



# How they're tackling Johne's

Routine testing and day-to-day control measures go hand in hand on these farms. They're proof you can make progress.

**J**OHNE'S is one of the nasty problems we have to deal with on our farms. Calves can get infected right after they're born, if not before. Clinical cases don't show up for years. And our tests are far from perfect.

The bottom line is that Johne's increasingly is being looked at as a management disease. At least, making improvements in how we handle our cattle, starting at the moment of birth, is the key to controlling Johne's spread and cutting incidence in a herd.

Here's how these four operations are tackling the Johne's threat:

### What Johne's tests do you use?

**Moser:** The Cornell ELISA blood test which costs us \$3 instead of the normal \$5 because we are on NYSCHAP. We used to use fecal culture, but it costs more, and there was the long turnaround time.

All cows are tested at dry-off. This enables us to use recent test status for colostrum management and maternity pen management.

**Scheider:** ELISA blood test at dry-off. We have not used different tests in the past, but we are considering switching to fecal culture testing because of its accuracy in identifying positive cows.

**Neahring:** Fecal and blood tests. We fecal test two times per year on all milking cows. We blood test sometime in December or January so we

have up-to-date results in time for the calving season. The state pays for all of our testing.

**Lewis:** We do a milk test at dry-off for all cows in the herd. It costs \$4. We used to use a blood test only for suspect cows. But using the whole-herd test helps us manage the positives differently.

### Describe your Johne's incidence.

**Moser:** In 2000, we had 15 to 18 percent of our cows moderate to high positives on fecal culture. At present, we have about 10 percent positive (40 or greater) on Cornell's ELISA test.

**Scheider:** Prior to our expansion in 2001, we did not believe we had any Johne's cows, but we were not testing. With the expansion, we began testing all mature cows and discovered that some of our original herd, indeed, was positive.

The number of clinical cases has been 2 percent of the herd. ELISA positives run about 7 percent. We are seeing fewer clinical cases. One animal born in our expanded facility has become clinical.

**Neahring:** Last fecal test was 7 percent with one or more colonies and with none "too numerous to count (TNTC)." On previous tests, we had as many as six TNTC, but those cows have been culled. We have also culled most cows with results of more than 10 colonies. The majority of those cows remaining that test positive have one to nine colonies. We haven't been on the program long enough to really see the

kind of results we want which is zero percent positive!

**Lewis:** We started the milk test during February 2005. So far, we are running roughly 8 percent positives or suspicious. We can't really compare this to the past since we did not check the entire herd before.

### Please describe your strategy for dealing with a Johne's test positive or suspicious cow.

**Moser:** Positive cows are not bred back. Those cows and suspicious cows are freshened in the free stall barn or outside (not in the fresh pen). After calving, those cows are moved into the main free stall barn.

**Scheider:** ELISA-positive cows are coded. Clinical cows are culled.

**Neahring:** Johne's cows are marked with plastic leg bands and ear tags so that their colostrum or waste milk is not fed to calves and so that we are sure to remove the calf right away at calving. If the cow's fecal count is more than 15, we put her on the cull list, and she does not stay for another lactation. We will cull her when her milk drops at the end of the grazing season. We mark positive fresh cows with Blu-Kote.

**Lewis:** Positive cows are calved in a separate area. We are a grade herd so basically we are looking at milk in the bulk tank for our income. As a result, when a test-positive cow shows signs



Moserdale Farm, Copenhagen, N.Y.

Andrew Moser (left) is shown with his veterinarian, Mark Thomas, of the Countryside Clinic, Lowville, N.Y. They are standing in an older building remodeled to house calves away from the cow herd. A Johne's assessment pointed out that cows in the return lane of Moser's double-8 herringbone had been able to splatter calves with manure where they were before.

"Managing for Johne's has helped minimize risk of other contagious diseases," said Moser. Although, he adds that culling due to Johne's means there is less opportunity to cull for other reasons. Johne's positives are not bred back.

The 300-cow Holstein herd has achieved Level 5-Enhanced status in the New York State Cattle Health Assurance Program (NYS-CHAP). To get that status, a herd must have been in NYSCHAP five years and part of an ongoing Johne's control program. In the past, Moser used fecal tests, but now all cows are tested at dry-off using blood tests because of the quicker turnaround time.

At Moserdale, calves get colostrum from Johne's-negative cows or are given a colostrum replacer. No waste milk is fed to calves, and no leftover feed is given to any other livestock.



Scheidairy Farms, Freeport, Ill.

Owner Doug Scheider (right) is shown beside his son, Dan. At left is Steve Samuelson, D.V.M., Orangeville Animal Health Services, who has conducted a Johne's assessment at the 650-cow operation. The Scheiders received "very low" or "low" risk ratings on all on-farm risk categories.

Biosecurity, including Johne's control, has received high priority from the Scheiders, especially since they expanded in 2001. That's when they began serum ELISA testing of all cows at dry-off. So far, one animal born in their new facilities has become clinical with Johne's.

Visitors to this northern Illinois dairy are given plastic boots, and walking in feed mangers is discouraged. Colostrum from Johne's- and mycoplasma-negative cows only is given to heifer calves. Waste milk is discarded. Calves are moved to another farmstead soon after birth, and heifers are sent to two growers before returning. The Scheiders have strict sanitation rules for the trucks, trailers, and people involved with moving cattle. Rendering trucks enter the farm at a secondary entrance well away from where calves are housed. Leftover TMR is fed to steers only.



**Steve Neahring (center), Nehalem, Ore.**

Two fecal tests a year on all milking cows plus a blood test before late winter calving is part of the John's strategy on this seasonal, grass-based operation with 170 milking age New Zealand Friesian/Jersey crosses. Neahring is a member of Tillamook Cooperative Creamery which provides all members with a John's assessment. "The assessment was especially good," said Steve, shown with his son, Tim (left), and son-in-law Brian Bailey. "It forces us to evaluate what we do and to look for weak places in our John's program."

Seven percent of the samples on the herd's last fecal test showed one

or more colonies and none with "too numerous to count." They have had as many as six TNTCs in the past. Cows with fecal counts of more than 15 are put on the cull list and do not stay for another lactation.

The Neahrings have moved calves away from where the cows are housed to eliminate the chance for manure contamination. John's-positive cows are marked so special effort can be made to remove calves soon after birth and ensure no mistakes are made with colostrum feeding. Colostrum from John's-positive cows is discarded. They plan to make maternity pens easier to clean between calvings.



**Bruce Lewis family, Jonesville, Mich.**

Bruce Lewis is shown with his sons, Conner and Adam, and his wife, Jennifer, and daughter Brittany. Their southern Michigan dairy has 400 Holsteins housed in drive-through free stall barns and milked in a double-12 pregnant parallel. They do a John's milk test on all cows at dry-off and have been running about 8 percent positive or suspicious. They cull test positive cows and put a V-notch in the ears of daughters born to positive cows. "We actually would be less likely to spend money on or be real patient with a notched cow," said Bruce Lewis.

The Lewises save colostrum from

older negative-tested cows to use for calves from John's-positive cows. Waste milk is fed to bull calves only. Loaders used for feeding are not used to handle manure.

The farm has had two John's assessments. They already were removing calves from cows right after birth and keeping young stock and cows separate. Now they have built a new dry cow barn which has a separate calving area for John's-positive cows. The Lewises also are making plans to either switch to milk replacer or pasteurize their waste milk. They are careful about using one loader for feeding only . . . no manure handling.

of diarrhea, we cull them, regardless of age, repro status, milk, or genetics.

### How are test-positive cows handled?

**Moser:** We handle all cattle to minimize the spread of John's. We raise the calves from positive cows, but colostrum from positive cows is discarded.

**Scheider:** Colostrum from test-positive cows is discarded or fed to bull calves. Currently, we keep all heifer calves in the herd.

**Neahring:** Colostrum from positive test cows is discarded. So far, we have opted to take a chance on the calf, keeping them in the herd.

**Lewis:** We do not save the colostrum from positive cows. We do keep the heifer calves, but we "V" ear notch them as a visual reminder that they are more likely to be infected and become positive in the future. We actually would be less likely to spend any extra money on or be real patient with a notched cow . . . paying for a surgery, for example.

### What about fresh cows and newborns?

**Moser:** Like I said, only test-negative (below 40) cows are calved out in the fresh pen. The rest freshen in the free stall or outside, depending on time of year.

All newborns are removed from dam as soon as possible and put in a separate barn. If we assist with any calving, the cow is cleaned carefully, and we make sure we use clean equipment. We always wash our boots and hands before assisting with a calving.

**Scheider:** Cows are placed in a birthing pen when in advanced labor. After freshening, cows are removed as soon as possible. Calves are processed and fed colostrum from a cow which has tested negative. They are moved to the calf facility with a truck which is only used to haul

calves and by a driver with clean boots. Calf feeding equipment is cleaned and sanitized after each calf uses it.

**Neahring:** We try to remove the calf from the cow and make sure it receives good colostrum. John's cows' colostrum is discarded. We are building a heated pen for newborns this year and making removal of the calf a priority.

The state vet claims that they have tested the outside of the udders of a group of dry cows that tested negative, but they still found that the samples from the contaminants on the udders were positive on every cow. That herd had a 50 percent infection rate.

We are also remodeling the maternity pens to make them easier to clean between cows. As we calve so many cows in two months' time, ease of cleaning is a must.

**Lewis:** In the past, we had only one area for housing our fresh cows, so all went into that pen. The newborn calves are separated from the cows as soon as possible. We try to do it in less than one hour.

### What are practices regarding colostrum?

**Moser:** We use colostrum as a single source . . . cow to calf (not pooled). We only use colostrum from cows that aren't suspicious or positive. Otherwise, we use frozen colostrum from a negative cow or a colostrum replacer. We use a colostrometer to check for quality colostrum. We do not feed any waste milk.

**Scheider:** Colostrum harvesting equipment is sanitized between each cow. Each individual cow's colostrum is placed into a separate container and marked with the cow's ID number, date, and person who collected it. Colostrum is then frozen to await a negative John's test and a negative Mycoplasma test before being fed to calves.

No waste milk is fed to calves. Pasteurization is intriguing, but we have many logistical issues since the milk would need to be transported to another farm where the calves are housed.

**Neahring:** Positive cows are marked and their milk discarded. We save good colostrum in the refrigerator or freezer for future use. Only waste milk from negative cows is fed. We also feed milk replacer when we don't have enough milk.

**Lewis:** We do not save colostrum from test-positive cows. We save colostrum from older negative-tested cows to use for calves from John's-positive cows and first-calf heifers without much colostrum.

We do not use colostrum substitutes, and we do not pasteurize. We feed our waste milk to bull calves and use milk replacer for the heifers.

### Have you had a John's assessment?

**Moser:** Yes, we have an annual John's review through NYSCHAP. It is conducted by our veterinarian, Mark Thomas. We get good marks for our colostrum management and calf management. We have learned that we need to pay careful attention to preventing manure contamination from the cows to the young stock. NYSCHAP has been a good program for us in New York (NYSCHAP.vet.cornell.edu)

**Scheider:** Our veterinarian recently conducted a John's assessment. Fortunately, we scored "very low" or "low" in all on-farm risk categories.

We will be getting a designated manure bucket that will be used only at the calf farm. Our worst score (moderate risk) involved acquisition of outside replacements.

**Neahring:** Yes. First time by our local vet and second time by the state vet. We got good ratings for our testing schedule and for our culling. We need to concentrate on taking calves away

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## 55th Annual HOARD'S DAIRYMAN ROUND TABLE

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from cows sooner, keeping dry cows cleaner, and keeping maternity pens cleaner. Also, we need to clean tires on mixer wagon between feed aisles.

**Lewis:** Yes. The first was conducted by Dr. Viteto. We have just had our second assessment.

We already were separating calves away from cows right after birth. Also, we were keeping older animals and younger ones separated, and we had been using clean feeding equipment.

We saw the need to have a separate calving area for positive cows and to either switch to milk replacer or pasteurize our milk. Finally, we need to have more regular testing and quicker culling of positives.

### **What do you now require of animals coming onto your dairy?**

**Moser:** We try to buy only from known sources to minimize risk. We would try to get a Johne's history from any source herd and possibly do testing before buying the cattle.

**Scheider:** We currently are not needing to buy any. When we were purchasing heifers, I would request to visit with the owner's veterinarian regarding Johne's and other health issues, but with the tight

heifer market of recent years, this was not always possible.

**Neahring:** Our goal is to be a closed herd. We see no reason to bring cattle in unless something unforeseen happens. We would want to blood test incoming cattle. The cattle we have purchased in the last few years have come from people we know well.

**Lewis:** We have not purchased any animals for several years.

### **What specific housing and manure-handling measures have you changed?**

**Moser:** Calves now are housed in a separate barn. Before, there was a chance of milking cows contaminating calves when they returned from the milking parlor.

We use separate feeding and manure-handling equipment. One skid-steer is used to push up feed and clean out mangers, another to handle manure. At first, we used separate attachments for one skid-steer.

Calves are removed from the dam as soon as possible after birth to a clean, dry pen away from other animals. And we quit pooling colostrum.

We now pay a lot more attention to cleanliness everywhere. That includes boots, hands, clothes, needles, barn equipment, tractors,

pens, and walkways. This helps in the control of all diseases, not just Johne's.

Finally, we do not feed any leftover feed to any other animals. All cattle get fresh feed every day.

**Scheider:** Loaders and buckets which handle feed are not used to handle manure.

Manure-handling loaders do not pass through feed alleys. Refusal TMR is fed only to steers. Our calf facility and the facility for our heifers now are located on farms with no adult animals. There, feed and water are offered predominantly at fenceline locations to lessen fecal contamination.

Young heifers are moved only in trailers which do not haul adult animals. Trailers which haul springing heifers are pressure washed after hauling any clinical cows.

Originally, in our current facility, one barn housed prefresh, post-fresh, and hospital cows plus the birthing area. The hospital cows were subsequently moved to a different barn.

Visitors are directed to the office to receive plastic boots. Manure-laden clothing, unauthorized stock trailers, and walking in feed mangers are discouraged. Rendering trucks enter the farm from

a secondary location and stay approximately 1/4 mile from where calves are born.

**Neahring:** The feed push-up scraper for the cows never gets into the manure. The same is true for the feed pusher for the heifers. We moved the calves into another barn so they are away from other cattle. A heated newborn pen away from all other calves also is under construction, and a redesign of the maternity pens should help.

Because all the replacement heifers we will raise are the A.I. calves born in February and March, we have decided to make that our priority and will do everything we can to protect those calves from infection, especially during the first few days. We also are changing the calf pen design for up to weaning age.

**Lewis:** We built a new dry cow barn this last year which gave us more room to calve positive and negative cows in separate areas. We try very hard not to walk in any feed or feed areas with manure on our boots.

We have one loader that we load feed with. If we have to use another loader for feeding, we take the time to power wash the bucket thoroughly before we use it. 

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