Milk quality is part of their daily culture

As winners of the nation’s top milk quality awards, these Idaho, Michigan, Minnesota, and Wisconsin farm teams share their best practices.

**HE 2019 National Dairy Quality Award Platinum winners represent an exemplary group of dairy producers. Not only do these herds produce some of the nation’s highest quality milk, these farms incorporate the many recommended, science-based practices that lead to positive outcomes.**

Nominators submitted applications from 82 farms this year. From that group, the judges made the first screening based on milk quality benchmarks. Of those, 45 herds merited further analysis by a team of judges through a comprehensive review of measures to ensure milk quality. After judging, final applications were designated as Silver, Gold, or Platinum winners. The previous page lists all of this year’s winners along with their nominators. *Hoard’s Dairyman* is honored to co-sponsor the National Dairy Quality Awards with the National Mastitis Council. The program is possible thanks to sponsorship from Boehringer Ingelheim, Conewango, and Essberger.

What is your milking procedure?

**Evergreen:** We have a written protocol. Milkers must wear gloves at all times when milking cows. We predip, strip out foremilk, dry teats using microfiber towels, attach the milking units, and postdip.

**Fischer-Clark:** We have a written protocol. We predip, forestrip, dry the teats with washable microfiber towels, attach the milking units, and postdip.

**Maple Ridge:** Our written protocol includes: predip, forestrip, dry teats with microfiber towels, attach the milking units, and postdip.

**Wilson Centennial:** Our written protocol includes: predip, forestrip, dry teats with microfiber towels, attach the milking units, and postdip.

**Wilson Centennial:** We have a goal to have the milking units, and postdip. Milkers are required to wear gloves during milking. They change gloves after each group or if they leave to do another task and then come back to the parlor.

Windmill: The milkers follow a written protocol. We spray a 0.5% iodine predip, foremilk (prime), clean with one cotton towel per cow, attach, then post dip. Milkers must wear gloves.

**How do you maintain healthy teats?**

**Evergreen:** We use quality pre- and post dip that contains 1% iodine to help maintain moisture of the skin. We do regular checks for takeoffs, vacuum levels, and other milking equipment settings to maintain consistent levels of milking throughout the year. These are scheduled every six months but are done more often if needed or if a problem arises.

**Fischer-Clark:** We properly maintain the milking equipment. This includes regularly scheduled maintenance with a check off for service performed at the proper intervals. We also make sure we have proper vacuum levels. Our dairy has consistent, written standard operating procedures for milking from employee to employee as well as shift to shift.

**Maple Ridge:** We pre- and post dip with skin conditioning teat dips. Our milkers follow a strict prep routine, and the routine is closely monitored for consistency. We use a mechanical teat scrubber to optimize a strong, consistent oxytetracycline release.

**RKB:** We don’t over milk, and inflations are changed on schedule. We quickly correct any liner slippage. We use teat dip that is suitable for the weather conditions — iodine-based barrier dip for nonfreezing weather, cold weather dip for freezing weather conditions — iodine-based barrier dip for nonfreezing weather, cold weather dip for freezing temperatures, and dry dip when it is extremely cold.

**Wilson Centennial:** The automatic takeoffs and vacuum levels are charted quarterly by Robert’s Dairy Service, our equipment dealer. Inflations are changed every three weeks. We install new pulsators this past spring. We emphasize having clean, dry teat ends prior to attaching the milking unit and good postdip coverage.

**Windmill:** We have a goal to have the milking attachment on less than 90 seconds after cows are prepped for milking. The takeoff setting is consistent. We use dependable teat dips and milking inflations. We maintain our milking system and follow the milking protocols.

**How do you keep cows comfortable?**

**Evergreen:** Milk cows are housed in naturally ventilated freestall barns. They are equipped with fans and misters that turn on to help with heat abatement.

About three years ago, we adjusted the stands since our farm switched to sand bedding for the purpose of cow comfort and cleanliness. Stalls are walked daily, and if a stall is broken or not usable, it is fixed as soon as possible.

When on pasture, dry cows are rotationally grazed and moved every three weeks to new pasture. This is done to ensure clean, quality grass. We also apply Ultra Boss fly spray every three weeks. During winter or close-up time, dry cows are housed in naturally ventilated barns with fans to help the airflow and heat abatement. Freestalls are bedded twice a week with clean, fresh sand and groomed three times a day. We do not overcrowd dry cows by going over 100 percent stocking density.

**Fischer-Clark:** Cow comfort is monitored to encourage cow cleanliness, such as good airflow (fan ventilation for tunnel barn and curtain sidewalls), temperature regulation, fly control, and cow brushes. Clear polycarbon siding on the barns uses natural light to help dry the barn and helps employees visually monitor the barn better. The deep-bedded sand stalls are groomed three times a day and sand is added weekly. Alley scrapers run 24 hours a day. Cow tails are trimmed properly.

**Maple Ridge:** We use virgin sand, which is added twice a week, and stalls are groomed six times a week. Manure is scraped three times a day during milking.

Our barns are 20 years old. One barn is naturally ventilated and the other is tunnel ventilated. Stall dimensions and alley widths could be larger.

Cows are handled slowly and carefully to minimize adrenaline. Our motto is “Slow is fast!” Dry cows have the same housing and bedding protocols as the lactating animals except manure.

Milk cultures are routine practice at Evergreen Dairy Farm. “At calving, we culture all heifers and also any cow with a previous history of high SCC or Staphylococcus aureus,” said Kris Wardin. “When we detect mastitis during midlactation, we take a milk sample and simultaneously start treatment due to timeliness of getting results back,” he continued. “When lab results come back, we discuss best treatment options with our veterinarian. If a pathogen is identified as non-treatable, we would continue antibiotic treatment and make culling decisions from there.”

The farm team includes (L to R): Marcos Tapia Lorenzo, Francisco Carrillo Lopez, Ryan Warnke, Carla and Kris Wardin, Dave and Mike Warnke, and Fidel Gonzalez Lorenzo. Carla and Kris are the sixth generation to operate the St. Johns, Mich., farm, having taken the dairy over from Carla’s parents, Jack and Cherie Anderson.

Frac sand is the bedding of choice at Fischer-Clark Dairy Farm. The high-quality quartz sand and its round granules provide an excellent cushion for the cows housed in freestalls. “More importantly, it’s a natural cleaner,” said David Fischer, co-owner of the Hatley, Wis., farm when answering the question regarding the extremely clean cows located throughout the barn. “Stalls are groomed three times a day, and new sand is added weekly,” he went on to say, admitting that frac sand is more expensive than other options, but the benefits outweigh the added costs. No longer able to tall dock due to new standards in the FARM (Farmers Assuring Responsible Management) program, David added, “We routinely trim switches ... tails were never a cause for high somatic cell counts for us.” Shown above are (L to R): Jon and Heidi Fischer, and David and Susan Fischer.
The team at Maple Ridge Dairy makes a great effort to incorporate technology and innovative ideas all while handling cows slowly and carefully to minimize adrenaline. “Our motto: ‘Slow is fast!’” said Brian Forrest. “Selective dry cow therapy is one strategy we did during the award year,” he added. “If any cow had a test-day somatic cell score over 200,000, we treated the cow with Dry-Clox intramammary and administered Orbeesal.” The Stratford, Wls., dairy also uses J5 vaccine to build immunity against mastitis pathogens. “We administer J5 three weeks prior to dry-off, three weeks before calving, three weeks after calving, and during mid-lactation,” added Forrest. Shown above are members of the Maple Ridge team (L to R): Juan Ain, Bill Link, Brian Forrest, Mike Martin, and Jami Schultz.

RKB Dairy of Faribault, Minn., is a back-to-back NDQA winner. When visiting the dairy, it’s clear that the farm does all the little things well to maintain an impeccable somatic cell count that averaged 68,000 and peaked at 81,000 on shipped milk. Likewise, the herd had a Standard Plate Count with a 3,000 midpoint and a 3,000 high. Consistency and cleanliness are guiding principles for Glen, Kathy, and Randy Bauer, shown above. “Consistency with regard to following established protocols,” said co-nominator Brandon Balzer with IBA. “Cleanliness of the animals and milking area,” continued Balzer. “Care — enough care to keep pushing forward, doing the right thing despite the numerous challenges facing the modern dairy farm,” he added.

### How do you detect mastitis?

#### Subclinical:

**Evergreen:** We use Dairy Herd Information Association (DHA) tests and a California Mastitis Test (CMT) paddle.

**Fischer-Clark:** We review somatic cell count (SCC) scores.

**Maple Ridge:** We use DHIA and SCC scores.

**RKB:** We closely monitor DHIA SCC reports and run a CMT on suspicious quarters and cows.

**Wilson Centennial:** We use a CMT paddle in the parlor and/or DHIA SCC results.

**Windmill:** We use CMT to identify the quarter after test day results.

#### Clinical:

**Evergreen:** We are following a milking routine with prestripping to help detect clinical mastitis.

**Fischer-Clark:** We inspect the appearance of milk that may be abnormal. We use SCR collars to monitor activity and rumination for cows. We watch for cows that are out of their normal routine. With a list alert system, we visually inspect the udder for redness, swelling, or tenderness.

**Maple Ridge:** We strip each quarter every milking to detect clinical mastitis.

**RKB:** We carefully watch the strip cup and forestripped milk, follow up with the CMT, and watch/feel the udder during milking.

**Wilson Centennial:** We look for chunks, blood, a “hot-to-the-touch” quarter, and watery milk. We also watch to see if the cows are off feed, not chewing their cud, or have high body temperatures.

**Windmill:** We do both prestripping and post-milking evaluation.

#### What steps do you take at dry-off?

**Evergreen:** We use a blanket treatment method on our farm. First, we wipe all the teats with iodine wipes (one wipe per cow). We use Albadry Plus (novobiocin and penicillin) intramammary and work it up into the quarter and then pinch off the top of the teat to give Orbeesal.

For cows that have a somatic cell count higher than 250,000 SCC per mL, we treat four days prior to dry-off with Spectramast LC (ceftiofur hydrochloride) intramammary. We give 2 cc of J-Vac intramammary and 2 cc of Scourguard 4K intramammary at the time of dry-off as well.

Far-off cows are moved to pasture (in-season; barn 30 days before calving and given 2 cc J-Vac intramammary. At dry-off, cows receive 2 cc of J-Vac intramammary, T-Hexx (external sealant), and BoviBlock teat sealant.

**Wilson Centennial:** We use Spectramast LC (ceftiofur hydrochloride) intramammary, for three to five days, intramammary. Milk is withheld for 72 hours.

**Wilson Centennial:** We use Spectramast LC (ceftiofur hydrochloride) intramammary. Tomorrow (cephapirin) tubes are inserted intramammary at dry-off following milking. Lockout tubes are inserted intramammary at dry-off, following Tomorrow, to seal the teat end.

**Maple Ridge:** At dry-off, we use Dry-Clox (cloxacillin benzathine) intramammary and follow that up with Orbeesal.

**RKB:** The teat is wiped with an alcohol pad, intramammary infusion with a Tomorube tube (cephapirin), slowly infuse an Orbeesal teat sealant tube, dip with T-Hexx dry teat sealant, and repeat on the other quarters. The cow is immediately moved to the dry cow pen, the treatment is written down, and the cow’s rear legs are marked with red livestock chalk.

**Wilson Centennial:** Blanket dry treatment is done every Saturday. We use one large alcohol wipe per teat and administer Spectramast DC (ceftiofur hydrochloride) intramammary, then wipe all four teats again. We pinch the top of the teat, administer Orbeesal, and then wipe all four teats again. That is followed up with postdip of Uddergold teat sealant.

Three days later, we give 2 cc Endovac-Dairy intramurally, plus 2 cc Scourguard 4K intramurally. Thirty days prior to calving, cows receive 5 cc Ultrachlor (isoniazide) intramurally. (under the skin), 8 cc Multimicin subcutaneously, and 2 cc Endovac-Dairy intramurally. All needles are single-use to prevent the spread of bovine leukosis.

**Windmill:** Orbenin (cloxacillin benzathine) dry cow therapy intramammary, BoviBlock teat sealant intramammary, T-Hexx (external sealant), and J-Vac intramurally.

### Describe your mastitis treatments.

#### For mild cases:

**Evergreen:** We use Spectramast LC (ceftiofur hydrochloride) once a day for four days, intramammary. Milk is withheld for 72 hours.

**Fischer-Clark:** We use Today (cephapirin) two times a day for one day, and milk is withheld for 96 hours.

**Maple Ridge:** We use Spectramast LC (ceftiofur hydrochloride) once a day for five to eight days, intramammary. Milk is withheld for 72 hours.

**RKB:** We use Spectramast LC (ceftiofur hydrochloride) intramammary, for three to five days, intramammary. Once a day. Milk is withheld for 72 hours. In other cases, we use Pirame (pirlimycin hydrochloride), intramammary, once a day for three to five days. Milk is withheld for 36 hours.

**Wilson Centennial:** We use Spectramast LC (ceftiofur hydrochloride) once a day for five to eight days, intramammary. Milk is withheld for 96 hours.
Continued from previous page

(A cowman to the core, Brent Wilson zigged when everyone else zagged by focusing on milk components instead of pounds of milk decades ago. “We ship over 7 pounds of milkfat and protein from each cow,” said Wilson of his Holstein herd that averages 31,146 M, 4.3%, 1,334 F, 3.4%, and 1,051 P, all while averaging a contest low 67,000 somatic cell count. The Wilson Centennial Farm team of Carson City, Mich., includes (L to R): front row, Kaas Cardinal, Chris Benjamin, Alberto Torres Ramirez, Avmael Morales Jose, Lucerito Alonso Gomez, and Reynel Guzman Ramirez; back row, Charles Blackmer, Billamar Alonso Alonso, Tomas Pacheco Alonso, Ben Wilson, Nancy and Brent Wilson, Tyler Wilson, Guadalupe Ramirez, and Angel Escobar Ortiz. These days the multigenerational farm is owned by Brent and Nancy Wilson and their sons, Tyler and Ben.

For moderate cases:

Evergreen: Same treatment as mild cases, except treatment is done for seven days.

Fischer-Clark: Same treatment as mild cases.

Maple Ridge: Same treatment as mild cases.

Wilson Centennial: For moderate cases, we use either Spectramast LC (ceftiofur hydrochloride), intramammary, once a day for five days with a 72-hour milk withhold or Amoxi-Mast (amoxicillin) three times, 12 hours apart with a 60-hour milk withhold. Milk is withheld for 240 hours. We also use Polyflex (ampicillin) once a day for three days, twice a day.

Windmill: Spectramast LC (ceftiofur hydrochloride), intramammary, once a day for five days. Milk is withheld for 72 hours.

For severe cases:

Evergreen: We use Spectramast LC (ceftiofur hydrochloride), intramammary, once a day for seven days. Milk is withheld for 72 hours. We also use Banamine (flunixin meglumine) through an IV once a day for two days. Milk is withheld for 36 hours.

Wilson Centennial: With severe cases, we will administer one shot of vitamin B. Spectramast LC (ceftiofur hydrochloride), same protocol as mild and moderate cases. We also may use Banamine (flunixin meglumine), IV, once a day for two days. Milk is withheld for 36 hours.

How do you track treated cows?

Evergreen: Treated cows have red velcro bands on both hind legs and are separated from the milking herd. We also have the cow(s) identified on a whiteboard in the parlor and uploaded on PC Dart. With information from past cultures and DHIA records, we have cow history stored on PC Dart. We also document health of that animal from daily observations and treatments.

Fischer-Clark: Treated cows are identified with red leg bands on both legs — they are also noted in Dairy Comp 305. At cowside, we use a clipboard and Excel sheet to track all relative information. That information is then entered into Dairy Comp 305 for a permanent record. We also use Dairy Comp 305 to update individual cow cards. Data is updated daily by the herdperson, and DHIA testing data is uploaded monthly.

Maple Ridge: Leg bands and the hospital sheet are used to identify treated cows, which are kept in a separate pen. We keep track of these cows on paper and with Dairy Comp 305. We maintain these records for three years.

RKB: We use red duct tape on both back legs. The cows are put in the special needs pen and milked last, which is written down in the parlor.

The cow identification (ID), treatment date, what it is being treated for, and drugs administered are written in a notebook that is kept in the barn. The day they tested negative is also recorded. The information is recorded on the cow’s card in a card file that contains herd health information. The milking unit is not used on other cows.

Wilson Centennial: To identify treated cows, we use bright-red bands, two bands per back leg, along with a red band on the tail if the cow has a fever. All treatments are uploaded to PC Dart. Employees use a pad of paper to write down the cow ID, what they treated with, how much medicine was given, and the date. At the end of the day, those are taken to the house to be put into PC Dart. We can access PC Dart from the computer in the office or on tablets by all employees.

All vaccinations, diseases, and surgeries are recorded on PC Dart. The employee will write down the treatment on paper, bring it to the home computer for input to PC Dart, record the specific quarter treated, what drug was used, and route of administration.

Windmill: Treated cows are put into a hospital pen with an orange leg band. Treatment is entered on the hospital clipboard and into our Dairy Comp 305 computer records.