



Cape May Coastlines

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NPS Reimbursable Project

The Cape May PMC continues to provide beachgrass (Gateway germplasm) and various grass plugs and shrub pottings to an ongoing National Park Service (NPS) reimbursable project in Gateway National Park.

To date, the Cape May PMC provided a total of 40,400 culms of beachgrass; 959 and 152 pots of beach plum and northern bayberry respectively; and 1,714 plugs combined of switchgrass, coastal panicgrass, and shore little bluestem. Looking forward

to 2015, the PMC will continue to increase, undercut, and process beach grass (Sandy Hook germplasm), and provide tree pots of additional beach plum and northern bayberry seedlings for restoration efforts from Hurricane Sandy.



NRCS staff and volunteers help process beachgrass.

Workday/Training with Field Office Staff

In April, employees from NJ State Office, Woodstown and Frenchtown field offices, and a few Earth Team volunteers came for a workday/training to help PMC staff complete processing 21,000 stems of

beachgrass for a restoration planting at Miller Field in the Gateway National Recreation Area on Staten Island. Field office staff also came the following week to help pot beach plum and northern bayberry seedlings for the

same project. The collaboration between PMC staff and Field Office staff was fun and successful. Approximately 400 potted beach plum shrub seedlings were delivered to the Park Service in early June.

Development of Trailing Fuzzy Bean



Amberique bean planted in restored dune.

PMC staff is currently building on last year's efforts to develop amberique-bean (*Strophostyles helvola*) for dune restoration and critical area planting. Staff recorded general plant growth attributes last year and will compare that data to this year's. In addition, staff direct-seeded accessions in a comparison trial: one site at the PMC, and a second site in a recently restored dune in the Borough of Avalon. In another study, two of the best performing accessions from last year were used in 3 critical area planting

mixes at high and low rates at the center. The mixes consisted of approximately 8 species of various grasses, forbs, and legumes. Lastly, these same



Comparison of early root nodulation on 2 fuzzy bean accessions.

accessions were interplanted with beachgrass in a hoop house study to isolate and determine if there is a beneficial relationship between *S. helvola* root nodulation and N-fixing properties and positive growth of beachgrass. These results will be compared to a fertilizer treatment and a control.

Beach Plum Grafting Demonstration



Cleft grafting during beach plum workshop.

In early spring, PMC staff hosted a field day workshop for the Cape May Beach Plum Growers Association. The purpose of the workshop was to demonstrate grafting techniques with three varieties of plum distinguished for their fruiting ability: ‘Hancock’; ‘Premier’; and ‘S.F. 134’. This material was grafted onto myrobalan plum (cherry plum) *Prunus cerasifera* rootstock. Dr. Richard Uva, a Maryland farmer and owner of Seaberry Farm (a farm specializing in

fruits and flowers) led the demonstration, highlighting specific grafting techniques and helpful materials to use in the grafting process. He showed the group a cleft grafting technique that is best done on dormant scion and rootstock. Ideally the rootstock should be between 1–3” and the scion should be cut to a tapered point 1–2” long on each side, and placed into a 2” cleft cut into the flat top of the rootstock.

The key is that the cambium layers in both the scion and rootstock are in contact. The grafting is then taped and sealed with grafting wax or a sealing compound. The weather was pleasant and the workshop was small enough to give everyone a chance at grafting under supervision; making a delightful, informative day.



Cowpea residue overwintered and planted with wheat.

Cover Crop Residue Research with Cowpea and Sorghum

A cover crop mix of cowpea and sorghum was installed in June 2013 at the PMC to compare the effects of growing a cover crop in a grass (grain) and legume mix, to the same covers grown alone. Treatments were also set up to compare the effects of residue management between mowing and disking as termination strategies. A scheduled fall wheat crop could not be planted due to budget

shortfalls and the government shutdown, so instead the residue was left standing over winter to protect against wind erosion, and the residue was incorporated in the early spring before an early spring no-till planting of wheat. Although not commonly grown in the spring in the Mid-Atlantic, wheat can provide a quick growing, weed-suppressing cover in April if the grower happens to miss the fall

planting window. Cowpea and sorghum was then planted with a no-till drill in the first week of June into both the overwintered dead residue from fall 2013 (still on the surface) and the living wheat mulch of spring 2014. Due to the Plant Materials Program efforts to refocus PMCs into area specialties, this project will be discontinued after fall 2014.

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