterinarians play very important roles in all the moving parts that are calf-rearing.

Heifer rearing on US dairies is about 15 to 20% of the total cost of producing milk; about $1200 to $2000 in rearing costs per heifer. How do we help clients maximize the return on their investment? It seems easy enough – keep them healthy and keep them fed.

You might start by making sure you know what your clients’ goals are for their heifers. All of these areas listed have an impact on herd profitability in some way. Have you and your clients talked about goals for: First lactation peak milk, or ME 305? Age at first calving, Body weight at calving, Height at calving, etc… This would be the first place to start – identify the goals and things you might want to monitor, see how the farm is doing, and then develop a plan.
What do we want?

- ME305 1st lactation > cows?
- Total 1st lactation yield > 80% cows
- Age at First Calf = 22-23 m? BCS=3.5?
- BWt >1350 lb at calving? 1450? (90% of mature BWt)
- Shoulder height 54 inches?
- Puberty 9-10 m, 55% mature wt?
- Breeding age = 12-13 m, 51 inches tall at withers?
- Subsequent Fertility?

What are some of the recommendations for heifer goals? This benchmarking list is one that research has supported for Holsteins. Having the heifer ME305 greater than the cows, a total first lactation milk yield greater than 80% of cow yield, age at first calf somewhere around 22 to 23 months with a body condition score of 3.5; Bodyweight of a Holstein heifer 1350 pounds pre calving and maybe 1250 lb or 90% of mature body weight. Post-calving weight with a shoulder height of 54 inches. Puberty at around 9 months at 55% of mature body weight. Breeding age of 12 to 13 months and 51 inches tall. Fertility.. There are many benchmarks out there. You might have specific goals for the farm that are different than these, or you might need some benchmarking to see where the farm stands in relationship to these recommendations.

On the website, we posted a worksheet to use with your clients on establishing goals for heifer rearing. Although a producer may choose not to monitor everything on this list, going through the process helps them identify what’s important to them and to you.

But how do we get to these goals with a focus on the neonates and prevention? If we look at the potential problem areas, such as peri-natal mortality or stillbirths, morbidity in pre-weaned calves, mortality rates, and average daily gains, we can then, with the evidence we have from the literature, put together the critical control point areas like calving management, colostrum management, liquid feeding program, starter feeding, water consumption and housing. Using these critical control point areas, we developed a list of things you could monitor.
First, we’ll start with calving management. There is quite a bit of evidence that dystocia increases stillbirths, neonatal mortality, colostrum deprivation, & interferes with IgG absorption, & increases the chance for neonatal acidosis due to hypoxia. Dystocia might also be associated with calf mortality because of the possibility of uterine fluid inhalation during birth. A recommended goal for incidence should be <15% dystocia in heifers and <8% in cows. But, there are many herds doing better than that.

In a recent study, calves that required assistance at birth were 3 times more likely to die before weaning than calves delivered naturally. And, with each unit increase in delivery score from 1 to 2 or 2 to 3, the ME305 of the calf in her first lactation was less by about 440 lbs on average.

If you are not already working on calving management with your clients, you could review the protocols they have. Are they written? You could validate their protocols with a discussion with the maternity crew or take a look at data they have available. One report is the calf events report from dairy comp that can provide the stillbirth rate over time. You could also make observations on calving assistance either in person, with videos or by using paper calving sheets. Your could also monitor the timing of calving by having the farm invest in the eCalving program from Ohio State. Or you could have them use something like the Moocall monitor or Calving 24. These latter systems are pretty pricey so you need to pencil out the costs and benefits that a system of alerts that watch for cows in labor might provide.
This is an example of a simple calving area report using paper records. All the data are in there to see if each calf is off to a good start. There is the calving difficulty, time of birth, time colostrum was fed, total amount of colostrum, its quality, and the calf birthweight.

Some producers using dairy comp software will be able to provide the calf events table with the command EVENTS 3. As an example of the use of this report – you can assess the rates of stillbirths. Looking at this table, we can see quite a bit about the herd. First, there were quite a few calvings in July, 9% of which were twins And 7% were stillbirths. If you look at other months, stillbirth rates are higher than the 8% benchmark and there is a differential stillbirth rate for male versus female calves. These reports help open a conversation and can potentially lead to training or retraining programs for the maternity crew. The report can sometimes identify when the calving area might be overstocked for the space or labor available. You could also use a list of cows due to calve report to predict when your pens will be challenged.

If you want to institute some calving records, there is a standard scoring system for calving ease, noted here from the national association of animal breeders. If you wanted something simpler, you could use a 1, 2, 3 scoring system with 1 being normal delivery, 2 - some assistance and 3 - a hard delivery.
For training labor in calving management, I would suggest the information provided by Ohio State in their factsheet that provides information on what employees would see with normal delivery and what they might see with a difficult delivery. These areas are useful in training and retraining the maternity crew. There are a number of online videos you could also use in training, but please review them first!

The next critical control point area is colostrum management. You need to review the protocols on the farm and reiterate the importance of the timing of harvest and that udder prep for a clean harvest is essential. We know that bacteria in the colostrum fed to calves can interfere with IgG absorption. If you want to show that the teat ends are clean after they prep, you could use a luminometer swab. You could also evaluate the cleanliness of the colostrum collection equipment, review the storage procedures, and check the temperature of the refrigerator by using a HOBO data logger or a simple thermometer left in there for a couple of minutes. Often the colostrum refrigerator is not the newest on the farm and the temperatures might be off. If they are freezing colostrum, it would be best to put them in one gallon ziplock bags and freeze flat. It is much easier to thaw than when the colostrum is frozen in jugs or bottles like the picture.

Before the use of luminometers, we use to swab and culture surfaces to check hygiene protocols. Now, we can look at ATP using this handheld device. Since things like somatic cells as well as bacteria all have ATP so that a high reading (100 or greater) would indicate either milk left on the surface or bacteria.
We have really good evidence about the IgG level of colostrum and its effect on calf health. We can check the quality by using a Brix refractometer and also take samples for culture where we are looking for a total plate count less than 100,000. We can also use the luminometer on the colostrum feeding equipment. One thing to always include is a swab of the esophageal feeder and the bucket milker.

I put this graph in here to show you the daily variability in as fed colostrum Brix readings on one farm. The black line here is the 22% cutoff point for “good” colostrum, based on Bielman’s work. This set of box and whiskers plots show the outliers (the red dots) and the middle point or median – the horizontal line in each little box – and the quartiles of the data for that day. This is just to illustrate that some of the Brix values were very low in the colostrum fed to calves on the farm.

This is a graph of the daily total bacterial counts from the colostrum samples. Remember log 6 is 10 to the 6th or 1 million CFUs per ml and the gray line is log 5 or 100,000 cfu’s, a recommended goal.
Monitoring body weight at birth

- Birthweight
  - Spring scale
  - Hoof circumference predicts calf body weight (Long et al., 2012)

<table>
<thead>
<tr>
<th>Hoof Circumference to Body Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tape (cm)</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>16</td>
</tr>
<tr>
<td>17</td>
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<tr>
<td>18</td>
</tr>
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<td>20</td>
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<td>21</td>
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<tr>
<td>22</td>
</tr>
</tbody>
</table>

After the colostrum is fed, sometimes the farm might get a birthweight. If you want to have the farm monitor weight gain over the pre-weaning period, you’ll need some estimate of birthweight. Some farms already have a chute scale they can run the calves across before placing them in the hutch or pen but some might prefer to have a spring scale or use Coronary band circumference. This table shows the prediction of body weight based on hoof circumference for male and female calves from Long’s work. Just remember that for calves less than 70 lbs, hoof circumference tape overestimated body weight to some degree and for calves over 99 lbs, it underestimated body weight.

Calf transport & loading into calf pens

- Observations
  - Clean?
  - Loading and unloading procedures
  - Low stress handling?
  - Hutches/pens ready?

The next process to observe is calf transport from maternity to the calf pens. I have been surprised at how clean as well as how dirty some calf trailers can be. But also make observations on their loading procedures and calf handling and if the hutches or pens are all ready for the calves.

Evaluating Passive Transfer

- Serum total protein of calves 2 to 7 days of age
  - >5.5 adequate passive transfer
  - ZnSO₄ turbidity test <1600 mg/dl IgG is negative passive transfer
  - SRID - accurate?, expensive
  - Use of Brix refractometer

<table>
<thead>
<tr>
<th>Brix</th>
<th>TP</th>
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<tbody>
<tr>
<td>10.9</td>
<td>7.5</td>
</tr>
<tr>
<td>10.4</td>
<td>7.0</td>
</tr>
<tr>
<td>9.7</td>
<td>6.5</td>
</tr>
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<td>4.0</td>
</tr>
<tr>
<td>5.9</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Many practitioners are already engaged in screening for transfer of passive immunity by measuring total proteins or IgG levels. Just as a reminder, this needs to be done after the calf has had some opportunity to absorb immunoglobulins, the 2nd to 7th day of life. You can also use the Brix refractometer to estimate total proteins and passive transfer status (Deelen et al, 2014). The table shows the conversion and what constitutes success or failure. We are using the cutoff of 5.5 based on more current work.
This graph is from daily serum samples taken at a farm. There is a lot of variability. I put the line at 5.5 as our cutoff for failure of passive transfer.

If your client is already pulling calf blood and running total proteins, then your job is to calibrate the refractometer on a regular basis if needed and look at the data. In this farm report, there is the calf ID, the Serum total protein, the birth date, the colostrum reading for what was fed to that calf based on a colostrometer, who fed the colostrum. and the calf’s dam ID.

Evaluating the liquid feeding program is an important area to monitor in the calf care audit. Some practitioners are already looking at the nutrition on the calves because of its importance to health.

There are lots and lots of studies out there that indicate that if you feed PREWEANED calves more compared to traditional milk replacer feeding, they produce more milk in their first lactation. If that’s true, then evaluating the liquid feeding program is vital not only for calf health but to make sure there is that return in milk once those heifers freshen.

### Total protein reports

<table>
<thead>
<tr>
<th>ID</th>
<th>CPROT</th>
<th>BDAT</th>
<th>CMTR</th>
<th>CMAN</th>
<th>DID</th>
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</thead>
<tbody>
<tr>
<td>I002</td>
<td>6.2</td>
<td>2/23/14</td>
<td>60 J</td>
<td>14320</td>
<td>12134</td>
</tr>
<tr>
<td>I003</td>
<td>6.1</td>
<td>2/23/14</td>
<td>60 J</td>
<td>14480</td>
<td>13090</td>
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<tr>
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<td>60 J</td>
<td>14480</td>
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<tr>
<td>I005</td>
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<tr>
<td>I006</td>
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<td>2/23/14</td>
<td>60 J</td>
<td>13940</td>
<td>13940</td>
</tr>
<tr>
<td>I007</td>
<td>7.0</td>
<td>2/23/14</td>
<td>60 J</td>
<td>13940</td>
<td>13940</td>
</tr>
<tr>
<td>Total: 15</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### Additional 1st Lact. Milk Production after increase in pre-weaning nutrient intake

<table>
<thead>
<tr>
<th>Study</th>
<th>Milk Yield (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foldsager and Krohn, 1991</td>
<td>3,002</td>
</tr>
<tr>
<td>Bar-Peled et al., 1998</td>
<td>998</td>
</tr>
<tr>
<td>Foldsager et al., 1997</td>
<td>1,543</td>
</tr>
<tr>
<td>Ballard et al., 2005 [200 DIM]</td>
<td>1,641</td>
</tr>
<tr>
<td>Shemay et al., 2000 [post weaning protein]</td>
<td>2,162</td>
</tr>
<tr>
<td>Diao et al., 2006</td>
<td>1,100</td>
</tr>
<tr>
<td>Stackley et al., 2007</td>
<td>1,100</td>
</tr>
<tr>
<td>Radh-Knight et al., 2009</td>
<td>1,583</td>
</tr>
<tr>
<td>Meade et al., 2010</td>
<td>1,813</td>
</tr>
<tr>
<td>Soberon et al., 2012</td>
<td>1,556</td>
</tr>
</tbody>
</table>

Soberon and Van Amburgh, 2013 +
The liquid feeding program is most important in the first 3 weeks of life because the calves are just not eating very much starter grain. When looking at the farm’s liquid feeding program, are the calves fed by body weight? What are their body weights? You can confirm the body weights by weighing some calves with a tape. Next, you can evaluate what they are feeding by downloading the most recent NRC model to your computer at the website noted. Putting in the values for calf weight, amount fed every day, and protein and fat levels will give you an estimate of the energy and protein allowable gains possible on that liquid feeding program. Start with the replacer tag, if they are feeding replacer. On this tag, the Crude protein is 24% and the fat is 16%. Just make the changes in the NRC page for the nutrients. The feeding directions are at the bottom but the farm might be feeding more than 16 ounces a day so you need to know the actual pounds of powder or dry matter fed per day.

In the next set of slides, we’ll go through the NRC and put in the data from this milk replacer tag. The first screen you’ll want to look at once you have the NRC downloaded is the Animal Description. Make sure the animal type reads Young Calf. You can also put in the body weight and the temperature. I put in 100 pounds at 32 degrees farenheit.

The next is the Program settings. I put it in English, use dry matter and the ration result I want.
I then click on the feeds button and then Add Feed(s) to Ration. In the lower right, you’ll see the calf feeds. I’m selecting whole milk and the 20:20 milk replacer.

Once you have added feeds, you get back to this screen and can see the default nutrients for what is highlighted, in this case, milk replacer. If I have different nutrients on the replacer bag tag, I can plug those into the white cells for the nutrient values. Because my bag tag read 24:16 for the protein and fat, I need to change those values.

You can see those changes here. I changed the Feed Name, the CP, and the Fat, as well as the vitamins at the bottom. Next, I want click on the Ration button and enter the amounts fed.

I put in the 1 pound of powder, set it to 100% and you can see the ration results on the right. If the calves are only eating 1 pound of powder per day and no starter grain, they do not have enough energy to any gain weight at 32 degrees but have enough protein, ADP allowable gain. You can play with these numbers and get to the goals you and you client want for gains, but I usually just find it helpful as a teaching tool.
So, back to the on farm audit. At the same time you are looking at the feeding system, you can use your luminometer to see how clean the bottles, nipples, buckets, transfer hoses, tube feeders or even the mix tanks are. If the farm has a pasteurizer, you should take pre and post-pasteurization samples for culture to see how well that pasteurizer is functioning.

In many publications, we see quotes like this “high numbers of bacteria in milk or milk replacer fed to dairy calves increases the risk of calf scours and pneumonia”. There is currently no specific evidence that high liquid feed bacterial counts alone will cause illness in calves, but because there could be pathogens amongst the environmental bacteria, low bacterial counts in milk or milk replacer should be the standard. We have been using Petri film to evaluate bacterial counts for our calf milk samples because it is easy to store, it can travel with us in our cooler and be incubated in the office or our traveling incubator.

For your information, we posted a set of dilution procedures for colostrum and milk so you can easily do your total plate and coliform counts.
Applying milk or colostrum to the film is pretty easy – just a very basic lab set-up.

If the farm is pasteurizing waste or whole milk to feed to calves, you need to become familiar with the different types of pasteurizers and how they work. There is quite a bit of information out there on times and temperatures, so we won’t go over that here. But, there are some common problems we’ve seen.

This is a commonly used commercial high temperature short time pasteurizer. One of the problems with this is making sure the system is cleaned properly – just like milking equipment – to ensure that milk scum is eliminated. There is Nothing worse than having to take it apart and clean the plates!

Other problems include: It might take too long to get to high enough temperature because there is not enough hot water, or the homemade plate cooler format they might be using is not adequate to heat the milk, or they are starting with too much bacteria (the waste milk should be held cold until pasteurized in order to reduce incubation), and, as I mentioned, there can be Pasteurizer cleaning problems.
I once put a HOBO data logger in a plastic bag in the calf milk tank just to see what was happening to temperature from 4PM (at zero) to 11 AM two days later. This tank was used to cycle milk through the pasteurizer and then back into the tank. You can see the rise in temp as the hot milk comes back and then it is fed. If you look across at the time points, though, there is some irregularity in the temperatures and times. This created a conversation as to what the protocol was and how we might be off a little.

Next you can evaluate the milk or milk replacer mix. You can use that Brix refractometer once again. If they are feeding waste milk, take a Brix reading and add “2” to get to the total solids. If they are feeding milk replacer, add 1.5 if you are using a digital Brix and 1.1 for an optical Brix. Take samples on the first calf fed and on the last calf fed and maybe a few in between. Also take the temperature of the milk fed to the first and last calf. It should be close to body temperature, just less than 102 F. You may also want to run osmolality of the mix if there are a lot of additives to the milk or milk replacer, just to be sure they are in what is considered the safe range, less than 600 mOsm/l. Your milk coop or another lab might be able to run these samples for you.

You can also evaluate the starter feeding. It is not easy, but if you can get a consumption estimate for different ages of pre-weaned calves, you will have more information you can put into the NRC calf nutrition model to see just what nutrients the calves are getting and what kinds of gains you could expect. We could spend a lot of time talking about starter nutrients but not at this time. One thing that is easy is to see if the grain mix has gotten too wet or is too dusty, if mold is growing, and what the process of renewing the grain is. This is also the time to evaluate water buckets for fullness and cleanliness.
The liquid feeding program and the starter grain all should lead to growth. In a study done at Cornell, first lactation milk production was associated with average daily gain prior to weaning. That’s a pretty long term effect. And in fact, pre-weaning average daily gain explained about 22% of the variation in first lactation milk production and milk production was not specifically associated with birth weight, weaning weight, or calf height. If we run the numbers, if the difference was from 0.5 to 2.7 lbs per day, the researchers saw an extra 1200 lbs of milk in the first lactation.

Monitoring growth by average daily gain is done on quite a few dairy farms now. You need the birthweight, 20-day weight would be nice to see how they did on mostly the liquid feeding, and then weaning weights.

Many farms have a scale that can be used at weaning as you move calves out of the hutch or pen. Or, you can use the calf-specific weight tape for calves 80 to 280 pounds.
This graph shows birth cohorts of calves by their average daily weight gains. You and your client can decide where you want your average daily gain goal to be, find out where you are and then establish the processes to get your goal.

Morbidity can have major effects on average daily gain as well as other, older heifer parameters. The effects of just diarrhea on average daily gain are not really known but, we do know that if a calf has diarrhea, it increases its risk for respiratory disease. We do know quite a bit about the effects of calf pneumonia on average daily gain as well as removal from the herd, and delay in age at first calving. Knowing the numbers of sick calves by birth cohort could help you in finding causes and setting up prevention strategies. But using just treatment records, even if you have them, might not give you the whole picture. In a study that we did, diarrhea tended to be over diagnosed by calf treaters and respiratory disease tended to be under diagnosed. You can help with training on what to look for when you set up and discuss your treatment protocols.

Nobody wants to see a dead calf, but knowing the cause of death can tell you quite a bit. A necropsy, done by you or a trained farm employee can sometimes point to specific prevention practices. You can train the farmer or employee to text or email the gross findings to you. A form they complete or a checklist might be helpful so that you can get all the information you need to help with the problem. The following pictures were taken with a cell phone...
An infected umbilicus

Consolidated lungs

And a look at the umbilical vein. These pictures, a checklist of what you want an employee to look for, would help you better understand the reasons for calf mortality on the farm.

In this slide, I have summarized recent studies looking at housing and disease. This leads us to consider not just the type of housing but how it is managed and their influences on incidence of disease and antibiotic use. For most farms, individual pens or hutches for the youngest calves, good ventilation, and then enough space per calf should help reduce the risks for respiratory disease.

**Housing and Environment**

- Marcé (2010) -- 4 main housing systems ranked in ascending order of risk for neonatal diarrhea and respiratory disease: individual pen until weaning, individual pen for 4 weeks, individual pen for 2 weeks, and collective pen from separation of calf from dam
- Lago (2006) -- Ventilation affects airborne bacteria and respiratory disease; bedding amount affects health
- Svensson (2006) -- Group size affects respiratory disease incidence
- Hepola (2003) -- If space allowance > 15 ft² per calf, when group size was maximum, no health problems
I have a whole website devoted to evaluating calf housing, particularly hutch housing. I think the most important factors include bedding and nesting for winter, heat stress remediation, ventilation and keeping the calf dry. There are a lot of ways to house calves so I will let you go to the website if you want more information. I'll briefly discuss a couple of tools I put in the calf care audit toolkit.

The first is an anemometer to measure wind speed to see if any air is moving in the hutch or pen. The second is the smoker stick to see where the air is moving and the third is some sort of moisture meter to see if the bedding is dry under the calf. This latter tool, the moisture meter, is pretty unsophisticated. You could spend thousands of dollars to get an accurate estimate of dry matter of the bedding but as something to demonstrate to your clients or their employees, this tool works for me at the moment. I poke it in the bedding and see if it reads wet or dry – about $14 at the garden store. The only other tool I have found helpful is the HOBO data logger for temperature and humidity. You might only need to purchase something like this if you are going to do a lot of housing evaluations.

Making the observations using something like a temperature logger is helpful to see what the calves experience when you are not there. You can then have real data to make your suggestions to how to remediate inadequate ventilation or heat stress.
An important observation to make in winter is nesting in the bedding. The bedding provides for insulation against cold stress, particularly critical for newborns, who have a cold tolerance only to 50 F. The University of Wisconsin group developed this nesting score system and found that with increasing nesting score, the prevalence of respiratory disease was reduced. The scoring system is described as a 1 where the calf’s legs are completely visible, such as the two upper pictures. A two is with the legs partially visible and a 3 is where the legs are not visible while the calf is lying.

There are a lot of areas to work on for calf care. The audit form we developed is just one tool to help organize your visit. We’ve posted a PDF version of it on the website along with a checklist of what you’ll be doing. Right now, I’d like to discuss the actual use of the form and what we found when evaluating it on some dairy farms. The veterinarians and farmers were gracious enough to let us test out the tool and provide feedback on the experience.

The sections of the form include all the information we just described. But where you start your audit will depend on what the calf caretakers are doing when you arrive. It is really important to get to the farm before they start to feed so that you can make those observations and collect samples.
You might take a look at the audit checklist first. That is a set of things to do during your visit. The audit form is where you can record your observations. When you look at all the different areas in which to make observations, you might think about parsing out some areas to another day, if time does not allow for a full audit. All the documents you need are at the website.

So what did we find in our evaluation of the audit tool? Although most of the farms we visited had excellent calf management, each farm had at least one thing that could be worked on. I’ll only highlight those negative findings in these combined farm examples. Remember, though, that part of the audit is to also congratulate them on the things that they are doing well.

In the milk feeding programs, some liquid diets allowed for only 0.2 to 0.4 lb per day of ADG for calves < 3 weeks of age. Nipple luminometer readings of over 8900 and Milk replacer mixing tank >7000 indicated they needed a new process for cleaning. In one milk sample, we found a Total solids of only 10.7% and a couple farms were feeding milk at a Temperature of 89 to 92°F. Coliform counts of 230,000 and a TPC of 3 million in milk to be fed was concerning. On the colostrum management side, a number of bucket milkers that were recently cleaned were reading over 9000 on the luminometer and a tube feeder was over 8000. Some colostrum samples had high bacterial counts and some calves had failure of passive transfer. We noted colostrum that was frozen in gallon jugs might be hard to thaw and found some colostrum samples less than the 22% Brix.
For housing observations, we found no air movement in some hutchs, wet bedding under the calves, and high temperature of 108 degrees in the hutch in the mid afternoon. For water, we saw algae in the water buckets on one farm. These kinds of images, placed in your report, are particularly helpful if you need to demonstrate something to someone not there during your audit. SO, despite being really great farms, there was usually one thing we identified that might need work.

So after going through the audit on 10 farms, what did the producers and practitioners think about the process? Of the producers, we asked three questions: Do you think the process of the calf care audit would be something useful to do on a regular basis (like monthly or yearly)? Was the report valuable to you with regards to the data presented and the comments provided? Based on what you read in the report, was there a result you think you might act on?

All thought that the process would be something useful to do on a regular basis, and they suggested quarterly, semi-annually or annually. The report was valuable and most were already acting on an audited item before they got the feedback questions. One comment was “Your audit was time well spent!”

The practitioners were asked: Do you think the process of the calf care audit would be useful in practice? Was the report valuable to you with regards to the data presented and the comments provided? And, Would you consider using a system like the calf care audit in your practice?

They mostly liked the format and thought it would be a good way to get a veterinarian involved in the calf program on their clients’ farms. They did find the report back to them and their clients valuable and found changes to make on the farm. And, they were considering using the audit in their practice.
So, I’ve given you some of the highlights of things you might find in a calf care audit. The real reasons we want to be engaged in monitoring calf care like this is to identify the status of critical control points for the welfare of the calf and those calfhood influences on future heifer performance.

We start with the client goals and monitor the critical control points to that get us to those goals.

To conclude: There are many dairy farms that have dialed in to calf management practices that reduce illness and antimicrobial use. From calving to weaning, they have strict prevention practices in place that can grow calves with minimal drugs. You have the opportunity to help them make sure everything is working properly. You also have the opportunity to help farms assess where they are and where they want to go with calf rearing.

Thank you for watching this presentation. Our research and extension group hope that you picked up a few pearls you can use in your practice. We have posted all the materials, including the form, on the website listed. If you have specific questions that we might be able to help with, please contact me at the email address listed on this slide. If you would like to get an hour of CE credit for this program, you will need to complete and pass a 10-point quiz and then we’ll send you your CE certificate by email. Thanks for caring about calves!