





2018-19 Species Evaluations

Our evaluations of little bluestem and knotroot bristlegrass at both the Nature Conservancy Texas City Prairie Preserve and Wildlife Habitat Federation (WHF) have entered into their second year. You may recall, during first year evaluations the accessions are irrigated when needed and data is collected on a monthly basis. First year evaluations are aimed at insuring establishment of the plants so that we can eventually see their full potential, and to let us quickly determine which populations have the potential to meet minimum agronomic requirements for commercial seed production (such as acceptable seed yields and quality). However, second year evaluations are conducted every other month and precipitation is the only source of water. These evaluations look more into the adaptability of the populations, and their ability to thrive under natural conditions. In order to reduce competition and give all of the

accessions equal chances I have spent a significant amount of time weeding and cultivating the plots. The table to the right shows a summary of little bluestem and knotroot bristlegrass plants remaining that you may find interesting.

		Texas City Evaluations		
		Planted	Remaining	%
Little bluestem	Local collections	620	469	76%
	Commercially available	100	18	18%
Knotroot bristlegrass	Local collections	820	717	87%

		Cat Spring Evaluations		
		Planted	Remaining	%
Little bluestem	Local collections	620	510	82%
	Commercially available	100	67	67%
Knotroot bristlegrass	Local collections	820	746	91%

As of June 31st, some of the remaining commercially available (non-ecotypic) little bluestem plants are beginning to show signs of flowering. I anticipate a few more plants will be lost to stress, and that most of the commercially available varieties will be reaching dormancy by the end of September. The local collections will likely begin to flower and set seed later into October and early November. These simple observations are strong rationale supporting the need for locally-adapted native seed selections for this region. Plants that flower and produce seed in the heat of summer are unlikely to yield viable seed. For long-term performance, this is concerning. For example, if you restore little bluestem to your pasture using a poorly adapted seed source the population (if it survives, which is unlikely) would be essentially sterile.

The knotroot bristlegrass plants began to green-up in early April and flowering was already occurring in May. This species also shows differences in physical traits based on the collection location, but as seed set occurs most of the differences observed early tend to become less noticeable. Seed has been collected for germination testing on all of the accessions and at least two more evaluations will occur this year.



Silver bluestem plants at the Texas City Prairie Preserve in Texas City.

2019 Evaluation Plantings

After our meeting last December, the TNS staff convened and decided to begin 2 important evaluation projects for the eastern half of Texas for the 2019-20 growing seasons. Based on some of the recommendations that CPNSP Technical Committee provided and coupled with adequate collections, we decided to move forward with Silver bluestem (*Bothriochloa saccharoides*) and Yellow Indiangrass (*Sorghastrum nutans*). On May 21st and 22nd seedlings were brought from the greenhouses in Kingsville and Nacogdoches and planted at both locations. Below is a list of the number of plants of both species.

86 Silver bluestem collections including the commercial release Santiago Germplasm (from west Texas) totaling 1,607 plants at WHF HQ at Cat Spring, and 1,611 plants at TNC Texas City Prairie Preserve.

54 Yellow Indiangrass populations including 22 commercially available varieties totaling 575 plants at WHF HQ at Cat Spring and 545 plants at TNC Texas City Prairie Preserve.



Evaluation plots located at WHF HQ in Cat Spring. In the foreground are the 2019 planted evaluations of Silver bluestem and Yellow Indiangrass, and the top right are those of Little bluestem and Knotroot bristlegrass planted in 2018.

Outreach and Education

TNS strives to inform the public on the importance of quality seed and best management practices for planting and maintenance. The CPNSP is committed to establishing itself as a reputable deliverer of sound management practices through various avenues of outreach. To date, we have covered various topics through public speaking, newsletters and articles, as well as field days and evaluation plot tours. As of Sept 18th we have reached 7,964 individuals with our efforts.



Photo courtesy of Tim Siegmund TPWD at the NAPC Field Tour in 2019



2019 Meeting and Discussion

We would like to have another meeting of the committee in 2019. Below are some of the things that I'd like to spend some time on while we are together.

- Hash out suggestions regarding additional species evaluations to be added in 2020.
- Explain the seed increase process and next steps once selections from the first evaluation projects are made after this growing season.
- Discuss seed demand sectors. Once releases are made, market development to encourage commercial seed production is essential.

Although a location and date have not been set I'd like to visit one of the CPNSP evaluation plots to give everyone a more clear understanding of the process.