

## Development of Locally Adapted Native Germplasms for Commercial Use<sup>1</sup>

Anthony D. Falk\* and Keith A. Pawelek<sup>2</sup>

**Abstract:** Successful reclamation or native restoration of large-scale projects is dependent on large-scale commercial seed availability; however, not all native seed is created equal. The Texas Native Seeds Program (TNS) at the Caesar Kleberg Wildlife Research Institute has developed a proven method for selecting native plant material, developing native germplasms, and partnering with commercial producers to make locally adapted native germplasms available at the commercial scale. The unique process quickly screens several source populations for favorable characteristics. This is achieved by using a system that combines rankings and measurements that are collected at the population level. Following data collection and selection, individual populations are increased in isolation to maintain genetic integrity. During the isolated seed increase phase, several small-scale research plantings are conducted using the produced seed. These plantings help refine areas of adaptation and provide proof to consumers that the new releases can effectively restore native grasslands. Following isolated increase, new germplasms are formally released through the Natural Resource Conservation Service, and production is licensed through Texas A&M-Kingsville. The staff members at Texas Native Seeds then partner with commercial seed producers to ensure large scale production of each new germplasm release. This is a critical step in our process because the production of each new species can be maximized with slight changes in management strategies. Through our unique process and partnerships, TNS has made 35 locally adapted native germplasms commercially available, working with 3 different producers across Texas. This process has enabled the industry to produce enough seed to plant roughly 25,000 ha annually.<sup>3</sup>

**Additional Key Words:** restoration, seed availability, seed production

- 
1. Oral paper presented at the National Meeting of the American Society of Reclamation Sciences, Duluth, MN June 12-16, 2022. Published by ASRS 1305 Weathervane Dr., Champaign, IL 61821.
  2. Anthony D Falk (\*presenter), Research Scientist, and Interim-Director, Texas Native Seeds, Caesar Kleberg Wildlife Research Institute, Texas A&M-Kingsville, Kingsville TX 78363.
  3. Work reported here was conducted near 27.53256° N, 97.53256° W.