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Forage Fact # 23

Cow Powered Winter Water Systems: Frostfree Nosepump

Nosepump Features:

- * Inexpensive to install
- * 135 head capacity (tried successfully by Andersons)
- * Can be used on dugouts and well systems
- * Allows winter manure to be left in distant pastures
- * Water access in remote pastures
- * Monitoring necessary in cold temperatures
- * All season watering facility
- * Easy to install

Costs of Nosepump:

- * \$975 for pump, cylinder & pullrod
- * \$200 for lid
- * \$150 Insulation
- * Backhoe work
- * \$250 culvert

For more information call:

- * John Kendrew
(250) 786-5256

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BC:**

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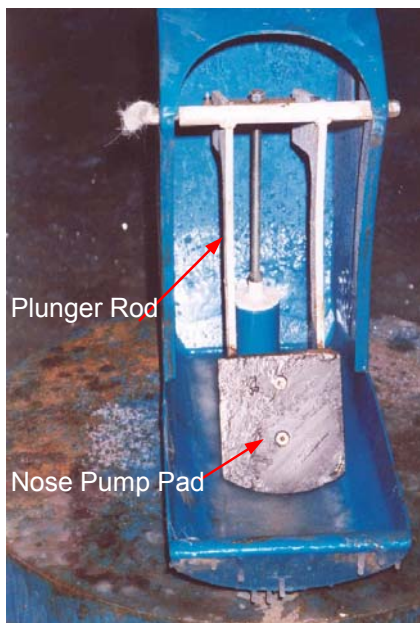
Installing the Frostfree Nosepump

With able minds and an easy to follow along video, the Kendrews had almost no trouble installing the Frostfree Nosepump system. This simple system was easy to install once the parts and people were organized.

This year at the AGM, John Kendrew went through his water system, explaining how the system works and why it is supposed to work in the winter. John described how he planned to utilize this system on his own ranch.



Anderson's cows drinking from frostfree nosepump.



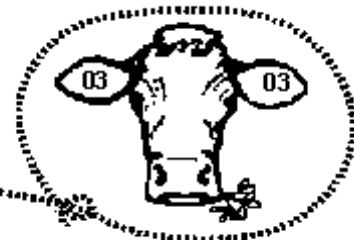
Nosepump, front view. The plunger rod is used to pull the water up into the trough

Economics

The costs of this system includes trenching in a line from your dugout or drilling a well. It also includes the culvert, which is usually a 24" diameter and 16 ft long, this size of culvert will cost approximately \$350.

The pump, cylinder & foot valve, is around \$1000, about \$200 for the lid and the insulation for the culvert lid is another \$150. It also recommended that you create cement platform for cows to stand on while they drink. Total material cost of approximately \$1700, backhoe work and line to dugout are separate.

**Peace River Forage Association
of British Columbia**



Dealers & Suppliers

Frostfree Nosepumps
 Jim & Jackie Anderson
 Rimbey, AB
 (403)843-6740
 1-866-843-6744
 www.frostfreenosepumps.com

Other water system websites:

www.kellnsolar.com
 www.capsolar.com

Inner Workings of the Frostfree Nosepump

The nosepump has a lever apparatus that is pushed by the cow. As she pumps water out of the culvert it is caught in a small trough. The pump is set on top of a 24 inch galvanized steel culvert, which is set vertically into the ground to whatever depth is required.

The nose-powered lever operates a piston pump which is submersed in the water in the culvert - much like the old hand pumps many of us have been familiar with for years.

The height to which the water rises in the culvert does affect the force required by the cow to operate the

pump. The water level in the culvert is the same as the water level in the dugout.

With relatively little provision for frost protection, the pumps seems to work trouble free. The only requirement has been to chip ice off that tends to build up on the sides of the trough from the cows splashing the water. This needs to be done in cold weather or ice will inhibit the operation of the lever.

Summary

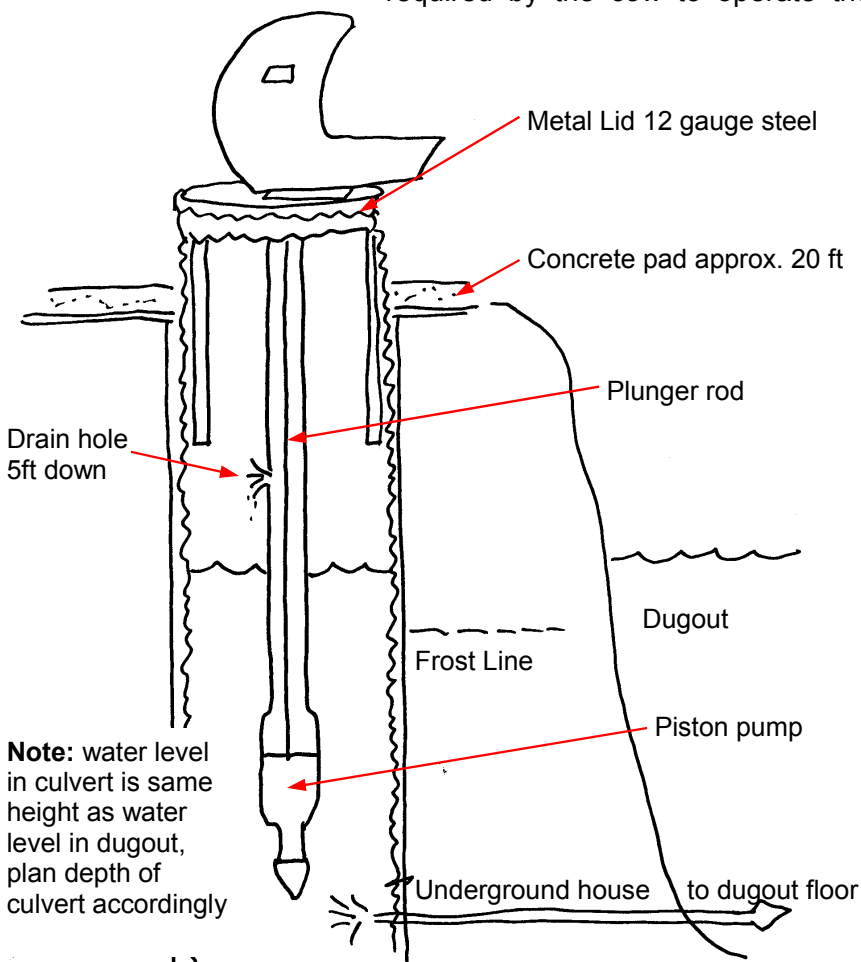
John feels this was a natural next step as they were already using summer nose pumps on the ranch. He is even thinking of installing another culvert elsewhere's on his ranch for more remote water access.

He would like to thank PFRA for coming out and doing the preliminary measurements for the installation of this system. With their help he was bale to determine at what elevation his system needed to be.

This system has potential to be used where riparian area protection is being implemented. This low cost, year round watering facility can improve access to areas that previously were not considered for livestock watering because of the cost or unavailability of an energy source.

This system uses cow energy anywhere and anytime you need it. The cows learn to use the pump easily and the system is low maintenance. What more can we ask for?

One piece of advice is when connecting insulation use construction insulation silicon — trust us!



Compiled by: John Kendrew & Julie Robinson

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