District Groundcover Habitat Restoration Activities – 2011 Cooperative Donor Site and Seed Collection Efforts

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In 2011, the District continued to enhance its groundcover habitat restoration activities on two important fronts. First, we significantly expanded our donor site acreage by entering into a cooperative donor site management and seed collection agreement with Quail Run Plantation (1,173 acres) located in Washington County. Using recent Tall Timbers research, we mapped three compartments containing 12 stands each that created a mosaic of prescribe burn areas. This burning regime mosaic will provide adequate quail nesting habitat within their home range and will maintain high survival rates. Under the agreement, the District will conduct the burns and be allowed to harvest wiregrass seed on 100 to 150 acres annually, which more than doubles the District’s available donor site acreage.

Second, the District was able to conduct its largest upland (xeric) wiregrass seed collection effort by entering into a Property Loan Agreement with FWC. Under the agreement, the District was able to borrow two additional Flail-vac seed collectors/tractors, enabling us to operate three seed collectors on three donor sites totaling 71 acres. Applying recent CFEOR sponsored research conducted by Emily Rodriguez; we started our collection activities two weeks earlier than usual and collected 2,439 bulk pounds of wiregrass seed during November and the first week of December. The Moseley site (51 acres) wiregrass seed tested at 33 percent purity/24 percent viability and the Burnt Trailer site (20 acres) tested at 8 percent purity/58 percent viability. The cost of collection was $8.07/bulk pound using contract equipment operators, who also dried and bagged the seed. We collected 2,119 pounds of seed at the Moseley site, yielding almost 700 pounds of quality wiregrass seed for future direct seeding activities and seed for growing contract nursery tubelings.

The take home message is to continue to cooperate and partner with private landowners and public agencies to further enhance your wiregrass donor site and seed collection program, while utilizing the most current research available to conduct cost effective and efficient operations. Last, we are on the cusp of restoring sandhill groundcover habitat within a “40 month” timeframe. Now that’s what I call success and progress all rolled up into one!
Changes in Diameter Growth of *Taxodium distichum* in Response to Flow Alterations in the Savannah River


Efforts to maximize or restore ecological function on floodplains impacted by dam construction have increasingly focused on river flow management. Few studies, however, consider floodplain hydrogeomorphic position and annual climatic variation in dam impact assessment. The Savannah River, a large river ecosystem in the Southeastern United States, was impounded in the 1950’s. Our study objectives were: (1) Characterize hydrology in floodplain areas containing *Taxodium distichum* and determine how it has been affected by dam operations; (2) Identify basal area increment (BAI) response of *Taxodium* to annual flooding and climate (dry, average, wet) conditions; (3) Assess BAI response to dam-induced hydrologic changes. Levee and backswamp sites were significantly drier in the post-dam era, and trees at these sites showed a significant post-dam increase in BAI. Low elevation river sites did not show significant hydrologic differences between pre- and post-dam eras, but BAI was significantly higher in dry years and significantly less sensitive to hydroperiod in the post-dam era. All trees demonstrated a significant quadratic BAI vs. hydroperiod relationship. This study demonstrates that annual productivity of *Taxodium* trees can be reduced by either drought or flood stress. It also suggests that climate and hydrogeomorphic location mediate dam impacts and productivity-flooding relationships in *Taxodium*.

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Upcoming Events


- **39th Annual Natural Areas Conference** – Keeping Natural Areas Relevant and Resilient, October 9-12, 2012 in Norfolk VA. For more information go to [http://www.naturalarea.org/12conference/](http://www.naturalarea.org/12conference/).


- **The 21st International Pepper Conference**, November 4-6, 2012 in Naples, FL. For more information contact the Hendry County Extension, Gene McAvoy, 1-863-674-4092 or gmcavoy@ufl.edu.

- **ACES and Ecosystem Markets**, December 10-14, 2012 at Marriott Harbor Beach in Ft. Lauderdale, FL. The Conference will focus on linking Science, Practice and Policy by bringing together Ecosystem Services Communities from around the United States and the globe. For details contact Jhanna Gilbert, jhanna@ufl.edu.