ForceMatters

The Organics Newsletter for Florida

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FORCE Begins Year Six

As FORCE begins its sixth year, we would like to share some of the newly funded and ongoing research and demonstration (R&D) projects that will be carried out this year. FORCE currently has seven R&D projects underway and another four projects ready to begin. In this issue of FORCEMatters, we will detail these new and exciting R&D projects. The order in which the projects are listed in NO way reflects grant importance, fund size, or start/finish dates.

Please note that FORCE welcomes County and private sector involvement. If any of these projects are of a particular interest to you, contact the FORCE office to see how you can get involved!

Aziz Shiralipour—Scientific, Technical, and Research Assistant

We are proud to announce that Dr. Aziz Shiralipour will be providing our FORCE project team with his scientific expertise, composting experience, research knowledge, and UF networking contacts. Dr. Shiralipour will be available for a multitude of FORCE projects, including, but not limited to the Environmental Assessment of Yard Waste Mulch & Compost and the Resource Manual for Manure & Mortality Composting.

Dr. Aziz Shiralipour, has over 16 years of experience in compost. He is a retired Agronomy Department Faculty member and Associate Director for the School of Natural Resources and Environment, Biomass Programs at the University of Florida.

FDOT—Improved Markets for Beneficial Use of Storm Debris

This project will work with FDOT to improve its organics management and application for beneficial use of mulch and compost within integrated roadside vegetative management practices.

Specific objectives include:

- Develop environmental stewardship programs using mulch and compost to help preserve and restore our natural systems with little or no adverse effect
- Create a better organics product to meet FDOT's product criteria
- Identify new and existing markets for products derived from storm debris and MSW

Yard Trash and Commercial Organic Waste Composting Demonstration

The goal of this project is to encourage composting of yard trash and commercial organics in Florida by conducting a demonstration that documents economics, environmental impacts, and sound operational practices. This project will be designed to address the various barriers inhibiting development of viable composting operations in Florida. Specific objectives include:

- Demonstrate various mix ratios and simple low-tech windrow composting practices
- Quantify leachate and odor generation and test the quality of finished compost

The Florida Organics Recycling Center for Excellence (FORCE) is a joint partnership between the Department of Environmental Protection, Sumter County, and public and private researchers.

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Environmental Assessment of Products Derived from Florida Yard Trash

This project considers whether herbicides, pesticides and heavy metals may be present in yard trash compost and mulch at levels that would cause regulatory concern. This information will assist FDEP in evaluating the appropriate level of regulatory control for yard trash facilities. We will assess this issue from three perspectives:

- Conduct a literature search and summarize existing knowledge regarding the fate and transport of herbicides, pesticides and heavy metals in yard trash products
- Identify the herbicides and pesticides utilized by professional applicators and available for retail sale, and analyze Materials Safety Data Sheets for the products to determine their half life and other factors associated with environmental persistence and hazards
- Contact major producers, brokers, and consumers of Florida yard trash compost and mulch, and work to obtain existing analyses and report actual levels of these contaminants found in Florida products

Florida BMP's and Opportunities to Enhance Compost/Mulch Markets

The goal of the project is to identify opportunities to enhance compost and mulch markets through Best Management Practices (BMP's). Specific project activities include:

- Review Florida BMPs and select those with potential compost/mulch application
- Identify opportunities for outreach and education for BMP target audiences
- Identify opportunities for future development and modification of BMPs
- Conduct research and develop information to support outreach and education for BMP target audiences

LEED Organics Project—City of Tallahassee Solid Waste Services

The goal of and funding for the project will be used for water efficient landscaping design and implementation at the City of Tallahassee's Solid Waste Services Administration building with the use of organic materials, mulch and compost, as well as native plantings. These protocols will be followed so that the City can obtain up to two points for either utilizing water efficient landscaping and reducing consumption by 50% (Water Efficiency Credit 1.1) or through the use of no potable water or irrigation (Water Efficiency Credit 1.2). The City is seeking the United States Green Building Council's LEED® certification for the SWS building. It will be the first LEED® certified Municipal building in the State of Florida.

UF/IFAS Local Extension Equipment Demonstration Utilizing the Earth Tub System

The purpose of the project is to provide local hands on experience and education to local adults and children using local feedstock to produce compost utilizing a small in-vessel system. Located at the County's Youth Center, the Sumter County Extension Services is conducting a series of field trials at the County's Youth Center in the small scale composting vessel, the ETS. Compostable organic materials will be collected by local volunteer groups and will serve as the feedstock for the compost unit field test. Testing will take place to determine the effectiveness of the ETS. Testing and data collection will include type and quantity of feedstock, elapsed time to compost various feedstock, weekly temperature readings and compost analysis by a private laboratory.

Read about the rest of our Year 6 Projects on the next page!

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UF Equipment Demonstration Utilizing the Wright Environmental System

The goal of this project is the vision for feasibility studies for on campus management of organic waste at the University of Florida. The project proposes that the organic waste will first be anaerobically digested using the SEBAC for biogas production; followed by a post processing step with the Wright Environmental System (WES) equipment. The grant money from FORCE will be used as seed funding to start up the WES and generate initial data on the break down of organics. Of particular interest in this phase will be the breakdown of biodegradable packaging within the WES. The University Athletic Association is moving towards using such biodegradable packaging (plates, cups, etc.) during events at the stadium. There is scant information available on the breakdown of such materials in composting systems. Most of the previous research has been carried out in house by the manufacturers and this information is not generally available to the public. Therefore, it is critical that preliminary data on the degradability of such materials be generated.

Sumter Conservation and Pollution Prevention Program at the West Central Florida Agricultural Education, Marketing, and Development Center

Landscaping using Sumter's compost as a water conservation project partially funded by the Withlacoochee Regional Water Supply Authority. Ground and surface water are Florida most vital resources supplying most ecosystems and providing drinking water for 90% of the states population. Since the state's geology makes water supplies vulnerable to excessive use and contamination, its protection is critical. Toward this end, Sumter County is proposing a water efficient landscape demonstration and learning center to be developed at the newly constructed West Central Florida Agricultural Education, Marketing and Development Center.

Sumter County Compost for Forestry Crops

The goal of this project is to provide data that combines the need for environmentally sound, economically feasible, practical, and applicable solutions for recycling and utilizing organics while demonstrating the impact that compost can have on forest crops. This is the last year of a three-year research and demonstration project on fast-growing forest tree responses to Sumter County compost. Guidelines will be developed for compost use on these short rotation forest crops, which include estimation of associated economic and environmental benefits and dissemination of this information to clientele.

Animal Manure and Mortalities Management Resource Manual

Agricultural animal manures and mortalities represent a significant potential for organic recycling in Florida. The purpose of this project is to develop and publicize a resource manual containing information on current and past research at the University of Florida, organic recycling strategies, and locations where such practices have been implemented.

For more information on FORCE please contact Stacie Stokes at:

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