



Cape May Coastlines

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“Sunshine is delicious, rain is refreshing, wind braces us up, snow is exhilarating; there is really no such thing as bad weather, only different kinds of good weather.”

John Ruskin



Richard Shaw discussing characteristics of Coastal Plain soils.



NRCS staff installs willow fascines along stream bank.

Cover Crop Field Day in October

In support the USDA’s soil health initiative the Cape May Plant Materials Center hosted a Cover Crop Field Day on October 18th for roughly 60 people. Guest speakers included Jack Rabin (Assoc. Dir. Farm Programs, Rutgers NJ Ag Expt. Station), Natalie Lounsbury (Univ. of Maryland), Pamela Rice (USDA ARS), and from the NRCS: Richard Shaw (State Soil Scientist, NJ), Eileen Miller (Soil Health Specialist, NJ) Fred Kelly (Resource Conservationist, NJ), Chris Miller (PMC manager), and Ramona Garner (Plant Materials Specialist NRCS ENTSC).

The focus of field day was on summer and fall

cover crops that could be used to improve coastal plain cropping systems. The soils of the Coastal Plain are generally poorly developed, presenting farmers with unique challenges and opportunities. Activities included lectures from: Richard Shaw on the characteristic properties of Coastal Plain soils; Eileen Miller on how to increase organic matter using covers; Natalie Lounsbury on winter-killed covers; Pamela Rice discussed the water quality benefits of using covers; Jack Rabin shared his experiences using leaf mulch to increase soil health; and Ramona Gardner discussed the option of cocktail mixes. The

afternoon consisted of equipment review and discussion, and a field tour of production and demonstration plots. According to a survey conducted after the workshop, farmers were interested in adopting radish as a winter crop, sorghum ‘Sudex’ as a summer cover, and also leaf mulch. A survey question regarding future topics of interest indicated that farmers wanted to learn more about the soil health benefits to covers, the economic costs and benefits of managing covers, and municipal leaf mulch application. Many suggestions were made to have a seminar solely on equipment, covering equipment use, access, and cost.

Willever Lake WHIP Restoration

Last winter, the Cape May PMC cooperated with NRCS staff, USFWS, and NJ Audubon on a WHIP lake restoration project after the removal of a dam. The lake bottom required new vegetation to prevent erosion and to

enhance its wildlife value. PMC staff used live silky willow (*Salix sericea*) stakes grown and collected at both the PMC and the Pinelands Nursery. Most of the installation consisted of live stakes, but there was also enough material to fashion fascines (wattles)

and to conduct a trial at two distances along the streambed. Subsequent visits by NRCS staff last spring indicated that the plantings held and the fascines were successful.

Jamaica Bay Interagency Project



Harvested cordgrass on bedsheets for transport from marsh.

The Cape May PMC continues to assist the NY District Corps of Engineers, NGOs, and community volunteers restore the Gateway National Recreation Area Jamaica Bay unit. This year, a community-led effort was made to collect smooth cordgrass (*Spartina alterniflora*) coordinated by the American Littoral Society Ecowatchers, and Jamaica Bay Guardian.

These three groups put together a large volunteer staff that the NJPMC staff assisted. While the amount of smooth cordgrass collected was comparable to last year's harvest, the timing of the collection may have been too early to secure an equal amount of viable seed (the harvest window is only a few weeks). Total seed yield after cleaning last year was 450 lb while this year it was only 140

lb. Approximately 290 lb of stored seed was distributed to growers last year. Since we will be relying on more stored seed to fill any deficit from this year's harvest, we are monitoring the effect of long-term cold and wet storage on seed germination. Seed has been sent away to a testing lab for both collection years and germ

(continued on pg 3)

Sandy, Sea Oats, and Shorelines



Photo of coastal erosion caused by Hurricane Sandy.

The NJPMC fared well during Hurricane Sandy although many of the nearby barrier islands were punished. A long-term evaluation of sea oats on the barrier island Borough of Avalon also survived the storm, producing seedheads that the PMC staff harvested. However, city officials decided to reconstruct the dune system after the

storm, building it higher, and destroying the sea oat evaluation plots in the process. The saving grace was that this germplasm did produce seed that was collected, a few of the original plants were dug up and saved before being destroyed, and the public at large is much more aware of the importance of having a

vegetated dune to prevent the loss of life and property. Also demolished was a new fall-seeded legume and grass coastal dune mix that was planted at two depths and replicated. Such are the vagaries and challenges of off-site plantings.

Xerces Pollinator Seedbed Prep

Treatments and evaluations continue on the Xerces seedbed preparation project. The objective is to test different organic methods of weed-suppression prior to planting pollinator plots. These are methods that would be suitable for small growers who want to install pollinator plots but who are unwilling or unable to use conventional sprays or

machinery. Treatments consist of using buckwheat cover at two rates, tillage, burn, plastic solar covering, and a vinegar spray. So far good results have been found using the burn treatments, however there is some concern how this may be best used on a larger scale. This project is being coordinated with Xerces Society for Invertebrate Conservation and is being

replicated on several farms throughout the region.



Photo taken in the fall of a burn plot after six months of treatment.

We're on the Web!

<http://plant-materials.nrcs.usda.gov/njpmc/>

Jamaica Bay Interagency Project (continued from pg 2)

tests are being conducted at the PMC to determine change in germ rates from year to year. In anticipation for future demand, the PMC staff planted 53 lb of seed in a constructed wetland pit at the PMC with the rationale of having a readily available supply of seed on-site.

PMC staff also had an opportunity to experiment with direct seeding methods at Elders East, a marsh island that undergoes

strong wave and tidal influence. Past plantings close to the shoreline failed except in a few places where loose, tide-swept seeds were accidentally established in coir logs. Inspired by this example, PMC staff decided to try to mimic this method of establishment by cutting the coir log fiber with a garden edger and then using an Earthwise vegetable row seeder to press seed into the cut.

The top of the coir log was then covered with burlap that was staked down to prevent seed from rising out of the cut during the tidal cycles.



Ongoing Projects

On-Site: Hurricane Sandy has increased the demand for native plant materials for coastal dune restoration. We have continued to increase our American beachgrass (*Ammophila breviligulata*) production plots (2012 produced a robust harvest) including germplasm specifically from Jamaica Bay. The PMC staff is also working to promote more diversity in coastal restoration projects by developing and introducing lesser-known/used species like bitter panicum (*Panicum*

amarum) North Pa, sea oats (*Uniola paniculata*), fuzzy bean (*Strophostyles helvula*), and beach pea (*Lathyrus japonicas*) for future use in coastal seed mixes. PMC staff created an increase field for beach pea for this purpose.

The NJPMC continues to support the USDA's soil health initiative by installing demonstration plots and a time trial for a variety of summer and fall cover crops. PMC staff also began initial screening and

crops more familiar to southern states such as cowpea, mucuna, lablab, and jackbean to test their potential for use. Data on survival, height, spread, and seed yield were gathered.

Off-site: The PMC staff continues to prepare fields, plant covers, and monitor the soils of a resource-poor organic grower in Central NJ. Other restoration projects include assisting the USFWS Cape May Refuge with direct shrub seeding.

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Cruising the Jersey Shore. NJPMC hosted a tour for a historic auto club in Spring 2012.

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