

# Environmental Stewardship

## Environmental Stewardship in Beef Cattle Production

As urban sprawl increases, much of rural Alabama has or will come under closer scrutiny from neighbors concerned about the environment. Many aspects of animal agriculture are dealing with stringent environmental regulations due in part to the public's perception of confined animal production. According to some estimates, grazing livestock accounts for about 25 percent of agricultural nonpoint source pollution in the United States, usually in the form of runoff. The potential for pollution from most farms and ranches comes from heavy use areas and poor pasture management practices.

**Heavy use areas.** Heavy use areas include gates, holding pens, trails, and feeding areas. Because of high cattle traffic, there is little or no vegetative cover on these areas. During rainstorms, water will runoff of these areas, carrying silt, manure, and nutrients with it. Reducing or eliminating runoff from heavy use areas will correct

most environmental issues from grazing cattle. Dry lots pose a unique problem. If you keep animals in a dry lot for extended periods (45 days in a 12-month period) your farm is considered an Animal Feeding Operation, and you are responsible for following the Alabama AFO/CAFO regulations.

Another heavy use area is surface water such as creeks, rivers, and streams. Surface water is often the only source of water and shade for cattle. When this is the case, cattle stay in the water much of the time in an effort to remain cool. The effects on water quality from the increased silt alone can be significant. During periods of sustained drought, dependence on surface water as the sole source of water can reduce or eliminate the cattle holding capacity of your farm or ranch. If you provide alternative sources of water and shade, you can help your farm withstand the effects of drought and maintain a quality surface water supply.

### Maintain environmental quality in heavy use areas by:

- Using silt control for heavy use areas such as feed bunks, waterers, gates, and crossings. ("Heavy Use Area Protection," NRCS Alabama Guide Sheet No. AL 561)
- Using vegetative filter strips between heavy use areas and surface water.

- Providing shade and shelter in pastures.
- Using portable or permanent waterers.
- Controlling runoff from dry lots, using vegetative filters or a waste storage pond. (“Waste Storage Pond,” NRCS Alabama Guide Sheet No. AL 313A)

**Grazing management.** Grazing management will also have an impact on the quality of a creek, river, or stream. Poor management results in poor soil and vegetation quality and an increase in the potential for contamination from nutrients, pathogens, and sediment. Managing pastures to minimize environmental impacts will also enhance the forage production from the pasture. A good stand of forage prevents erosion and nutrient or bacterial runoff. Pasture rotation prevents the build-up of manure in one place and reduces damage from heavy use areas. A uniform stand of forage will reduce selective grazing. Applying fertilizer as recommended by a soil-test report will help to maintain a quality pasture and will eliminate over application of fertilizer. In short, good pasture management is good environmental management.

### **A quality pasture will:**

- Reduce or prevent soil erosion.
- Hold nutrients.
- Prevent nutrient runoff.
- Hold moisture.

### **Protect pasture quality by:**

- Matching forage production with grazing needs.
- Using controlled/rotational grazing.
- Using approved weed control methods.
- Using soil testing to monitor soil fertility.
- Fertilizing according to soil test recommendations.

### **Maintain environmental quality by:**

- Using organic fertilizer (poultry litter) wisely.
  - o Cover litter, keeping rain out but allowing moisture to escape.
  - o Store litter on a surface that will prevent leaching of nutrients into ground water. (“Waste Field Storage,” NRCS Alabama Guide Sheet No. AL 749)
  - o Apply litter based on soil test recommendations and litter analysis.
  - o Follow established setbacks for dry litter application: 25 feet from roads, 100 feet from public use areas, 50 to 200 feet from surface water, 100 to 300 feet from wells, and 50 feet from roads.
- Controlling runoff from dry lots, using vegetative filters or a waste storage pond. (“Waste Storage Pond,” NRCS Alabama Guide Sheet No. AL 313A)

For additional information, contact your local Alabama Cooperative Extension System office (<http://www.aces.edu>) or your district Natural Resources Conservation Service (NRCS) office (<http://www.nrcs.usda.gov>). To access the publications listed above, visit <http://efotg.nrcs.usda.gov/toc.aspx?CatID=321>.