

Plant Materials for Former Saltcedar Sites Being Developed

Reaching for Species Adapted to Fine-Textured Saline Soils



New seed production field of Alkali sacaton (*Sporobolus airoides*) producing 75 bulk lbs/acre the second year after planting.

The Los Lunas Plant Materials Center received funding in 2004 to begin a plant materials development project for the U.S. Fish and Wildlife Services through the Bosque del Apache National Wildlife Refuge. The goal of the project is to develop grass, forb, and shrub species adapted to fine-textured saline soils which are often found after saltcedar eradication activities in the southwest United States.

A number of large saltcedar clearing projects are being performed under the auspices of several soil and water conservation districts in New Mexico. Many cleared sites have deep alluvial water tables resulting from channel incision and flow management on the major rivers in the state like the Rio Grande and Pecos. This deep ground water and lack of flooding potential imply that many of these sites are not appropriate for revegetation with riparian plants but must be revegetated with non-phreatophytic xeric species which can persist on fine-textured saline soils.

Although several appropriate species are presently commercially available including alkali sacaton (*Sporobolus airoides* 'Salada') and fourwing saltbush (*Atriplex canescens*), in

particular the Vallis race, there is a need to develop commercial supplies of additional species to augment the species diversity of these sites.

Several species currently under development at the Los Lunas Plant Materials Center, giant sacaton (*Sporobolus wrightii*) and vine mesquite (*Panicum obtusum*), will probably prove appropriate for some of these former saltcedar sites, but their adaptation to salinity, aridity, and fine-textured soils will have to be further evaluated. Additional species which are presumed to have these adaptations will be identified, and seed collections will be made representing different populations. Germination and growth under soil conditions typically present on former saltcedar sites will determine those species best adapted to these sites. These superior species or ecotypes will then begin the process of seed increase and cultivar release.

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