

North's first cow-powered pump debuts on Manitoulin

by Jim Moodie
SNOWVILLE—It's like a water cooler conversation, except that the setting is outdoors and the 'cooler' is meant for cows.

Chatting amiably around this unusual H2O unit, located in a snake-fenced dry lot on Dave Millette's farm property near Snowville, are the farmer himself, Seija Deschenes of Manitoulin Streams, and Ministry of Agriculture, Food and Rural Affairs representatives Barry Potter and Brian Bell.

But they're not the only ones interested in this shiny new gizmo. As the four land-use advocates stand here in their manure-deflecting rubber boots and disposable plastic slippers (kind of like shower caps tugged over shoes), discussing the various merits of the eco-friendly watering device, another presence makes itself felt at the edge of the lot.

We'll call her Bessie. Bessie doesn't have shower caps on her hooves, and doesn't seem to care less what the humans are talking about. She's just parched, and wants to get these two-legged creatures out of the way so she can apply her nose to the pump.

Which, as the people respectfully back off, she proceeds to do: thrusting her powerful snout against the pump lever and lapping up the water that concomitantly pools in the drinking trough, a litre-and-a-half per push. Bessie prods the lever several times with her

big square schnoz, and licks up every drop before ambling back to join the rest of the herd.

This type of self-serve bovine thirst-buster, manufactured in Alberta, is the first of its kind to be tried out in northern Ontario. Other types of remote watering devices—like sling pumps, which utilize the current of a river, or solar pumps—exist in the region, but what makes this pump so unique, notes the farmer, is that it requires zero energy (other than cow power), won't freeze up in the winter, and is virtually maintenance free.

"The only thing I've had to do is replace a nut," says Mr. Millette.

The farmer had the unit installed last fall, with financial help from Manitoulin Streams. The river rehab organization sourced funds from the Community Fisheries and Wildlife Involvement Program, the Canada-Ontario Agreement and Eco Action (plus had a donation from Manitoulin Transport) to underwrite the cost of the pump and its installation, which amounted to about \$15,000 altogether. The farmer chipped in with in-kind contributions such as fencing and labour.

For Manitoulin Streams, the mandate of which is to restore fish habitat in the cold-water rivers that flow into Lake Huron, the great advantage of the nose pump is that it keeps cattle from tromping along the shoreline and sullying the



A cattle beast at Dave Millette's property on Snow Lake (a widening of the Manitou River) slakes its thirst by using a frost-free nose pump, the first of its kind to be tried out in Northern Ontario.

photo by Jim Moodie

water with their manure. "This way, there won't be so much phosphorous or erosion of the banks, which widens the river and makes the water temperature go up," notes Ms. Deschenes. "Being a cold-water stream, maintaining the depth is important, and the more awareness we can get out to landowners about these types of options, the better for us."

But it also benefits the cows themselves, points out livestock specialist Mr. Potter. "They're getting fresh water, which is better for their health and weight

gain, and if they're not going into the mud, they won't get those cracks that allow organisms to get in and cause foot rot."

In the view of Mr. Millette, "it's a win-win situation. It's healthier for the river, and healthier for the cattle." He notes that, in previous winters, the cows would have been right on the ice, drinking through a hole chiselled by the farmer. "And when the ice melts, guess where all that manure goes?" he says.

He admits that it took some tinkering to get the pump up and running properly, as well as some patience as he waited for the herd to come around to the new routine.

A dowser first visited the property to witch for a water source, he says, "then we drilled 64 feet." The well is enclosed in a culvert and backfilled with Bentonite, a type of clay that seals on contact with water and is often used as a casing material.

A 20'-by-20'-cement pad was poured around the top of the culvert to handle the heavy bovine traffic and

limit their impact on the landscape.

Asked how hard it was to train the cattle to use the pump, Mr. Millette quips that he was about to "get out the cow suit" and show them how to do it himself. "There was definitely a learning curve," he says. "It was quite frustrating. I ended up calling Scott Veterinary, and he said, 'when they're thirsty enough, they'll use it.' It took about three weeks to get them onto it."

Mr. Millette attributes the herd's initial reluctance partly to the fact that the pump was installed before freeze-up, so there "was still standing water around" for the cows to access. "But the day the ground froze up, they were onto it—it was pretty nice to seem them come and use it for the first time."

The farmer adds that the pump can be put on a "training setting" at first, which "makes it real easy to push." Later, as the creatures become accustomed to operating the pump, the resistance can be increased, creating more

outflow of water per pump.

He says the animals have little trouble pushing the lever. "It's stiff for us, but they can stand sideways and just use their neck. They give one push, and are rewarded with water, so they get used to it."

With the snow now melting and pools of water abounding on the property, Mr. Millette says he figured the animals would revert to their old habits. "But even with all the standing water now, it's interesting to see that they're still using the pump," he says. Apparently they prefer fresh water, even if it requires a bit of effort to access it.

The unit is designed to handle 50 cow-calf pairs, and Mr. Millette says the members of his herd often approach en masse and agreeably take turns at the well. "They have a pecking order that they've established," he says. His year-old heifers don't have any problem working the pump, and while he hasn't introduced any calves to the mechanism yet, he says it can be adjusted to a setting which requires so little effort that "my five-year-old can do it."

Mr. Potter feels that such units represent "a great opportunity for remote areas with no electricity," while also noting that the existing Nutrient Management Act and evolving Source Water Act could require more farmers to invest in such technology to limit their impact on the environment.

Local ag rep Brian Bell believes that, with initiatives such as this, Manitoulin—and in particular the farming community around the Manitou River and Blue Jay Creek—is on its way to becoming "a kind of centre of excellence or demonstration area" for other communities to look at and, perhaps, emulate.

"This is not unique to Manitoulin," he says. "But there's some great technology being adopted here that doesn't have to alienate farmers."