



Producers say it is easy to train cattle to use nose pumps. | JIM ANDERSON PHOTO

## Nose pumps can help keep the water running

Constantly raising and lowering the system's piston keeps water in the pipe from freezing in cold winter temperatures

BY HEATHER SMITH THOMAS

PHOTO BY JIM ANDERSON

Frozen water and frozen water systems can be a nightmare in cold weather.

Jim Anderson, a rancher near Rimby, Alta., solved his winter water problems 25 years ago by creating an innovative water system in which cattle pump water for themselves via shallow wells, water that never freezes even at -40 C.

Anderson's innovation uses a piston pump, modified so cattle can push a lever with their nose. This raises and lowers the piston in the cylinder, which is inside a large vertical culvert that holds heat from the ground, and keeps water in the pipe from freezing. The water is in a small enclosed basin on top.

Water from any well in which water doesn't have to be raised more than 50 feet can be pumped by cattle. Often the culvert is installed near a pond or dugout fenced off from cattle, water from the pond is piped horizontally underground to the bottom of the culvert, where it rises to the same level as the pond surface—but won't freeze. [See www.equine.com for the basic info on the new drink-a-piston](#)

[back cover.](#) There is nothing left there to freeze up.

Many folks are using these innovative watering systems for cattle, horses and bison.

John Pilon at Ponoka, Alta., raises bison and they water themselves with a nose pump.

"They figured it out quickly. When we installed it, the bison came around while we were there, and my daughter pushed the paddle with her hands but made it look like she was pushing with her head. They stood there watching her, and could smell the water. They figured it out, and once some of them learned, the rest copied them."

Bison are so strong that Pilon worried they might damage the nose pump and basin, but it has withstood their pushing.

"My daughter had to use both arms to push and it's a hard one-arm push for me to work the paddle, but bison make it look easy," he said.

"Last January, we had two weeks of minus 40, and the pump still worked without freezing up. We have another well with a solar pump; we don't have electricity on our land. I've had more problems with the solar than with the nose

pump. The nose pump has been maintenance-free."

The only time it needs attention is during very cold weather, when the paddle may freeze and stick.

"All we have to do is bang the head and knock the ice loose and then the paddle is free again. If we don't get to it, and it's stuck for a day or so I don't panic because bison can eat snow," Pilon said.

Most folks who install the nose pumps use them for cattle.

Don Vies, a rancher about 200 kilometers northeast of Calgary, put in his first nose pumps about a dozen years ago.

"What prompted this decision was when we lost 28 head of cattle that fell through the ice on a dugout. It was an expensive loss, and an emotional tragedy. These cattle were all home-raised and my wife and two daughters had them all named," he said.

"This is why we went to nose pumps, but there are many other benefits besides making winter watering safer for cattle. It keeps the dugout cleaner through the year because cattle aren't wading into them. The cattle also seem to do better on the nose pumps"

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Horse owners also install nose pumps, especially in areas where there's no electricity for tank heaters. | JIM ANDERSON PHOTO

(Incorrect)



**ABOVE:** Bison producers find that nose pumps are able to withstand the strength of their animals. | JOHN PILON PHOTO



**RIGHT:** Some producers use nose pumps so they can fence off their water sources. | ROSEMARY BROWN PHOTO

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because they get fresh, clean water," Viste said.

"We don't have any moving water up here. We're on the hills above the prairie and any standing water can become stagnant on the surface. If you can get water up from the bottom of the dugout, for the nose pump, it's much better," he said.

He was also tired of cutting through several feet of ice on the dugouts.

"I had to use a chainsaw to cut down as far as I could, clean that out, and then cut down again, and then use something else to drill down after that. After losing those cattle, I was so scared it might happen again that I'd go out there first thing in the morning because the cattle would be trying to get water," he said.

His nose pumps have worked well.

"Everybody is afraid that cows won't be able to learn how to use them, but cows are a lot smarter than people think. They also watch the other cows and copy them."

He said training the cows was easy.

"I started like everybody else, putting panels around the nose pumps to keep the cattle right there, and fed them there until they learned to drink. Now I just train new heifers by putting a few older cows with them in a quarter section. Every other water source is fenced off except the nose pump, and they find it and figure it out."

Some ranchers in his area have 700 to 2,500 cows using these pumps.

Kurt Dake, a rancher near Vegreville, Alta., has used nose pumps for five years.

"I was tired of fixing water hydrants every time it got cold. We'd just created a new dugout, and decided to put a nose pump on it."

He has 50 cows on one nose pump and said they take turns.

"When they first were learning to use it, they all crowded around, wanting water, and figured it out by watching others drink," Dake said.

Eventually, cows realize that only one at a time can drink.

"They look toward that nose pump and when no other cow is there, they hurry over and get a drink. All day long there are cattle taking their turn, and they no longer crowd around."

A few people use nose pumps for horses, especially in areas where there's no electricity for tank heaters. Kyla Jansen was one of the first horse owners to install a nose pump in northern Ontario, on

an island.

She faced challenges trying to water her horses during cold weather. For years, she hauled water because she didn't have access to electricity. Then she installed a nose pump.

Once in a while, however, horses don't drink all the water in the bowl after they pump it full. Horses like to play with it, and sometimes pump more than they need. If water is left there it can freeze.

If it freezes, she uses a rubber mallet to tap on the side of the bowl and it cracks all the ice into tiny pieces.

"Two big scoops with my hands, and the pump is ready to go again," Jansen said.

"The first year I put in the nose pump, we installed it right before winter and my horses didn't have a chance to figure out how to use it

before cold weather. But they can smell water, and two horses checked it out. They taught all the rest how to use it. I had a miniature pony, and even he was able to pump the water," she said.

"They have to figure it out themselves, but if I get a new horse I show him the water. I fill the bowl so he can drink, and I stand behind it and pull the lever back, then let it go so it bangs against his nose."

After a few times, they figure it out.

"Some don't use their nose. They grab the lever with their teeth and push with their teeth. My smaller ponies do this a lot because they're not as tall and don't have the strength to get in behind it and push down with their noses. Some of the bigger horses also grab the paddle with their teeth and shove on to get their water."