

Soil Health Workshop

Covering methods that improve soil resiliency including nutrient cycling, organic matter accumulation, water holding capacity, plant yields and profits

USDA-NRCS Appalachian Plant Materials Center, Alderson, West Virginia

Tuesday, October 22, 2013

9:30 A.M. – 3:30 P.M.

Registration: 9:30 – 10:00

10:00 – *Welcome and description of the Plant Materials Center* – John Vandevender, Manager, USDA-NRCS Appalachian Plant Materials Center

10:10 – *Rainfall simulator demonstration* – Steve Woodruff, Agronomist, USDA NRCS East National Technology Support Center, Greensboro, NC

10:30 – *Soil Health Demonstration and review* – Ray Archuleta, Conservation Agronomist, USDA NRCS East National Technology Support Center, Greensboro, NC

12:00 – 12:45 lunch (available at \$10 per person paid at the workshop)

12:45 – *Cover Crop trials and field review of soil health processes* - John Vandevender, Tom Basden, WVU Extension and Ray Archuleta

1:15 – *Grazing Management related to Soil Health* – Kevin Ogles, Grazing Lands Specialist, USDA NRCS East National Technology Support Center, Greensboro, NC

2:30 – *Cover Crop Mixtures* - Ray Archuleta

3:00 – *Solivita Soil Sampling and wrap-up* – Steve Woodruff and Ray Archuleta

3:30 – Adjourn

To register for this training please contact: Heather Grimes, hlgrimes@mail.wvu.edu
(specify the workshop location you wish to attend and if you require a lunch)

Please provide Heather with your registration by October 15, 2013.

The Appalachian Plant Materials Center, 385 Old Prison Road, Alderson, WV 24910, is located about 3 miles south of Alderson, WV off of County Route 3-29. Information about the Appalachian Plant Materials Center can be found here: <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/plantsanimals/plants/centers/?cid=stelprdb1086125>

Continuing Education Credits for Certified Conservation Planner, Nutrient Management Planner, and Certified Crop Advisor will be offered.

The USDA is an equal opportunity provider and employer.

Soil Health Workshop and Nutrient Management Training

TWO LOCATIONS TO SELECT FROM

USDA NRCS Appalachian Plant Materials Center (PMC), Alderson, West Virginia, October 22, 2013
West Virginia University Organic Research Farm, Morgantown, West Virginia, October 24, 2013

Rainfall Simulator Demonstration – Steve Woodruff, Agronomist, USDA NRCS, East National Technology Support Center, Greensboro, NC

Steve will demonstrate soil erosion protection, water infiltration, and water runoff from a variety of soils and vegetative covers by using the rainfall simulator. Nutrient loss through soil erosion and leaching will be discussed while demonstrating and measuring water infiltration rates. Soil particle detachment and transport and the impact on water quality will be demonstrated and discussed throughout this demonstration.

Soil Health Demonstration – Ray Archuleta, Conservation Agronomist, USDA NRCS East National Technology Support Center, Greensboro, NC

Ray will demonstrate differences in soil structure and water infiltration through the use of the Slate Test on soil particles. He will discuss the importance to soil health of increasing the biological activity in the soil as well as the transfer of soil nutrients to plants for growth. He will relate the results of a variety of soil management methods on crops and forage yields. The importance of biological processes to soil structure through the growth of soil fungi will be discussed in this presentation.

Cover Crop trials and soils evaluation – Tom Basden, Extension Specialist WVU with Ray Archuleta

Tom will discuss the conclusions from different demonstration plantings of cover crops and the benefits to soil quality in vegetable crops. Cover crop planting dates, cover crop mixtures and rates as well roller/crimper technology will be discussed. Pumpkin yield benefits from cover crop management treatments will be discussed. Also covered will be the impacts of fall planting dates on legume establishments, biomass accumulation, winter growth and soil erosion control. Ray Archuleta will continue with his explanations of soil biological activity and structure in these field plots.

Grazing Management related to Soil Health – Kevin Ogles, Grazing Lands Specialist, East National Technology Support Center, Greensboro, NC

Kevin will explain different grazing management practices and their effects on soil health in this presentation. Soil structure due to forage root growth and reproduction will be covered as well as nutrient cycling and transfer to growing plants. Techniques such as continuous grazing, mob grazing, rotational grazing and management intensive grazing will be compared.

Cover Crop Mixtures – Ray Archuleta

A variety of cover crop mixtures, their application in specific climates and soils, planting dates, mixture rates and species, and termination techniques will be covered in this presentation. Legume varieties and their potential nitrogen contributions will be considered. Also presented will be a discussion of the abilities of small grain species to scavenge unused nutrients in the soil system.

Solivita Soil Sampling – Steve Woodruff, Ray Archuleta

These presenters will discuss soil biology testing and CO₂ respiration; new techniques of measuring soil health and the results of different soil management and soil restorative techniques. Soil microbial life is a good indicator of a soils ability to cycle nutrients from insoluble forms. This microbial portion of the soil provides plant available nitrogen into the soil solution.