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REDUCING BACTERIA WITH BEST MANAGEMENT PRACTICES FOR LIVESTOCK: FENCE

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Description

Fence barrier to distribute grazing and control livestock access to waterways.

Contrast of grazed and ungrazed pasture under an intensive grazing system. The pastures are separated by electric fence and are on a 3-week rotation per cell. *Photo by Jeff Vanuga, NRCS.*

Benefits to Producer

- Reduces herd health risks associated with livestock standing in muddy areas, such as foot disease and injuries due to unstable footing.
- Decreases herd injuries associated with cattle climbing steep and unstable streambanks.
- 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.
- Allows for regeneration of riparian zone vegetation to act as a full or partial buffer.
- Greater distribution of grazing and utilization of forage.

Bacterial Removal Efficiency

Fencing resulted in the following bacterial reductions based on scientific research:

- *E. coli*: 37 to 46%
- Fecal coliform: 30 to 94%
- Fecal *enterococci*: 57%
- Fecal *streptococci*: 30 to 76%
- Total coliform: 81%

Other Benefits

- Increased gain in beef cattle of 0.2 to 0.4 lb/day.
- Prevention of leg injuries that cattle may suffer on muddy banks, and eliminates the possibility that cows will calve by the water, where newborns are more likely to suffer hypothermia and death.
- Reduced sediment and nutrient yields from streams draining pastures.
- Reduced stream turbidity by 49%.
- Increased height and vigor of riparian vegetation.
- Reduced annual sediment concentration by more than 50% and decreased the amount of soil lost by 40%.
- Reduced total phosphorus levels 76% and sediments loads by 82% as a result of stream bank fencing.
- Increased fish production by 184%.

Estimated Installation Costs

- Permanent electric cross fence: $1.80/foot (on normal soils).
- Four-strand barbed-wire cross fence: $2.16/foot (on normal soils).
- Four-strand barbed-wire fence: $3.05/foot (on steep or rocky soils).

A barbed wire fence separates a riparian buffer (right) from a grazed pasture (left) used by cattle. *Photo by Jeff Vanuga, NRCS.*

- Cost information obtained from the Texas NRCS Electronic Field Office Technical Guide for Zone 4; costs may vary for other zones.
- Prices are estimates and can vary depending on location and economic conditions.

For Technical or Possible Financial Assistance

- Contact your local County Extension Agent, Soil and Water Conservation District (*https://www.tsswcb.texas.gov/swcds*) or the Natural Resources Conservation Service (*https://www.nrcs.usda.gov/*).

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