

Agribusiness Dairyman



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PRAIRIELAND DAIRY

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Cover Feature

Brown Bear Makes Better Bedding By C. Kelley & A. Partida

As all dairymen know (or should know), bedding is essential to optimal cow productivity. Without bedding, production could be hindered by factors such as, leg and hoof sores or slippage from a wet floor that could break bones, causing new problems. New problems mean more money to fix the problems – You cannot milk a cow that cannot stand. Bedding can vary from a simple turned compost to state-of-the-art waterbeds.

Dan Rice is part owner of Prairieland Dairy in Firth, Nebraska. On an average day, the dairy milks about 700 cows 3 times a day. His dairy purchased a Brown Bear machine, and has since been able to reach it's goals, as well as, produce a consistent product.

Dan starts out describing how their bedding is made, "Our process is pretty much a closed system. We recycle our flush water to clean the barns. As the flush water takes the manure down to our separator, the solids and the liquids are separated. The liquids are then taken to our lagoon, and from there we pump it through a pivot

onto our crops. The solids go through the separator, and are then taken and piled outside on a cement pad for approximately two weeks, to let any excess water run off. The solids come off the separator at 85% moisture and off the cement pad at 80% moisture. From here we put the solids into windrows on a clay pad which is turned over three times a week, for about six weeks, until we have the finished compost that we can use as bedding or compost."

Around 75% of their compost is used for bedding; the remaining 25% is sold as is in the compost market to landscapers for starting grass. The overall objective, for Dan Rice and his partners, Cliff Obbink, Dave Obbink, and Steve DeBoer, is to use their compost as bedding. "So, our three goals for making a sanitary product is first, to kill all of the bugs so the bedding will be a sterile product; second, to get the bedding dry so that it will absorb as much of the moisture as it can in the stall beds; and third, to kill all weed seed. This is why aerat-



ing the manure is so important – to get the manure dry and also to get the biological heat as oxygen to bugs so they continue to reproduce. The ideal temperature is 150-170° for three weeks," Dan explained.

The owners of Prairieland Dairy grew concerned as they used the bedding; they could have been putting manure that was infested or contaminated under their 700 cows and that is the one place you would want to have a sanitary environment. "We were concerned when the compost got wet [again] that it might turn back into manure, but we found it didn't. When we first started using compost, we were turning the windrows with a skid loader and a bucket. By doing it this way we could not get a consistent product, and our somatic cell count was running about 400,000 - 500,000 at this time." Dan went on to explain that the turning was taking way too long and just too labor intensive. They stopped using their own compost as bedding and went back to using green sawdust which was more costly, very difficult to get, and was actually more layered with bacteria than the original compost.



Prairieland Dairy LCC is located near Firth, Nebraska.

"When we got the Brown Bear and attached it to a rented New Holland tractor, we began to get a sanitary, uniform product, as opposed to the unsanitary manure, to put under our cows." Dan elaborates, "While using the Brown Bear machine, we were able to keep a high enough heat in the windrows that would kill 95% of all chloroforms – the biggest bug in the bedding."



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Since its purchase, the Brown Bear has been used to aerate and stir the windrows, giving Prairieland a consistent product. Their somatic cell count now runs about 200,000 – half of what it was prior to the Brown Bear's use. Dan goes on, "Our SCC is the lowest it has been in the past three years and we are very pleased about that."

"Since the Brown Bear, our compost has run a 2,1,1 ratio of nitrogen, phosphorus and potassium. And as for being tested for heavy metals, there has not been anything out of the ordinary. As for our moisture content, it is typically about 30% when composting is finished. Before using the Brown Bear, the cost of using the green sawdust was running us about \$2,000/month (dry sawdust \$3,400/month), and including the labor, which we figured was costing us about \$1,000/month, that left us a savings of \$1,000/month. In the first six months we also sold more than 500 yards of finished compost. We figured our cost to produce the compost was about \$10/yard and we sold it wholesale at \$22/yard and retail at \$25/yard – picked up here at the dairy."

"The reason we chose the Brown Bear is the fact that it moves the compost pile from one windrow while caking another windrow every time it's turned." Dan continued, "By moving the windrows, the ground, which is clay, has time to dry up. Also, since our side-shooting bucket is so big and bulky, we don't worry as much about the skid loader getting stuck in the muck, as we did when the ground was wet."



Prairieland's SCC is the lowest it has been in the past three years and we are very pleased about that.

Dan finished by saying, "The simplicity of our Brown Bear gives us more confidence. Since there are very few parts, very few things go wrong with it. The Brown Bear Corporation's customer service has also been very good. We have been able to reach our goals, as well as, produce a consistent product since we purchased our Brown Bear."

