Member's Innovation an Option Under Current OFCAF Funding

Back in 1999, Rimbey farmer, Jim Anderson, with the encouragement of the GWFA, was developing his rotational grazing system. With the use of electric fencing, he was able to keep his cattle out of the Blindman River and improve his pastures. But, as is always the issue, some type of water system needs to be incorporated into the plan. He had a nagging idea about watering cattle with a piston pump for many years, ever since watering his mother's chickens in the winter by pumping the old hand pump and carrying water to the chicken coup. He had successfully used diaphragm nose pumps, developed in Europe, for several years, but their use was limited to summer temperatures.

Dialoging with a friend, and with the assistance of the Alberta Research Council, Jim began the development of his down-hole piston pump Frostfree Nosepump (FFNP) system. He tested numbers of animals, depths of wells, frost-preventing techniques etc. Over the next few years, using this pumping system in his own pastures, with his own herd, he gained enough confidence in the system to market it to other producers across North America. Jim built an electric cow, El-C, that has travelled to many trade shows with Jim and his wife Jackie over the past 20 years. El-C made her debut at Agri-Trade Red Deer in 2002. They attend fewer trade shows these days, but always plan to be at Agri-trade each year.

It hasn't been an easy journey. It takes a while and a lot of demonstration and determination to convince farmers who have always watered their cattle one way, to look at an out-of-the box idea. But, gradually, as more and farmers were willing to try it, thousands of pumps have found their way onto ranches across the continent. Some smaller herds use a single pump on the well. Large herds may put 4 or 5 pumps on one well (whether it be a bored well, a wet-well off a dugout, or a well created with a pressure system). Some ranches are using 24+ FFNPs in their pastures.

The FFNP is a livestock powered pump that works as a system designed to use geo-thermal heat to keep the water from freezing in a large-diameter culvert deep in the ground. Other requirements include insulating the culvert to prevent the loss of heat, and a large, insulated pad to prevent compaction from driving the frost down. It is an energy-free, winter-tolerant system. When ranchers provide all of these parameters and get themselves out of the way to let the livestock learn how to pump their own water, they find they have an easy, economical, sustainable, and reliable way to water livestock.

This system fits the bill for the OFCAF program and other funding programs.

OFCAF (On-Farm Climate Action Fund) currently provides financial support to producers to accelerate their adoption and implementation of on-farm Beneficial Management Practices (BMPs) to lower Greenhouse Gas (GHG) emissions,

support production efficiency, sustainability, and resiliency on their farm operations. One of the 3 activity categories is expanding the adoption of rotational grazing. Rotational grazing is the practice of containing and moving livestock through pastures to allow forage plants to recover, deepen their root systems and improve soil health.

Rotational grazing is nothing new for the GWFA. For many years, the association has promoted and enabled the development of rotational grazing. So, this funding, to develop grazing management plans, install interior cross fencing or water system infrastructure, plant legumes and forages is a welcome addition to the GWFA toolbox.

How does the Frostfree Nosepump meet the OFCAF criteria?

The FFNP:
- Lowers GHG emissions because it uses no power or fuel whatsoever.
- Is efficient in that the animal only uses the water it requires with no water wasted except that which might drip from their wet mouths, or splash when pumped.
- Is sustainable as, once installed, it requires next to no maintenance, and will continue to operate over many years without any inputs.

Will the FFNP work for a large herd?
Multiple units can be put on a single casing. One unit is required per 100 head. This ratio works well.

Will my cattle learn this?
They will. The producer provides the opportunity. The cattle will teach themselves if the producer removes himself from the area so the cattle are not looking to him to provide the water.

Will this work in very cold weather?
It will. Information is provided on the proper and complete installation, and if those instructions are followed, the pump operates even when it is 50° below zero, without heat or power.

What about calves?
If the lift from static water level (water level at rest in the well) is within 20 feet, calves will learn to pump beside the cow. Alternately, during summer months, a creep waterer can be attached to supplement calves. The cows pump the water into the creep waterer for the calves.

What about maintenance?
There is next to no maintenance required. When it is very cold (-25° C or colder), it may be necessary to remove ice built up on the unit from splashing, but there is no need of daily monitoring any other time of the year.

If you are a grazier and need a water system for your livestock that is always clean, and always the correct temperature, works year-round without a power or heat source, one you don't have to check daily, that requires no water hauling or ice chopping - you may want to look seriously at the Frostfree Nosepump. This down-hole piston pump installed in a large diameter culvert, deep in the ground, with insulation inside and around the culvert, may very well fit the bill for you. And with OFCAF funding to support your project, there will never be a better time to get it done.