



This semi-annual newsletter is published by the USDA-NRCS Brooksville Plant Materials Center, 14119 Broad Street, Brooksville, FL 34601-4525, Tel: 352-796-9600, FAX: 352-799-7305.

Brooksville PMC Participates in National CIG Project

The Xerces Society for Invertebrate Conservation in Portland, OR, was awarded a National Conservation Innovation Grant in 2009 to develop and test pollinator habitat job sheets for six regions of the US. The Brooksville PMC is the only NRCS location in the southeastern US that is participating in this project. Besides work in Florida, the grant is developing pollinator habitat recommendations for California, Oregon, New England, Wisconsin, and Pennsylvania.

Everyone knows pollinators are important to our environment, but often people do not realize just how vital they are. Pollinators are needed to ensure the successful reproduction of nearly 75 percent of the world's flowering plants. This includes more than two-



thirds of the world's crop species. The fruit, seed, and animal (meat and dairy) production supported by pollinators provides over 30

percent of the foods and beverages that we consume. The annual economic value of insect-pollinated crops in the US was estimated to be \$20 billion in 2000, with native insects contributing at least \$3 billion of pollination services.

Pollinator numbers, particularly native bees, have been declining for many years as a result of habitat loss, alteration, and fragmentation, as well as pesticide use. Many studies have demonstrated that natural and semi-natural habitat, as well as high floral diversity, supports diverse and abundant populations of pollinators, healthy honey bee colonies, and adjacent crop pollination.

The goal of this project is to develop regionally appropriate, general, and crop specific formulas for creating pollinator habitat on working lands. This project will result in the technical specifications needed by NRCS conservation planners to implement projects that create this habitat.



At Brooksville we planted a demonstration hedgerow of tree and shrub species which included redbud (*Cercis canadensis*), Simpson's stopper (*Myrcianthes fragrans*), sparkleberry (*Vaccinium arboreum*), southern magnolia (*Magnolia grandiflora*), Chickasaw plum (*Prunus*

angustifolia), and false indigo (*Amorpha fruticosa*).

Interplanted between these species are perennial herbaceous forbs including rosinweed (*Silphium compositum*), rough sunflower (*Helianthus angustifolius*), blanket flower (*Gaillardia pulchella*), dotted horsemint (*Monarda punctata*), pine barren goldenrod (*Solidago fistulosa*), narrowleaf silkgrass (*Pityopsis graminifolia*), and coastal plain chaffhead (*Carphephorus corymbosus*). The latter three forbs came from material that the Field Office staff assisted the PMC to collect last year. Next year, we will be taking records on flowering periods of these plants.

Napiergrass Field Notes: Blame it on the Rain

It's been two years of tough fall weather for the napiergrass; a.k.a elephantgrass; a.k.a *Pennisetum purpureum* crossing block. This tough weather negatively affected pollen production and collection in year one with winds and rain that broke stalks and destroyed cellophane pollen collection bags; and in year two, an absence of rain appeared to delay the plants' overall development and pollen production. This delay made pollination occur roughly three weeks later than in

year one and the reproductive period was subsequently terminated with an hard-freeze in early December.

So, how did we make out in spite of Mother Nature's capriciousness? Well, only three out of five lines of napiergrass successfully produced pollen.

Pollen collected from Line N 172 was negligible and may not have successfully crossed with other lines. Crosses with line N 23 and Merkeron may have been successful in a handful of cases before the winter cold spell set in.



Figure 1. Napiergrass plots from left to right: N 190 (no bloom), N 172 (earliest bloom), N 161 (no bloom), N 23 (bloomed), MERK (bloomed).

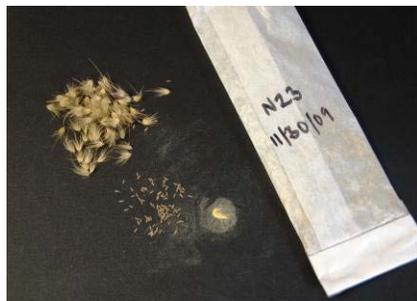


Figure 2. From left to right: group of florets, open anthers, pollen, and collection bag.

The bag was then shaken to break open any remaining anthers on the flowering spikelets, removed, labeled, and frozen until the following year.

Our collaborators at the USDA/ARS Crop Genetics and Breeding Research Unit in Tifton GA will be able to confirm whether or not our efforts at cross-pollination were successful this year. Successful genetic research will help in this highly productive African native to become a more successful biofuel crop.

A Conservation Celebration

A Florida NRCS-sponsored event was held for the public at the Brooksville Plant Materials Center on April 20, 2010. This event was a co-celebration of the 30th anniversary of the first Earth Day held in New York

City on April 22, 1970 and the 75th anniversary of the passage of the Soil Conservation Act in April 1935, which was the initial foundation for the present day Natural Resources Conservation Service.

Carlos Suarez, NRCS State Conservationist, welcomed the attendees and Walt Douglas, NRCS Regional Assistant Chief – East gave a short presentation on the history of the agency. Jeff Danter, Florida State Director of the Nature Conservancy, spoke on the history and importance of Earth Day, and the significance of conservation in our daily lives. Afterwards, Plant Materials Specialist Mimi Williams and PMC staff members assisted students from Solid Rock Christian Academy and other volunteers in planting a pollinator garden using local ecotypes of wildflowers (below).

The day's remaining events consisted of: presentations on water conservation by the NRCS Mobile Irrigation Lab; discussion of the PMC's longleaf pine restoration project by Greg Hendricks, State Resource Conservationist; demonstrations of corn



shelling and milling equipment by Steve Melton, a local seed producer; and a "how-to" look at the Web Soil Survey, by Tom Weber, State Soil Scientist and members of his staff. Attendees also had the opportunity to visit informational booths for fifteen environmental conservation/educational groups, including the traveling museum of the Perdido Bay Tribe, and view various NRCS and PMC informational displays.

Current plans are to hold another Earth Day Celebration at the PMC in 2011. We will not be formalizing our plans until early next year, but we have tentatively set the date once again as April 20. Look for future announcements on the event and we look forward to seeing many of you at the PMC next April.

Look up the Brooksville, FL PMC at <http://plant-materials.nrcs.usda.gov> or <http://www.fl.nrcs.usda.gov/programs/flplantmaterials.html>

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