STOCK WATER TANKS

My new neighbor just bought 40 acres and a home, and they have one horse and some sheep. The other day they came to me and said, "What can I do about an efficient watering system for my animals?" The property does have a live stream on it, but they want to protect and enhance the stream plus they are also thinking about the whole watershed and what kind of actions on their place might affect their neighbors downstream.

To begin with, my neighbors were on the right track in that one of their concerns was their neighbors downstream. So often we have many new landowners that don't understand exactly what kind of rights they have to that stream and does the acreage come with water rights and what can those water rights be used for. Often many small acreage landowners don't realize it, but they have no right to the water that is conveyed in the stream or ditch and that the water is for the neighbor that may be 5 miles down the road. Times have changed and livestock watering freely in ditches, ponds and streams is not so much the norm as landowners begin to think about animal health, water quality, and wildlife habitat.

Studies have shown that animals prefer trough water over stream water because it is clean. Livestock can gain up to 30 percent more weight on clean water and will graze more efficiently when water systems are distributed throughout the pastures. When trying to plan for a livestock watering system some things to think about are the type of livestock that will be watering, the number of livestock and how close to power, pasture rotation, the equipment that will be used and if it will be used in the winter. On average a horse or a beef cow will drink about 12 gallons of water per day, sheep and goats, for example, need about 4 gallons per day and if it is hot animals may need twice that much.

One of the first things to think about is if the water tank is going to be permanent or portable. Animals tend to drink one at a time if water is provided in pastures of 10 acres or less in size. A flow rate of 2 to 6 gallons per minute will keep a 25 to 35-gallon tank full. If you can change the tank location this will allow sod to recover in former watering areas and spread manure out across the pasture. If water is far away or located outside the pasture, then animals will travel as a herd to water. In the herd situation, livestock will graze unevenly, concentrate in the watering area and "boss" animals may prevent timid animals from drinking. Make sure you have enough space for animals to drink and that at least 10 percent of the herd can water at one time.

There are several low-cost ways to put in a water tank and if it is a tank for year around use, think about going geothermal. There are different ways to do this. One way is using a buried supply line from and existing water system with a tire pit below ground level that allows geothermal heat to rise. Using very thick tire faces such as tractor tires increases the insulating value. Usually the top of these tanks will freeze and must be cleared daily but as livestock drink throughout the day it should stay clear. Another concept is an insulated galvanized tube which contains about 500 gallons of water. A culvert 10-foot-tall with a 4-foot diameter is buried 8 feet below ground level. The water supply pipe enters the bottom of the culvert and comes up the middle of the culvert and is controlled with a float valve under an insulated lid. Once again, the geothermal heat from the ground will keep the tube open.

There are several other concepts out there along with use of solar and wind powered pumps. By installing cost efficient waterers and staying away from tank heaters you will also be ahead on your electric bills. Plus, livestock will enjoy water that is fresh and the right temperature.

For more information contact the MSU Powell County Extension Office at 846-9791