Livestock

Unit lets cattle pump their own water

By **HEATHER SMITH THOMAS**

ORTHERN Utah rancher Kip Panter knows nose pumps work. "I have a creek running through my place. NRCS has been helping ranchers get cattle away from streams and sent out a letter telling us about a cost-share program. I met with them to see what the possibilities might be on my place," says Panter.

The Natural Resources Conservation Service was "willing to do a 75-25 split, and also had information about nose pumps and asked if I'd be a test case for those. I ordered my pump from Jim Anderson, who invented it. My labor to put it in was my 25%. I had a backhoe come and dig a 20-foot hole [as deep as it would dig] near my creek," Panter says. "I put a perforated culvert down the hole and filled around it with gravel. Groundwater is always there, even when the creek goes nearly dry in summer."

The creek freezes over in winter, but the water in Canter's pump never freezes.

Cattle catch on quickly

"Cattle learn to use it quickly. I just filled the basin a few times, working the lever with my hand, and when I came back, one cow had figured it out and was showing the rest how to do it," Panter says.

"The pumps are very strong. I've had 2,000-pound bulls using mine, and they play and rub on them but never damage them. These pumps are foolproof. I've had mine through two winters and three summers with no problems. I have two pumps in different paddocks. Mine are single basins, but you can put two or three on the same culvert so more cattle can drink at once.

"Some ranchers have 80 or more cattle on one pump, and they do fine. The cattle don't hang around the water source; they just go get a drink when they want and there's no crowding," says Panter.

How it works

Jim Anderson, a rancher near Rimbey, Alberta, solved the problem of stock water for regions with no electricity and temperatures down to 40 below. His innovation is a piston pump, like the old-fashioned well in which a person works the handle up and down.

"We modified this so cattle could use their nose to push a lever, which raises and lowers the piston in the cylinder, the same as a handle used to do," says Anderson.

The 3-inch cylinder goes down inside a larger pipe or vertical culvert. "We capture geothermal heat from the ground and contain it up to the surface to keep the water from freezing.

The typical installation is a road culvert with at least a 24-inch diameter, set in the ground at least 20 feet. The bigger the culvert, the more opportunity for ground heat to rise, to keep the water pipe in the center warm." explains Anderson.

The culvert has 2 feet sticking above the ground. The waterer is a small enclosed basin on top of the vertical culvert. The water source can be a shallow well, nearby pond or lake, or buried collection tank. Many ranchers use a fenced-off pond or dugout to collect runoff from surrounding hills

Key Points

- Some water sources and methods freeze up in cold weather.
- The frost-free nose pump keeps working in subzero weather.
- This system provides a way to keep cattle out of ponds and riparian areas.

"Water from the pond is piped horizontally underground to the bottom of the vertical culvert, where it rises to the same level as the pond surface, but will not freeze," says Anderson.

With the pond, lake or stream fenced off, cattle can't pollute it or fall through ice in winter when trying to drink. Vegetation acts as a filter for runoff water coming into

a pond. "The cattle always have fresh, clean water," says Panter.

He put a 20-by-20-foot concrete pad around his pumps so the cattle are never standing in mud.

"This also insulates the ground around the pump," says Panter.

Smith Thomas writes from Salmon,

