►The Angus cows and calves at Lawler Farms prefer to drink fresh, clean water from a trough rather than drink out of a nearby creek.

Problem Solved

►Bruce Randall turned a muddy, seeping spring into a trough full of fresh, clean water.

Converting a muddy bog into a spring-fed livestock watering system improves water quality for livestock and the environment.

Story & photos by ***Becky Mills***

You've heard the old cliché: There are no problems, just opportunities. Opelika, Ala., farm manager Bruce Randall took the saying to heart.

When Randall came to Lawler Farms eight years ago, there was a seeping spring in a small group of trees. Cows and calves tromped through it and made a muddy bog. A ditch ran beside the spring that went to a small branch, but the ditch soon stopped up, and water trickled across the road next to the ditch.

"We had to drive through it a couple of times a day, and it was making a mess," Randall recalls.

He thought about digging out the spring and creating a watering area, but he knew the cattle would make an even worse mud hole. He also thought about running a pipe from the spring across the pasture to the woods, but he wasn't sure how that would work, either.

Then one day he was at the Natural Resource Conservation Service (NRCS) office where Soil Conservation Technician Rhoda Kerr handed him a brochure about a water tank with a float valve in it. That's when he thought about combining his ideas and adding a water trough.

NRCS technicians came out and ran elevations from the spring to the fenceline next to

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the woods. Randall found he had an 8-foot (ft.) drop. His plan started to look promising.

The process

First, he used a backhoe to move just enough mud at the springhead to bury the pipe. Next, he found clay on the farm that would work for a cutoff wall. He put perforated pipe from the springhead to the cutoff wall and covered it with small rock. The spring water flows into the pipe. He used non-woven filter cloth to cover the rock, then moved soil back over it.

The pipe changes from perforated to solid once it passes through the clay cutoff wall, and gravity carries the water from the springhead down through the pasture to a water trough.

Randall's trough of choice is a skidder tire. "People give 'em away," he says. "They don't rust, and they don't break."

He used a chain saw to enlarge the opening of the tire so the cattle could drink more easily. He built a concrete pad to hold the tire and set the tire on the pad before the concrete was completely dry. He put more concrete up to the bead of the tire and used marine sealant to keep it from leaking.

Before he poured the concrete, he also brought the pipe from the springhead up through the area where he would pour the pad and installed an overflow pipe. It takes the excess water out of the trough, through the pasture and into the woods where the water slowly filters into a creek.

In addition, Randall made a heavy use area extending 10 ft. out from the trough. He used

non-woven geotextile fabric below a layer of crushed rock.

Money, time well-spent

Randall says he spent the equivalent of two days cleaning up the spring, installing the pipe and building the water trough. He estimates it cost around $1,500 for the materials and labor, but the Alabama State Cost Share program and Lee County Soil and Water Conservation provided 60% of the money with cost-share funds.

Kerr says it was money and time well-spent. "By getting cattle out of the spring, Randall is controlling erosion. That improves the water quality not only for his livestock, but also improves the water quality downstream."

Auburn University animal scientist Frank Owsley approves of the project. "When you give cattle a clean place to drink they use it. And anytime you can get animals out of a mud hole you're doing good. In the summer it reduces fly problems, and it reduces the potential for health problems."

Owsley, who is Auburn's director of environmental stewardship in animal agriculture, adds, "It also reduces the potential for environmental damage since silt is the top pollutant of surface water. This is good stewardship of the land and water."

When Randall watches the purebred Angus cows and calves drinking clean, fresh water from the tire trough, he simply states, "It works well. It has really paid off."

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