



Water Conservation on Dairy and Livestock Farms

Water availability and water quality have emerged as two of New Hampshire’s most pressing political and economic issues. Although most farms have their own water supply, it doesn’t mean farmers don’t need to think about water conservation. Growing demand for water from other users within the watershed from which you draw your farm’s water may diminish your own future water supply. Everyone benefits from conserving water.

Farms are large water consumers. A primary need on most farms is the animals’ water supply. The table below lists the daily water needs of some common farm animals.

Drinking Water Needs of Farm Animals

Type of Animal	Gallon Use per Day
Milking cow	35-45 *
Dry cow	20-30
Heifers	10-15
Calves (1-1 ½ gal/100 lb body weight)	6-10
Swine, finishing	3-5
Nursery	1
Sow & litter	8
Gestating sow	6
Beef animal	8-12
Llama	3-5
Sheep	2
Horse	12
100 Broilers	8
100 Chicken layers	9
100 Turkeys	15

Source: mwps # 14 – Private Water Systems Handbook

**For milking cows, this figure will vary depending upon the size of the animal and the daily milk production.*

Water storage is one way to accumulate water slowly in off-peak periods to be ready for high demands. The system itself provides some built-in storage. A 4-inch diameter well casing will hold nearly 2/3 gallon per foot, and a 6-inch casing 1.47 gallons per foot. A water system’s pressure tank will hold 20 percent to 30 percent of the tank size and many of these are 30 to 40 gallons. The large fiberglass tanks used in the maple industry can serve as intermediate storage between the well supply and the service area. You will need a secondary pump to pump water from the storage tank to service areas.

Don't try to save water by limiting the amount of water your animals drink, but do follow these water conservation practices.

- Fix leaks. A leaking pipe joint or dripping faucet contributes to the loss of 10 gallons per unit per day.
- Pay attention when filling tubs or tanks. A water tub that is accidentally left to run over while filling with a hose is responsible for the loss of 5 gallons per minute.
- Capture the pre-cooler water that chills down milk. Allowing it to run down the drain can waste up to 20-30 gallons of water every minute water is running through the cooler. Catch the water in a tank for your animals to drink or install a recirculation system. Check with your sanitarian for regulations concerning pre-water.
- Divert wash water from a clean in place (CIP) system to a storage tank. Then reuse the water through a pump to wash down the parlor.
- Tune up your wash system to assure the air injection system is working properly and check the settings to see that you are only using the amount of water needed for each wash cycle. In cold climates wash-solution volume can often be reduced in the summer. However, remember to increase it next fall to assure enough thermal mass to maintain proper temperatures.
- Cow cooling doesn't need water spraying continuously, cycle the unit off and on in coordination with a fan system.

Following the above suggestions can save dairy farmers between 75 and 125 gallons of water per milking. Here are some other quick ideas to help save water on livestock farms:

- Install floats on water tanks that will shut off supply when tub is full.
- Keep water clean so animals don't waste water.
- Manually clean floors and alleys before washing down, to reduce the amount of water needed.
- Rinse small equipment in a sink or bucket, rather than with running water.

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