

## **REDUCING BACTERIA WITH LIVESTOCK BEST MANAGEMENT PRACTICES**

### **LIVESTOCK SHADE STRUCTURE**

#### **NRCS CODE 717**

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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.



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

#### **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 -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.

#### **Estimated Installation Costs:**

- \$6.50/square foot.
- Cost information obtained from the South Carolina NRCS Electronic Field Office Technical Guide.

#### **Practice Life Span:**

- 15 years

#### **Available Cost-Share Programs:**

- Cost-share is not currently available for this practice in Texas.

#### **For More Information:**

- Contact your local County Extension Agent, Soil and Water Conservation District (<http://www.tsswcb.state.tx.us/swcnds>) or the Natural Resources Conservation Service (<http://www.usda.nrcs>).