

# Conservation Feature Story -

**From a Problem to an Asset** by Julie A. Best, Public Aff  
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Lawler Farms in Lee County, Alabama, is a purebred Angus cattle operation. Bruce Randall is the farm manager, and he recently turned a problem into an asset for the cattle operation.

There was a seeping spring among several trees near one of the pastures that created a constant wet spot. The water seepage made the area muddy, unsightly, and a problem area. With the assistance of USDA-Natural Resources Conservation Service (NRCS) and the Lee County Soil and Water Conservation District, the spring was developed as a source of water for the cattle.

To develop the spring, a small clay core wall was constructed below the spring head using clay found from a nearby site on the farm. A perforated collection pipe enclosed within a fabric filter sock was installed into the seep area. Small stone was placed around the pipe and non-woven filter cloth was installed over the rock. This allows the water to collect and drain into the pipe. The water flows by gravity to a watering trough for the cattle. The area over the pipe and core wall was then back filled and vegetated.



*Bruce Randall (L), Farm Manager for Lawler Farms, and Jason Gardner, NRCS District Conservationist in Lee County, look at young heifers among the herd of purebred Angus.*



*The spring area before development.*

After reviewing an NRCS guide, Randall opted to use a large tire as a water trough. The tire serves two purposes—it recycles an old tire and it serves as an excellent watering trough. The tire proved to be a very economical trough. Randall estimates that a trough of comparable size would cost approximately \$150. Once the tire was on the farm, Randall used the front-end loader on the tractor to move the tire around. He used a chain saw to enlarge the tire opening for livestock access. The bottom of the tire trough sits on a concrete slab. Randall seated the tire on the slab before the concrete hardened and applied a marine sealant, and then filled in around the bottom of the tire with more concrete. This made a stable trough that the cattle cannot move. The trough contains a fill pipe and an overflow pipe that is connected to a drainage pipe that carries overflow water away from the trough.

A heavy-use area around the trough, which provides a stable surface around the watering facility, measures a minimum of 10 feet on all sides of the watering trough. The heavy use area consists of a non-woven geotextile fabric beneath a minimum of 6 inches of crushed stone and gravel. “The heavy use area stays very clean,” says Randall. “The manure that does accumulate on the area decomposes very quickly.” Randall says that the developed spring and the tire water trough are helping improve the water quality in the pasture. “The cows still have access to the small stream that flows through the property, but they prefer to drink water from the trough. The tire is doing all that I need it to do. The trough provides a dependable source of clean water. I plan to install more,” says Randall.



*Jason Gardner (L), NRCS District Conservationist in Lee County; Bruce Randall, Farm Manager for Lawler Farms; and Eddie Jolley, Conservation Agronomist with NRCS, discuss the advantages of the tire water trough.*

Eddie Jolley, Conservationist Agronomist with NRCS, says, “It’s not uncommon for livestock to have direct access to springs as their water source, but this results in springs becoming quickly contaminated with livestock manure and turns the spring area into a mud hole. Proper spring development involves protecting both the spring and its water quality from environmental damage and contamination as well as improving livestock access to the water.” Randall says, “The spring development is really paying off during dry weather. The spring-fed trough provides a good source of water during the dry season.”

Before beginning a spring development project, it is important to consider the following:

- What water sources are available?
- How much water will they provide?
- What types of materials and equipment are required and what are the costs?
- What impacts will the development have on wetlands, threatened, or endangered species?

For assistance in answering these questions, contact your local USDA-Natural Resources Conservation Service office.

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