



Jimmy Carter Plant Materials Center 2015 Progress Report of Activities

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This report highlights the major activities at the Jimmy Carter Plant Materials Center during 2015. For additional information contact JCPMC.

STUDIES

Adaptability Trials – variety adaption warm season and cool season cover crops

Jimmy Carter Plant Materials Center, along with other PMC's across the Southeast region participated in a warm season cover crop adaptation trial. A combination of 19 species and varieties of species were included for study at Americus, Georgia. Seed for all species and varieties or cultivars are commercially available. Data collection includes germination and field emergence, susceptibility to disease and insects, canopy cover, plant height, days to flowering, and aboveground biomass produced are being recorded. The objective of this study is to provide research based recommendations on cover crops to best fit particular regions and niches. First year data shows high variability can exist between species of the same variety in a trait such as days to flowering and biomass produced. Biomass amounts above 10,000 lbs. per acre were recorded for several species and varieties of both grasses and legumes.



Photo of warm season adaptability trial at JCPMC

A cool season adaptability trial began in fall 2015 and included PMC's across the country. Commercially available seed of varieties of cereal rye, crimson and balansa clover, black oats, daikon radish, winter pea, hairy vetch are included in this study. Data is being collected on the same traits as the warm season component of the study, with the addition of winter hardiness and spring green up. This study is scheduled to continue for 3 years. Information from this study will be used to make recommendations as to the best suited species and varieties for specific conditions across the Southeast.



Photo of cool season adaptability trail at JCPMC

Clover Seeding Rate Study

Georgia, Mississippi, and Hawaii PMC's are jointly adopting a study to compare seeding rates of coated "Dixie" Crimson Clover (*Trifolium incarnatum*) to a standard rate of un-coated seed. The seed of this clover is most commonly available to farmers as a coated seed. Seeding rate information generally does not specify coated or un-coated. The coating includes an inoculant and increases seed size. The number of seed per pound is significantly different and PLS calculations for uncoated seed are approximately 2 times that of the coated seed. This study will compare a standard rate of uncoated seed to 3 rates of coated seed based on

seed counts not weight basis. Data on canopy cover, plant height, and biomass produced will be recorded. The objective of this study is to assess the effect of seeding rate on canopy cover, stem counts, and ultimately biomass produced.



Photo of Clover Seeding Rate Study at JCPMC

DEMONSTRATION

High Diversity Grazing Demonstration

The Jimmy Carter Plant Materials Center is cooperating with NRCS grazing specialists in Georgia and Alabama on a demonstration level project to learn more about high diversity grazing or multi-specie grazing mixes. The project is modeled to support the Conservation Stewardship Program Soil Quality Enhancement 16. The enhancement was developed to add diversity to warm season grazing lands. At least 6 species representing 3 functional groups with at least 1 desirable legume must be included in the mix. Two seeding mixes are being compared for this demonstration. Days from planting to grazing, and repeated clippings of biomass to mimic grazing will be recorded.

Photo of Grazing Demo at JCPMC



ACTIVITIES

15th Annual Conservation Systems Production Workshop February 2015
PMC Manager Richard Barrett spoke about the JCPMC's role in supporting the agencies soil health initiative.

Cover Crop workshop April 2015. NRCS staff from Georgia and Alabama participated.

Summer Cover Crop walk through July 2015. NRCS staff and landowners took part in the self-paced overview of warm season cover crops under study at JCPMC

Flint River SWCD Soil Health Workshop August 2015 PMC Manager Richard Barrett delivered presentations about how cover crops play a vital role in improving soil health at 2 sessions. One in Dawson and one in Americus, GA.



Photo of Cover Crop Workshop. Richard Barrett explaining field methods to measure residue to NRCS staff.

OUTREACH

JCPMC participated with Georgia NRCS at the Sunbelt Ag Expo October 20-22, 2015. A poster of JCPMC projects and display box of a mixed specie cover crop were highlights of the display PMC staff were able to discuss with visitors.



THE Jimmy Carter PMC: WHO WE ARE

The PMC selects conservation plants and develops innovative planting technology to solve the nation's most important resource concerns. Our mission is to develop, test, and transfer effective state-of-the-art plant science technology to meet customer and resource needs.

The USDA, Natural Resource Conservation Service Jimmy Carter PMC was established in 1936 and consists of 327 acres of land. The PMC is just outside of Americus, Georgia.

...AND WHAT WE DO

Plant Material Centers work to provide vegetative solutions and technology to address conservation resource concerns. The priority work of the JCPMC is supporting the agencies soil health initiative. We carry out our mission through:

- Research
- Demonstration
- Training

Electronic Documentation and Information

Information about GMPMC can be found on the following web-sites:

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/plantmaterials/pmc/southeast/gapmc/>

Jimmy Carter Plant Materials Center Staff

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