



Shore Conserver

Eastern Shore Soil and Water Conservation District

promoting locally led conservation

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NMSU study finds cover crops improve soil health

A five -year study by a New Mexico State University researcher found that integrating cover crops, such as legumes and grasses, into existing cropping systems can increase the biological health of soils.

Led by NMSU cropping systems agronomist Rajan Ghimire, the study is part of efforts by the NMSU College of Agricultural, Consumer, and Environmental Sciences to improve soil health in New Mexico.

Ghimire, an assistant professor with research interests in soil health, soil fertility and conservation systems, started the study as a cropping systems project with eight different cover crop treatments in three-year crop rotation. "The purpose of this study is to integrate diverse cover crops and mixtures in existing cropping systems and improve soil health and environmental quality while sustaining production in dryland and limited-irrigation cropping systems," he said.

Today, the study covers a four-acre area and the NMSU Agricultural Science Center at Clovis. He has evaluated cover crop treatments that include different combinations of grasses, legumes, and brassica. In the third and fourth years of the study, he said, results showed cover crops increased the biological health of the soil.

"We evaluated soil health, carbon sequestration, greenhouse gas emissions, soil water dynamics, weed suppression, and yield of subsequent wheat and sorghum crops - with and without cover crops," he said. the response of soil organic matter and biological components varied with cover crops. Legumes and their mixture with other cover crops were the most effective in improving soil biology but oats and their mixtures were most effective in increasing organic matter. Other benefits included better weed suppression and greater ground cover.

Cover crop treatments require careful planning. Cover crops need moisture and careful selection of species, planting and termination timing, and residue management after cover crop termination determine the yield of the subsequent crop, especially in drylands. If cover crops are integrated with irrigated cropping systems, the benefits could outweigh any risk.

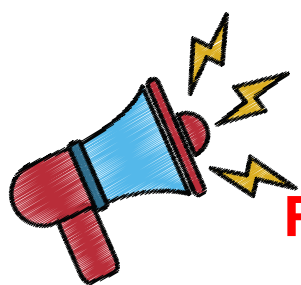
Good soil structure and high organic matter are two major indicators of soil health. Cover crops can increase biomass input and support soil organic matter accumulation. At the same time, they improve soil structure and conserve soil from both wind and water erosion. Cover crops also increase carbon input to soils through their roots and above ground biomass and root exudates, which provide food for microbes, such as bacteria and fungi and support the activities of those organisms in the soil.

This article was written by Carlos Andres López of New Mexico State University Communications and Media Relations. For more articles on agricultural research at NMSU, visit <https://newscenter.nmsu.edu>.



www.facebook.com/ESSWCD

Cost - Share Programs



Eastern Shore SWCD Cost- Share Program

Fiscal Year 2021 Sign Up Period*

STARTS: July 15, 2020

Ends: August 17, 2020



*a 2nd sign-up period will be announced if additional cost share funds are available

Nutrient Management Plans: A nutrient management plan details the most efficient use of fertilizer and manure on your farm. Plans are customized to fit your operation. They consider the potential productivity of each field along with an inventory of available nutrients from the soil, crop residues, manures, and commercial fertilizers. This is a flexible plan that is based on crop response and it focuses on efficiently using crop nutrients. These plans must be written by a VA certified planner and are required to participate in all cost share programs.

Popular Cost Share Programs on the Eastern Shore

Small Grain Cover for Nutrient and Residue Management (SL-8B): A good stand and good growth of winter cover must be obtained in time to protect the area in fall and winter. No nutrients may be applied between harvesting of the previous crop and March 1 of the next calendar year. No nutrients are allowed at planting. Harvesting for hay, haylage, silage, grain, straw, or seed is not permitted.

Harvestable Cover Crop (SL-8H): A good stand and good growth of winter cover must be obtained in time to protect the area in fall and winter. Harvesting for hay, haylage, silage, grain, or seed is permitted after a specified date. With few exceptions, nutrients from any sources are not allowed between harvesting of the previous crop and March 1 of the next calendar year.

Protective Cover for Specialty Cropland (SL-8): This practice keeps a cover on cropland when it is not being used after harvest of vegetables or specialty crops. Growth must be maintained for at least 90 days after seeding. Growth may not be harvested for hay or seed.

Legume Cover Crop (WQ-4): This practice is for use only on land being planted to a grain crop. No-till planting must be established into an existing legume stand or newly established legume stand. Grazing is not allowed. Removal of legume residue by baling or any other means is not allowed.

Cost share and/or tax credits are available for other best management practices not listed.

For more information on these practices or others, contact:

Bill Savage, Conservation Specialist, at 757-302-4437 or bill.savage@esswcd.org.

Carmie Savage, District Manager at 757-302-4431 or carmie.savage@esswcd.org

Virginia Conservation Assistance Program

Land Development and Storm Water Runoff Assistance For Property Owners

Roads, parking lots, sidewalks, homes, and offices replace natural landscapes. Rainfall that once soaked into vegetated ground now becomes storm water runoff carrying pollution such as sediment and nutrients. This runoff flows into the Chesapeake Bay and has a detrimental effect on water quality.

The Virginia Conservation Assistance Program (VCAP) is a cost-share program for homeowners and landowners that provides financial reimbursement to property owners installing eligible Best Management Practices (BMP's) in Virginia's Chesapeake Bay Watershed. These practices can be installed in areas of your yard where problems like erosion, poor drainage, or poor vegetation occur.

Through VCAP, you can:

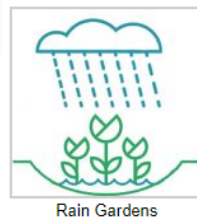
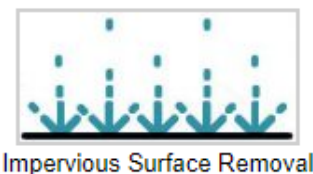
- maintain or improve property values
- receive technical assistance
- receive cost-share assistance
- help protect our natural resources



VCAP can help:

- restore problem areas
- control and minimize erosion
- conserve water within the landscape
- restore riparian buffer areas
- promote wildlife habitat
- re-vegetate bare slopes
- stabilize draining ways
- treat storm water runoff

For more information or questions, call Bill Savage, Conservation Specialist, at 757-302-4437 or bill.savage@esswcd.org



These two photos are of a current VCAP shoreline erosion remediation project being done here on the Eastern Shore. When complete it will help water quality in the Chesapeake Bay and protect about 500 feet of the bay with a living shoreline. Photos by Ellen Grimes.



2020 Eastern Shore Envirothon

The Eastern Shore SWCD's local Dominion Energy Envirothon competition was held on March 12, 2020, at the Barrier Islands Center in Machipongo. A total of six teams competed, representing Northampton High School, Chincoteague High School, and Broadwater Academy. Held annually, the Envirothon tests students on their knowledge of wildlife, forestry, aquatics, soil science, a special topic. This year's special topic was "Water Resources: Local Control and Local Solutions."

In addition to being tested on natural resource topics, students also must study a given problem and make recommendations on how to fix that problem using best management practices. This year's special problem required the teams to give a 20 minute oral presentation on ways to protect surface and ground water from pollution in Rockingham County.

We are fortunate on the shore to have coaches who have coached Envirothon teams for a number of years. Thank you to Fred Gers, CHS, Kelsey Gaskins, NHS, and Sandra Thornton, BA, for their dedication to exposing students to the natural resources and Envirothon.

The top three teams were Broadwater Gold, Northampton 1, and Chincoteague. Normally the top two teams would go on to the area competition. However, due to COVID-19, the area, state, and national competitions were cancelled for 2020.



1st Place Team - Broadwater Gold



2nd Place Team - Northampton 1



Students identifying skull features during the wildlife portion of the competition.



Students working on the soil science portion of the competition.

Contests & Updates

2020 VASWCD Photo Contest

The VASWCD is committed to conservation of natural resources through stewardship and education programs and we want to see it through your eyes. In celebration of Earth's Day 50th Anniversary, our 2020 Photo Contest theme is "Earth Day Everyday." Capture those vibrant moments and express what earth day everyday looks like to you! The contest is open from March 1 – July 31, 2020. To learn more about the contest please visit <https://vaswcd.org/photocontest>. Up to 10 photos may be submitted by each participant.

Last years overall winner was Brad Carter, NRCS Soil Conservationist, at the Accomack Service Center in Accomack, VA.



District Hires New Conservation Technician

Norman Pltt has been hired as a part-time Conservation District for the district. He is a certified Engineer's Aid and CAD designer. For the last 31 years he has worked in engineering disciplines ranging from NASA Wallops Island Engineering Support staff to serving as the program manager for the environmental program in Accomack County.

Norman brings specialized expertise in project management, environmental site design, and environmental compliance. He is certified in Erosion and Sediment Control and in Storm Water Management by the Virginia Department of Environmental Quality. He is also certified as a wetland delineator.



In 2017, Norman decided to apply his expertise to the private sector and began his own business. He and his wife, Karen, live in Wachapreague, VA. Norman serves as the Pastor for Grace Independent Methodist Church in Wachapreague.

Norman is enjoying working for the ESSWCD. He enjoys serving the people and the place he calls home and loves. Welcome aboard Norman!

The Commonwealth of VA supports the Eastern Shore SWCD through financial and administrative assistance provided by the VA Soil and Water Conservation Board and the Department of Conservation and Recreation.

Eastern Shore SWCD programs, activities and employment opportunities are available to all people regardless of disability, race, national origin, sex, sexual orientation, color, age, religion/ religious creed, veteran status, or genetics. An equal opportunity/ affirmative action employer.