

# Beneficial Conservation Practices for Farmers

## Introduction:

As farmers, you work more closely to the land than most people. This guide has been created with you in mind to share information about agricultural practices that help protect your soil and water while saving you money and preventing future problems from occurring. Below are examples of practices that are beneficial to your business as well as the land and wildlife.

## Practical Conservation Practices and the Benefits:

- **Exclusion Fencing:** permanent fencing (board, barbed, high tensile or electric wire) installed to exclude livestock from streams and critical areas not intended for grazing to improve water quality.  
**Benefit:** Keeps livestock out of the stream where they could get injured or even drown in high flows; keeps the cattle from eroding the side banks and will help improve the health and retention of the pasture.
- **Cover Crops:** Crops, such as winter rye or clover, planted between periods of regular crop production to prevent soil erosion and provide humus or nitrogen.  
**Benefit:** Reduction of water runoff and soil erosion into streams, enhance soil structure stability, preserve soil nutrients, and suppress weeds, pests and diseases.
- **Proper Stocking Rates:** The right number of animals on a given amount of land over a certain period of time that the land can support and is sustainable over time per unit of land area.  
**Benefit:** This will allow the farmer to gain as much from his land as possible without exhausting its resources and causing soil to erode away or lose its nutrients.
- **Rotational Grazing:** A process whereby livestock are strategically moved to fresh paddocks, or partitioned pasture areas, to allow vegetation in previously grazed pastures to regenerate.  
**Benefit:** Allows vegetation to grow back and stabilize the soil before it erodes away into the local streams, and has shown to increase livestock health.
- **Stream bank restoration and protection:** Stabilizing the stream bank to prevent soil erosion and protecting water quality.  
**Benefit:** Reduce property loss due to erosion, protect livestock from injury on unstable stream banks, reduces sediment loads in stream and improves overall aquatic life.

- **Crop Rotations:** The practice of growing different crops in succession on the same land chiefly to preserve the productive capacity of the soil  
**Benefit:** Better soil fertility, aids in pest management, and reduces soil erosion and pollutants running into nearby streams.
  
- **Manure Composting:** Controlled aerobic decomposition of animal manures and poultry litter to produce a stable, homogenous, soil-like amendment.  
**Benefit:** Reduces the potential for parasite transmission in pastures, can kill weed seeds, and reduces the potential for manure solids and pathogens going into nearby streams.
  
- **Alternative Livestock Watering Systems:** Different means of supplying clean water to livestock than letting them drink from streams or ponds.  
**Benefit:** Livestock have year-round clean water, reduces potential injury to cattle when drinking, increases water consumption, reduces potential for diseases in cattle from drinking water that has manure in it from infected cattle upstream, and reduces stream bank erosion.
  
- **Tree Plantings in Riparian Zones:** Planting different riparian zone trees along streams where erosion of the stream bank has occurred to help stabilize the soil.  
**Benefit:** Helps stabilize stream banks reducing erosion and making the water cooler and better for cattle to drink. It also helps provide more shade for cattle and helping them keep cool easier.
  
- **Vegetating Bare Soil:** Improving plant growth on exposed soils with vegetation by adding the recommended rates of lime and fertilizer to fields, seeding with the appropriate grasses, and live staking stream banks with certain plant species.  
**Benefit:** Reduces soil erosion and gully formation, increases agricultural production from unproductive areas, and reduces runoff into streams.
  
- **Creation of Safe Stream Crossing Areas:** A safe area to cross a stream constructed of geotextile and gravel, and built to withstand water force and flooding, that improve access for livestock and allow vehicles to cross.  
**Benefit:** Reduces cattle injury by giving them a safe place to cross and drink water and allows farm equipment to be able to easily travel from one side of the stream to the other.

## **Funding and Support Programs:**

USDA/NRCS Conservation Programs:

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/>

Financial Assistance programs:

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/>

Easement Programs:

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/>

Landscape Planning:

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/>

# Resources and Support:

## **Cover Crops:**

Cover Crops and Green Manures:

<https://extension.tennessee.edu/publications/Documents/W235-G.pdf>

Cover Crop (340) Tennessee Fact Sheet:

[http://efotg.sc.egov.usda.gov/references/public/TN/CoverCrop\\_340\\_FactSheet\\_101712.pdf](http://efotg.sc.egov.usda.gov/references/public/TN/CoverCrop_340_FactSheet_101712.pdf)

Conservation Practice Standard – Cover Crop Code 340:

[http://efotg.sc.egov.usda.gov/references/public/TN/CoverCrop\\_340\\_Standard%28FINAL%29\\_010914.pdf](http://efotg.sc.egov.usda.gov/references/public/TN/CoverCrop_340_Standard%28FINAL%29_010914.pdf)

Crop Rotations:

<https://extension.tennessee.edu/publications/Documents/W235-E.pdf>

Row Crop Sustainability:

<https://extension.tennessee.edu/publications/Documents/W311-A.pdf>

## **Alternative Water Sources for Livestock:**

Selection of Alternative Livestock Watering Systems:

<https://extension.tennessee.edu/publications/Documents/PB1641.pdf>

Solar Powered Livestock Watering Systems:

<https://extension.tennessee.edu/publications/Documents/pb1640.pdf>

## **Rotational Grazing:**

Temporary Fencing for Rotational Grazing:

<https://extension.tennessee.edu/publications/Documents/sp399G.pdf>

Benefits of Rotational Grazing:

<http://www.uvm.edu/~grazing/index.php?id=benefits-of-rotational-grazing>

## **Phosphorus in the Environment:**

Best Management Practices for Phosphorus in the Environment:

<https://extension.tennessee.edu/publications/Documents/PB1645.pdf>

## **Tree Plantings and Riparian Zone Restoration:**

Tree Planting Procedure for Small, Bare-Root Seedlings:

<https://extension.tennessee.edu/publications/Documents/SP663.pdf>

Conservation Practice Standard Overview – Riparian Forest Buffer:

[http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb1255022.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1255022.pdf)

NRCS Conservation Practice Effects - Network Diagram Riparian Forest Buffer:

[http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb1253200.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1253200.pdf)

## **Water Quality and its Affects:**

Coliform Bacteria – An Indicator of Water Quality:

<https://extension.tennessee.edu/publications/Documents/SP392-B.pdf>

Improving Stream Water Quality on Beef Cattle Farms:

<https://extension.tennessee.edu/publications/Documents/SP722.pdf>

## **Best Management Practices on Farms for Water Quality:**

Agricultural and Urban Best Management Practices for Water Quality:

<https://extension.tennessee.edu/publications/Documents/SP752.pdf>

