

## **THE BEST REASON TO INVEST IN A GOOD WATER SYSTEM**

August 2012 Hay & Forage Grower  
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One of the best questions to ask an experienced grazier is “What was the best investment you have ever made in your grazing system?” There is a good chance that their answer would have something to do with their livestock water system. But, what are their reasons?

Some say the reason is that it improves grazing distribution. Research in Missouri measured how forage utilization in a pasture depended upon the distance from the water source. As one might expect, overgrazing and compaction occurred up close to the water source. However, at about 500 ft from the water source, utilization began to decline substantially. At that distance and beyond, the pasture tended to be overgrown and under-utilized. Their work led to the rule of thumb that water sources should be placed within 400-600 ft of all areas of the pasture. By designing a rotational grazing system using this rule, grazing efficiency can be maximized.

Some say the reason is because it promotes better nutrient distribution in the pasture. This is certainly true and for the same reason that the grazing distribution is improved. If a herd goes off and grazes an area that is more than 400-600 ft of the pasture’s water source, the animals will often go back to water as a herd rather than as individuals. This causes the herd to more frequently camp near the water source, spending more time there. Since manure doesn’t fall too far from the animal, higher nutrient loads quickly begin to show up in those areas closer to the water source.

Some say the reason is that it helps keep the cattle out of the creek and the nutrients in the pasture. Research in Georgia has shown that adding a water trough can reduce the time cattle spend in riparian zones by as much as 60%. A similar study in Virginia observed that cattle would consume water from the trough over 90% of the time if given a choice between a trough and a creek. In fact, a number of studies have indicated that the simple addition of a water trough reduces the total amount of nutrients getting into the stream by about two-thirds.

Some say the reason is because it increases the quality and the quantity of the water that the animals consume. These improvements have been associated with increased feed intake, better body condition score, and as much as a 10% increase in animal performance. Providing fresh, high quality water also greatly reduces the risk of spreading leptospirosis and other diseases, as well as reducing the amount of coliform bacteria the animals may ingest.

Some say the reason is it prevents animal poisonings. This has been an especially prominent point of view of late, given that several recent cases of animal deaths have been linked to toxic algal blooms in stagnant farm ponds. Cyanobacteria, known to most as blue green algae, often flourish in farm ponds or water sources where there are high concentrations of nitrogen and phosphorus. When these ponds become stagnant after weeks of no rainfall to refresh them, these blue green algae can grow rapidly and create an “algal bloom.” This algal bloom can grow so dense and “soupy” that any animals using the pond cannot help but to take in some of the blue

green algae as they drink. These blooms can also cause the pond to “turnover,” where the blue green algae rapidly die out. As they begin to decompose, these organisms release their toxins into the water. The various toxins produced by this organism can irritate skin, damage the liver, or affect the nervous system. Most producers wouldn’t give a second thought to using a pond as the source of drinking. But, perhaps they should.

Still, I would argue that the best reason a good water system is such a wise investment is not for any *ONE* of these advantages but, rather, because of *ALL* of them.



Cattle graze in the back of this 8-acre paddock where shade and water have been separated.



The fertilizer truck has left the nutrients in the pasture, but the cows have moved them to the pond. A small amount of blue green algae has blown to the corner of this pond.