

Development of Conservation Species at Kisatchie National Forest for  
Conservation, Restoration, and Habitat Enhancement

2007 Status Review

By  
Morris J Houck<sup>1</sup>, Gary Fine<sup>2</sup>, and Garret Thomassie<sup>3</sup>

<sup>1</sup>USDA Natural Resources Conservation Service, Alexandria, LA

<sup>2</sup>USDA Natural Resources Conservation Service, Thibodaux, LA

<sup>3</sup>USDA Natural Resources Conservation Service, Galliano, LA

Submitted to:

Peter G. Nilles  
Forest Botanist  
Noxious Weed Coordinator  
Kisatchie National Forest  
2500 Shreveport Hwy.  
Pineville, LA 71360

**Project Description:** This is a three year inter-agency agreement that began in 2006 between US Forest Service, Kisatchie National Forest and NRCS Louisiana to initiate a native seed revegetation program for Kisatchie National Forest using local seed sources. The main focus is to collect native grass and legume species that can be successfully propagated and provide the FS with sufficient seeds of adapted species for restoration and remediation activities.

Table 1: Species identified and collected for planting and/or evaluation

Scientific Name	Common Name
<i>Panicum virgatum</i>	Switchgrass
<i>Schizachyrium scoparium</i>	Little bluestem
<i>Chasmanthium latifolium</i>	Inland Sea Oats
<i>Chamaecrista fasciculata</i>	Partridge pea
<i>Baptisia alba</i>	White False Indigo

Seed collections were initiated in 2005. Literature was reviewed to determine germination procedures for each species. Grow out procedures include germination and establishment of seedlings in greenhouses, and transplanting containers into the field. Following greenhouse seedling production at the Golden Meadow Plant Materials Center (PMC), initial seed increase plantings will be established at Nichols State University. Performance information (germination, vigor, potential seed production) and adaptation data will be collected from each planting species.



**Summary of Progress:**

Little bluestem, *Schizachyrium scoparium* - Original seed collections were planted at the PMC in seedling containers. Plants were lost during hurricane of 2005. Greenhouses at the PMC have been inoperative since hurricanes and no additional plants have been re-established. Additional collections of little bluestem and one of pine hill bluestem were received in the fall of 2005. Additional collections are planned in 2007.

Partridge pea, *Chamaecrista fasciculata* - Seed collections began fall 2006. Eight (8) collections have been received. Field increase plantings were scheduled at Nicholls State during the spring of 2007. Being an annual this species should produce sufficient quantities in one year if a large enough field planting can be established. The decision was made to hold off initial increase in 2007 and collect additional amount for increase in 2008.



Inland Sea Oats, *Chasmanthium latifolium* - A total planting area of 0.2 acres is being maintained at Nicholls State University (0.12 acres planted 06/15/06 and 0.08 acres planted 10/24/06). Plants are being maintained in two separate small blocks. Plants were planted to a row culture (36" between rows) to provide optimum management activities (i.e. fertilization, irrigation, harvest). In fall 2006 the planting was fenced to provide control from rabbit grazing. Production to date has been limited to hand collecting seeds that were produced during the growing season. Approximately 0.5 pound of seed was collected in 2006 with additional amounts in 2007. Seed fill in the 2006 harvest was determined to be good based on hand rubbed samples, but germination was very poor.

Switchgrass, *Panicum virgatum* - Two collections received 2005 and 2006. No field production has been established. Additional seed collection is planned for the fall of 2007.

White False Indigo, *Baptisia alba* - Two (2) populations identified and collected in 2006. Initial increases are set to begin the fall of 2007 in the greenhouses at the Golden Meadow PMC.

**Status:**

As of the end of 2007 projected production estimates of producing approximately 50 lbs of two species of native grasses and approximately 200 lbs of one native legume maybe off schedule for the projected delivery date of December 2008. Problems associated with production caused by the hurricanes of 2005 subsequently causing greenhouse and field damage to seedling and field production have cause us to re-evaluate production schedules.

Plantings of inland sea oats, partridge pea, and switchgrass should provide adequate quantities of seed if large enough fields can be planted and/or existing planting are managed to produce seeds (Table 2).

Table 2 Field Production Estimates of Selected Species

Common Name	Seeding Rate for Seed Production PLS/acre	Average Production		Average PLS %	First Year Harvest	
		Spring bulk lb/ac	Fall bulk lb/ac		Yes, No	Amt.
Switchgrass	3.0 lbs/ac	-	300	85	Yes	250
Little bluestem	14.5 lbs/ac		280	55	No	0
Partridge pea	4.5 lbs/ac	-	500	65	Yes	500
White False Indigo	10.0 lbs/ac	?	?	65	?	?
Inland Sea Oats	8.5lbs/ac	?	?	85	?	?

In order to meet production goals as outlined in the IA, but at a later projected completion date (2009-2010), a modification of the contract in the form of a “No-Cost Extension” was requested in January 2007. This would move the termination date of the contract to December, 2010.