Agricultural Soil and Water Conservation Stewardship

(2017 Current Topic)

Over the past 25 years, the Maryland Farmer has played an important role in the efforts to clean up the Chesapeake Bay and its tributaries. Maryland has been a leader in the implementation of soil and water conservation best management practices to control sediment and improve water quality. The Current Environmental Issue, Agricultural Soil and Water Conservation Stewardship, easily translates across all provinces and states.

NCF-Envirothon participants will learn about the Maryland's natural resources and engage in hands-on training and testing. Students will learn the basic concepts of how agricultural Best Management Practices and all natural resource areas are interrelated by closely interacting with natural resource professionals. By providing a lifelong learning experience for these students, they will learn the importance of maintaining a balance of the quality of life versus the quality of the environment as an agriculturist. As part of the overall NCF-Envirothon program, students will gain an understanding of the importance of promoting soil and water conservation stewardship.

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Current Issue Learning Objectives

Key Topics

1. Soil and Water Conservation best management practices; their purpose and implementation.

2. How are soil and water conservation best management practices interrelated to the management of wildlife, forestry and aquatic systems?

3. How do agriculturists maintain a balance between their quality of life versus the quality of the environment?

Learning Objectives

Upon completion of the training, the student will be able to:

1, Identify and recommend soil and water conservation best management practices in agriculture.

2. Describe the role of the federal government in conservation programs that benefit both agricultural producers and the environment.

3. Identify the concept of soil quality/health to provide the needed functions for the conservation planning process.

4. Identify various types of soil erosion and utilize different methods to estimate and predict soil erosion to assess land use impacts.

a. RUSLE 2 Equation
b. Aerial Photographs
c. Topographic Maps
d. Soil Maps
e. USDA Classification System
f. Soil Surveys

5. Explain why land-use planning is important to our ecosystems and to our economy to achieve sustainable agriculture.

Resources

Online Resources:

The Farm Bill 2014 Programs- Fact sheet describing the conservation programs

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

RCPP Projects by State-Link to Maryland projects (pdf)

www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/csp

Farmers Guide to Conservation Stewardship Programs

http://sustainableagriculture.net/wp-content/uploads/2015/02/CSP-Farmers-Guide-2015-final.pdf

Conservation Choices for Maryland Farmers

http://mda.maryland.gov/resource_conservation/counties/ConservationChoices_2012_FINAL%20(1).pdf

Guidelines for Soil Quality Assessment in Conservation Planning

http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051259.pdf

USDA Guidelines for Soil Health Assessment

http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/assessment/

Soil Quality Indicator Facts Sheets

http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/health/assessment/?cid=stelprdb1237387

USDA official site for RUSLE

http://www.ars.usda.gov/Research/docs.htm?docid=18095

Understanding Erosion with the Revised Universal Soil Loss Equation

http://www.5counties.org/docs/roadedu/2012_5c_roads/rusle.pdf

Expanded Resources

Textbook:

Soil Science Management 6th Edition, Edward J. Plaster (Contact: Delmar Cengage Learning)

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