REDUCING BACTERIA WITH BEST MANAGEMENT PRACTICES FOR LIVESTOCK

WATERING FACILITY
NRCS CODE 614

Jennifer L. Peterson, Extension Program Specialist, Texas AgriLife Extension Service
Larry A. Redmon, Professor and State Forage Specialist, Texas AgriLife Extension Service
Mark L. McFarland, Professor and State Soil Fertility Specialist, Texas AgriLife Extension Service

Description:
A permanent or portable off-stream water supply, such as a trough or pond system, that provides an adequate amount and quality of drinking water for livestock and/or wildlife and also helps improve animal distribution.

Benefits to Producer:
- Reduces herd health risks associated with livestock standing in muddy areas, such as foot disease and injuries due to unstable footing.
- Provides clean source of water for livestock.
- Decreases herd injuries associated with cattle climbing steep and unstable stream banks.
- Improves water quality by reducing sediment, nutrient, bacterial, organic, and inorganic loading to the stream.
- Reduces stream bank destabilization and associated erosion due to trampling and overgrazing of banks.
- During drought, when surface water sources are dry, an alternative water source provides the water necessary for beef cattle producers to remain in business.

Bacterial Removal Efficiency:
- An off-stream alternative water supply resulted in the following bacterial reductions based on scientific research:
  - E. coli: 85%
  - Fecal coliform: 51 to 94%
  - Fecal streptococci: 77%

Other Benefits:
- Decreased the amount of direct livestock use of stream for drinking and other activities between 48 and 90%.
- Decreased stream bank erosion by 77%.
- Increased gain in beef cattle of 0.2-0.4 lb/day.
- Improved milk and butterfat production in dairy cattle.
- Increased annual net returns to ranch between $4,500 and $11,000 depending on cattle prices and precipitation levels with use of off-stream salt supplements.
- Increased annual grazing capacity by 85 AUMs.

Estimated Installation Costs:
- Watering troughs: $450 to about $7,600 depending on the size and material (plastic, galvanized metal, fiberglass, or concrete).
- Electric water pumps: $1,900 to $4,000 depending on the size.
- Solar water pumps: $5,700 to $12,000 depending on well depth.
- Windmills: $8,200 to $17,800 depending on fan diameter.
- Pond: $2.08/cubic yard to $10.08/cubic yard depending on size.
- Cost information obtained from the Texas NRCS Electronic Field Office Technical Guide for Zone 4; costs may vary for other zones.
Practice Life Span:
- Trough: 15-20 years
- Electric pump: 15 years
- Solar pump: 15 years
- Windmill: 15 years
- Pond: 20 years

Available Cost-Share Programs:
- EQIP (up to 75% cost-share).

For More Information:
- Contact your local County Extension Agent, Soil and Water Conservation District (http://www.tsswb.state.tx.us/swcds) or the Natural Resources Conservation Service (http://www.usda.nrcs).