ON-FARM BERM REMOVAL, RIPARIAN BUFFER PLANTING, AND GRAZING SYSTEM

Healthy soils benefit a healthy herd.

PROJECT GOALS

Marvin Moyer, owner of Twin Brook Farm, believes in the importance of good soil health. He continues to implement best management practices that improve the soil on his farm and the health of his streams, resulting in a healthier Chesapeake Bay. Recent efforts include the removal of berms and installation of a riparian forest buffer, exclusion fencing and alternative watering sources.

COMMUNITY AND ECONOMIC BENEFITS

- Planting trees and shrubs along a stream increases soil stabilization, which reduces streambank erosion and the repair costs associated with damage from high-water events.
- Plants along the stream filter out excess nutrients and sediment from water before it enters the stream, reducing the downstream impacts in the watershed.
- Instituting a rotational grazing plan enhances a farm's viability and sustainability by improving herd health, reducing supplemental feeding costs and improving the soil health of a farm.
- Healthy soils provide resiliency during weather extremes such as better infiltration during heavy precipitation and retaining moisture during drought.
- Removing streamside berms allows water to spread out, slow down and infiltrate on the upstream landscape instead of increasing velocity and rushing downstream where it often causes excessive erosion and flooding.

ENVIRONMENTAL BENEFITS

- Trees and shrubs reduce the amount of nutrients and sediment leaving the landscape by providing natural water filtration, reducing soil erosion and helping soils to absorb and retain nutrients.
- Riparian forests are important wildlife habitats.
- Tree canopy over streams cools the water temperature and provides a food source (leaf litter) for aquatic life.

Photos by Will Parson/Chesapeake Bay Program

"This was a more proactive approach to allow the farmer to extend his good stewardship onto more ground while still addressing a stream corridor with best management practices that has been bermed for a long time. The USC Water Quality Funding Program filled a gap and allowed this great project to be implemented that could otherwise be difficult for us to find the funds for. We saw the huge conservation value in this project and were excited to be able to partner with the USC on it."

- Danielle Singer
Tioga County Soil and Water Conservation District, Tioga County, NY

CONTINUED ON REVERSE SIDE

ENVIRONMENTAL BENEFITS (CONTINUED)

- Rotational grazing techniques improve soil health in pastures, which allows for better water infiltration, more water retention during drought, increased carbon sequestration and enhanced uptake of nutrients by pasture grasses.
- Healthy stable streams are able to access their floodplain where high flow events can spread out, slow down and infiltrate the ground causing little erosion and depositing sediment in the floodplain instead of carrying it downstream.

CONSERVATION PROJECTS INSTALLED

- Obstruction Removal - Streamside Berms
- Riparian forest buffer
- Grassed waterway
- Rotational grazing plan
- Exclusion fencing
- Alternative watering sources

PROJECT SUMMARY

Marvin Moyer is the owner and operator of Twin Brook Farm who preaches the importance of soil health to all those around, and his farm echoes this message. He has implemented several management practices to reduce runoff of nutrients and sediment into Little Nanticoke Creek and its tributaries (which run through his farm), creating a healthier ecosystem in the stream, as well as in the Chesapeake Bay. Recently Marvin purchased an adjacent 90-acre property to expand his rotational grazing system and eliminate the need to rent land to graze part of his herd. He raises 100% grass-fed beef so this was a limiting factor for his farm. To expand the functionality and create an environmentally-sound system, he removed a berm that flanked the stream on his new property, before installing a five acre riparian forest buffer with cattle exclusion fencing on both sides of the 1,400 feet stream reach. He installed 11,000 feet of fencing and 4,800 feet of waterline for two watering systems in the new pastures. His grazing system is now 160+ acres for his 60 cow herd.

Trees planted on farms helps to keep excess nutriens from entering location waterways.

Rotational grazing for cattle improves soil health and allows more cover crops to be planted.

THINGS TO CONSIDER

- Maintenance is needed in the buffer for three-four years while the plants become established.
- Planting riparian forest buffers sometimes removes land from production, but this loss is often outweighed by the added resilience to extreme weather and the reduction in flooding impacts.

THE PARTNERS AND FUNDING SOURCES

- Upper Susquehanna Coalition
- Tioga County Soil and Water Conservation District
- National Fish and Wildlife Foundation
- NYS Department of Environmental Conservation

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