

REDUCING BACTERIA WITH BEST MANAGEMENT PRACTICES FOR LIVESTOCK: LIVESTOCK SHADE STRUCTURE

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Description

A permanent or portable framed structure to provide shade for livestock away from the riparian area and to improve grazing distribution.

Benefits to Producer

- ▶ Improves animal health and well-being.
- ▶ Reduces time cattle spend in or near waterway thereby reducing stream bank erosion and protecting riparian area.
- ▶ Improves water quality by reducing sediment, nutrient, bacterial, organic, and inorganic loading to the stream.

Bacterial Removal Efficiency

- ▶ Shade structures resulted in the following bacterial reductions:
 - *E. coli*: 85% when combined with an off-stream water source.
- ▶ Shade structures can be used in conjunction with other practices such as alternate watering facilities. This practice has been shown to reduce concentrations of bacteria.

Other Benefits

- ▶ Increased weight of 1.25 lbs/day for cows, 0.41 lbs/day for calves, and 0.89 lbs/day for steers when provided shade in the spring and summer.
- ▶ Reduced deep body temperatures of cattle by 0.5 to 1.4° F.
- ▶ Increased summer gain of yearling Hereford steers by 19 lbs/head in a 4-year study.
- ▶ Reduction in cow's radiant heat load by 30%.
- ▶ Reduction in total suspended solids and total phosphorus with availability of non-riparian shade.
- ▶ Improved grazing distribution.



Livestock shade structure constructed of wood and a shade cloth roof.
 Photo by Larry Redmon.

Estimated Installation Costs

- ▶ \$6.50/square foot.
- ▶ Cost information obtained from the South Carolina NRCS Electronic Field Office Technical Guide.
- ▶ 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/swcbs>) or the Natural Resources Conservation Service (<https://www.nrcs.usda.gov/>).

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