

# Don't Dilute Watering Opportunities

Match your system to your cattle's needs.

by Barb Baylor Anderson

If you haven't re-evaluated your watering system recently, fall may be a good time to consider what worked and what didn't during the summer months. A number of factors influence water intake, and matching your system to your cattle's needs is key.

"Animal size and the feed or forage they eat with regard to moisture content all have an impact. Growing and lactating animals require more water," says Victor Shelton, U.S. Department of Agriculture (USDA) National Resource Conservation Service (NRCS) grazing specialist and agronomist/producer from Washington, Ind. "Cows eating only dry hay consume more than cows eating stockpiled forage with dew or snow. Green, growing forage has more moisture. Temperature and humidity also play roles."

Once you evaluate your animal and feedstuffs scenario, Shelton encourages producers to review the current watering system and determine whether changes should be made.

"One of the primary considerations for a good watering system besides having a dependable water source is to size your pipe correctly," he says. "Too often, a smaller-sized pipe than what is required is utilized to deliver the needed water amount."

Shelton notes the smaller the line, the more friction to slow down flow rate, which lessens the amount of water that is delivered in a certain amount of time. If your line is too small, then you need to make up the difference in storage tank size. A larger watering tank will allow for longer delivery times. But with proper pipe size and shorter walking distances for cows, a smaller tank and fresher water will be available to the animals.

## Tailor your tank needs

"Sizing the line correctly is important in making sure you meet water requirements," he says. "All-weather tanks, such as ball or heated tanks, are great for extending the grazing season out in the field and for winter feeding areas. These tanks work fine when water intake is lower during the winter, but

they are not sized appropriately for open pastures with long walking distances. During warm months, you may want to install a frost-free hydrant close to the tank to supplement the water and use for tank cleaning."

Shelton says animals grazing within approximately 600 feet (ft.) of a watering site can utilize a much smaller tank than those walking from quite a distance, especially more than 1,200 ft. When the walking distance is short, animals tend to come in very small groups or as individuals to get a drink, he explains. But when they walk a long distance or cannot see the tank from their grazing location, watering becomes more of a social event. If the whole herd waters at once, you need more drinking space.

"Grazing distance makes a difference in tank size," he says. "If the tank size is not adequate or you don't get enough water to the site quick enough, then the lead cows get what they want and head back to a grazing spot. Once the lead cows take off, nobody

wants to be left behind, so drink or no drink, usually the whole herd follows."

Tanks should be durable and ultraviolet-light-resistant. And, if possible, they should be easy to empty and move.

"If you use a larger portable tank, then shut off the water early enough to let the cows remove some of the water with less to dump," Shelton says. "Use free-flow valves for ponds and springs to keep sediment and algae from being an issue. Jobe-type valves work great on higher-pressure systems, but need to be used with clean, clear water."

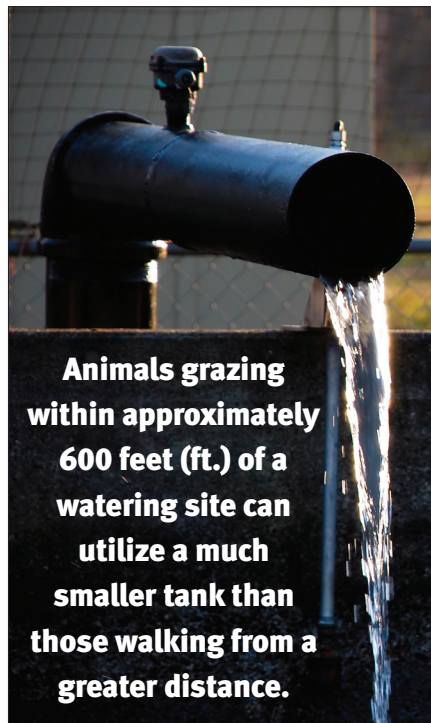
## Choose the best water source

Choosing a water source also plays an important role in maximizing water management. Shelton advises producers to determine what available source will provide the highest-quality water and how best to pipe the water from the source. He recommends spring water first, followed by wells, city water, and finally ponds or streams.

Water can be gravity-flowed or pressurized. Shelton says pressurized systems are the easiest to work with in placing water where you really need it. Gravity-flow systems limit where you can get water, because the tank has to be low enough below the existing water source for the weight of the water to provide enough pressure for it to flow.

"Too much distance or not enough change in elevation and you will have problems," he says. "For every foot of rise above where you want to take the water, you gain 2.33 pounds of pressure initially. You can quickly lose flow because of friction on the line. The smaller the line, the more friction, and you may end up with no water running out."

Shelton knows from personal experience the value in matching your water system to your needs. "If you are getting ready to put in a watering system or add to an existing one, I would recommend getting some help with the design," he notes. "I know now that you need to make sure you pressure-check the lines before you cover them up."



**Animals grazing within approximately 600 feet (ft.) of a watering site can utilize a much smaller tank than those walking from a greater distance.**