

Waterbed Believers

Installing cow waterbed mattresses has helped solve some problems in this Ontario barn

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THIRTY YEARS AFTER they made waves in swinging bachelor pads across North America, water beds are making a splash again — this time in dairy barns.

The Holsteins of La Ferme Idéale Ltée., southeast of Sudbury, Ont., are one of the few Ontario herds on top of the latest trend in dairy decor. Last fall the farm, which includes partners Valois Seguin and his Sons Marc and Alain, made the transition to Waterbeds for their 95 milking cows. Both humans and bovines have been sleeping better since.

Marc admits the idea of bedding down the entire milking string on H₂O sounded a little off-beat, but with the herd in the throes of a serious mastitis outbreak, he was willing to give it a try.

Now, with just over half a year on the beds, the cows are already showing the benefits. The mastitis rate has plummeted, production has risen, bedding and labour costs are way down, the cows seem cleaner and more comfortable, and even the manure is easier to work with. Although it cost \$25,000 to put the beds in the barn, “it should all pay off in two years, just in reduced bedding and labour,” says Alain.

Developed in Great Britain nearly a decade ago, the trend to bovine waterbeds first spread across Europe and came to North America in 1999. Since then most installations of the Dutch-made beds have been in the dairy heartland of the upper Midwest, New York State, and California. Dean Thronsen, owner of Wisconsin-based distributor Relative Products LLC [*now Advanced Comfort Technology, Inc.*], estimates 300-400 of the rubber-covered beds are now cushioning Ontario stalls. Up to a quarter of those are on the Seguin’s farm.

Each rubber-coated bed contains 13 US gallons of water, and is designed to cushion and absorb the shock of the cow as she rises, settles, or shifts on the bed. The bed’s flotation allows Bossy to shift more easily, rather than rubbing her limbs across the stall floor. As she settles on the bed the weight of her belly forces the water to the pressure points of her knees, hocks, hooves and udder. The cushioning also allows continued blood flow to the udder, which should improve production.

The beds offer a combination of traction, longevity, comfort, and cleanliness that Thronsen argues is tough to match. “They have a 10-year warranty, but we expect them to last 15 or 20 years.”

“If you’re using bedding, sand is number one as far as the cow is concerned, but it’s hard on equipment, and it’s a labour-killer,” he says. The waterbeds allow farmers to do away with most or all of their bedding.

On the other hand, the whole idea of bovine waterbeds is still a little off the beaten track. “It’s nothing that anybody’s ever seen before. When you say ‘My cows rest on waterbeds’, people think you’re crazy.”

At La Ferme Idéale Ltée., the beds have been the antidote to a serious mastitis outbreak — an outbreak, paradoxically, that began after they renovated the barn to increase cow comfort, enlarging stalls in the freestall barn from 42 inches wide to a full four feet wide. Soon the cows were taking advantage of the extra space to lie across the stall, dropping manure and urine on the bedding area rather than the concrete slatted floor behind them. To keep the cows dry, “we’d add more sawdust,” says Marc. “But the more sawdust we added, the dirtier they were.”

“It seemed the more comfort we were giving to the cows, the worst the mastitis got,” Valois adds.

Despite the extra time spent cleaning out and bedding down the stalls, the infection rate climbed, pushing down production and costing the farm some of its best cows. “For two years in a row 15 cows were lost — culled or died — and before that it was five,” says Alain. “Before that we’d have maybe one or two a year.”

Losses headed towards \$100,000 a year as production fell from a pre-outbreak average of 33 kg/day to 24 kilograms. To maintain output, the farm had to keep every half-decent milking udder available, even if it was running on three quarters. “We couldn’t cull voluntarily. We’ve had to keep everything, because we need them to produce milk,” Marc says.

When extra bedding, more extensive cleaning, stripping teats and intensive vaccinations didn’t stem the onslaught, the Seguins suspected the freestall environment was part of the problem. Marc wanted to prevent the cows from lying sideways in the stall by installing plywood on the dividers, but that idea was shot down because it would reduce ventilation. Instead, the Seguins opted for rod screens on the divider, and it took Valois two weeks, 95 pounds of welding rods, and a pile of old steel rod from a torn-down silo to do the job.

At the same time, the family began to see the extensive use of sawdust as part of the problem. Marc reckoned the extra bedding, far from keeping the cows clean, was actually providing a moist, warm, manure- rich environment in which bacteria could thrive, and he began to look for alternatives. “I started looking through dairy magazines, reading the ads for mats,” he says. “I looked at five or six different types of matts, and then I saw this one for cow waterbeds.”

The idea sounded a little strange, but la Ferme Idéale has a track record for adopting new ideas. In the early 1970s the farm switched from dry manure to a liquid system, complete with homemade concrete slatted floors in the freestall barn. In 1994 the Seguins installed a double-six parallel milking parlour. Other ventures include developing a line of Belgian Blue bulls to use as terminal sires (and selected to throw the red- coloured calves that buyers seem to prefer), and experimenting with polled Holsteins to cut down on the time, expense and stress of dehorning.

So after spotting the ad for waterbeds, Marc was intrigued. He called the Thronsen and ordered a video. When the movie arrived, the Seguins knocked off work to watch. “When I first talked to Alain about the waterbeds, he was sceptical,” Marc says. “But after seeing the video, we were sold.” A few weeks later they met Thronsen, looked at some samples, and bought the beds.

Workers at la Ferme Idéale began installing the beds last Nov. 15, in a process that took four people two days. The crew hammer-drilled anchor holes in the concrete floor of the stalls, and then rolled out the mattresses (the beds come rolled up like rubber belting.) Each mattress has an individual, single-cow bladder, so unlike the first generation of human waterbeds, sleeping cows won’t be disturbed by the waves made by their shifting neighbours. The beds are then bolted to the concrete, and filled with water.

Now that the herd’s lounged on the beds for more than six months, the Seguins (and the cows) seem to have no regrets. Since the installation milk production has rebounded from 24 kg/day to 26 kg/day. Somatic cell counts have been cut in half to somewhere between 150,000 and 200,000.

“From January to June this year I saw five cases of mastitis, one of them acute, but all those cows are still in the barn,” Alain says. “During the same time last year I had 28 cases, and seven were culled or died.”

Bedsore, sore knees, swollen hocks and foot problems have also declined, and the cows spend less time on their feet. “Before we were hoof-trimming a lot and we were dealing with abscesses and sore feet,” Alain says. The Seguins trim feet on an as-needed basis, and from January to June this year they saw 57 foot problems, compared to 84 cases last year.

The decline in herd health problems also means less stress for the humans on la Ferme Idéale. Marc says the beds played a key part in the turnaround. “The beds are always dry. That’s the beauty of it. If you have a leaker, she gets wet, she gets up, the bed comes up, and the surplus fluid runs off.”

While the dozen or so beds near the door each had three gallons of windshield washer fluid pumped into them to serve as anti-freeze, none of the other beds froze during the winter. “The warmth of the water transfers through the rubber and it seems to warm up the surface and helps to dry it off,” Marc says.

Despite the steep cost of the beds, the Seguins figure they've more than covered the initial cost in reduced labour, bedding, drug use, and increased productivity. During the first half of this year the farm saved \$5,000 in sawdust alone (the family now uses only a light dusting of hydrated lime in the freestall) and another \$6,700 in labour. There are other spinoff benefits, too. With less sawdust going into the liquid manure system, the manure is easier to pump, handle, and work with. "It has cut our manure pumping and handling time in half," Marc says.

"I think they work great. I don't have any experience with other types of mats, but as far as switching from concrete to the waterbeds, it has worked extremely well. I'd recommend it to anyone who wants to get away from bedding," he says, adding he may hold an open house in the autumn to show the system to other farmers.

But for now, at least, Marc's not ready to order a water bed of his own. "I tried a water bed in a motel once, and I woke up with a sore back," he says. "I think we'll just leave them in the barn."