

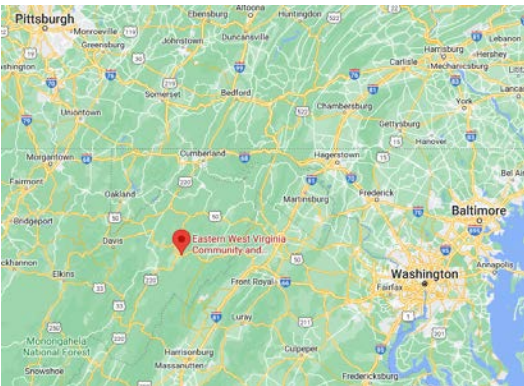


GREEN STREETS | GREEN JOBS | GREEN TOWNS INITIATIVE

The Green Streets, Green Jobs, Green Towns Partnership (G3) aims to stimulate the green jobs market and enable families to work where they live and play. Small to mid-sized communities can boost their local economies and protect water resources through the use of watershed planning, design and construction of stormwater best management practices.

THE EASTERN WEST VIRGINIA COMMUNITY AND TECHNICAL COLLEGE (EASTERN) WORKFORCE OPPORTUNITY REGIONAL CENTER AND SERVICES, INC

Mid-Atlantic Biochar Initiative



The Eastern West Virginia Community and Technical College (Eastern) Workforce Opportunity Regional Center and Services, Inc. partnered with the Regional Planning and Development Council to coordinate with existing partners to further develop and promote the use of biochar for environmental improvement purposes. Three unique projects were undertaken in this Green Streets, Green Jobs, Green Towns project:

biochar on post-mine lands, which can increase vegetative growth and restore the land to a condition capable of supporting land use activities prior to mining. Additional studies indicated that poultry litter applied on apple orchards can have positive impacts on tree health and crop yield.

The second aspect of the project involved a demonstration of protocols to reduce runoff volumes and maximize impervious disconnection practices by integrating biochar into existing soils. Studies have shown that open space and turf grass lawns within development projects are underutilized areas and can reduce the amount of water that has to be managed or treated. However, much of this open space becomes compacted during the development process, thus reducing infiltration after construction is complete. Existing research and studies have successfully proven that various forms of biochar increase water retention when integrated into soils.

- 1) Provided gap funding for the West Virginia Army National Guard's (WVANG) "Patriot Gardens",
- 2) Conducted research and analysis on the hydrological soil classification of urban soils integrated with various biochar feedstocks, and
- 3) Conducted education and raised awareness of the benefits of biochar in the mid-Atlantic region.

For the first project, the organization developed apple orchards on post-mine land sites. The lack of fertile topsoil posed an obstacle to maximizing apple production yield. Based on previous studies, they used poultry manure based soil amendments and poultry litter based



46 workshops with 600 attendees



1,000 sq. ft. invasive species removed



3 trees planted



6 native plants installed



PROJECT DESCRIPTION CONTINUED

The third component of the project tackled a variety of goals, including:

- The development of a Mid-Atlantic Biochar Strategy to form a cohesive manageable model for the development of an entrepreneurial biochar ecosystem.
- Development of a focused “Steering Group” in the Mid-Atlantic of interested organizations to connect the governmental agencies (EPA, Dept. of Agriculture, etc.), researchers, businesses, etc.
- Brought together resources, funders, researchers and entrepreneurs to identify meaningful opportunities for commercialization.
- Collaborated with the EPA and others to explore the possibility of a regional production plant for wood and manures.
- Explored the proof of concept by demonstrating the profitability of the sale of biochar.
- Explored the creation of a public-private partnership with several different companies that were interested in this research project.

Year Awarded: 2018

Award Amount: \$77,000



Tilled plots before adding amendments.



Tilling in amendments using a rototiller.

Biochar Formulation as a Soil Amendment in the Agricultural, Forestry, and Environmental Sectors



Biochar as carbon emissions negative technology and climate change

This webinar is scheduled for Nov 12, 2020 11:00 am US/Eastern.

The Speaker is Carlos Rodriguez Franco from the USDA Forest Service Research and Development. Carlos is a Senior Forester; He earned a doctorate degree in Forest Sciences from Yale University, a master's degree in Silviculture from Colegio de Postgraduados and a bachelor's degree in Forest Engineering from Chapingo Autonomous University both in Mexico. He has written more than 90 scientific articles on subjects related to forest inventories, silviculture, forest management, plant production techniques, forest plantations, and agroforestry systems published in Mexico, the USA. Some of his contributions were his participation in the "Forestry Compendium" published by CAB International in the United Kingdom, and the book "Pines of silvicultural importance" that was published by CAB International.

BioChar THE ECONOMIC BENEFITS



Project Partners: Chesapeake Bay Trust, Eastern WV Community and Technical College, National Center for Resource Development, United States Biochar Initiative, U.S. Department of Agriculture, U.S. Environmental Protection Agency, U.S. Forest Service, West Virginia University Mid-Atlantic Sustainable Biomass Consortium

For additional information: visit epa.gov and cbtrust.org