

# Michaela G. Cross — BRI Undergraduate Researcher

My name is Michaela Cross and I am from Decatur, Texas. Before transferring to Sul Ross State University, I attended North Central Texas College, where I earned an Associate of Arts. I am currently a senior at Sul Ross and am working on a double major in biology and range management, with a dual emphasis on conservation biology. I currently work for West Texas Native Seeds (a project of Texas Native Seeds) as a student worker and I am conducting my research project as a part of this program.



## Evaluation of Arizona Cottontop and Green Sprangletop Seed Sources

1 January — 31 August 2017

Arizona cottontop (*Digitaria californica*) and Green sprangletop (*Leptochloa dubia*) are two common perennial grasses found throughout west Texas in a variety of ecological sites. Both species are available from various seed dealers and seed producers in the commercial seed trade; however, adaptation of these commercial varieties has not been extensively tested for use in west Texas.

This research will build on two previous studies: the TxDOT study, conducted by Texas Native Seeds at seven different sites across Texas; and the Arizona cottontop study, conducted by the USDA-NRCS at the Tucson Plant Materials Center (Tucson, AZ).

The purpose of my project is to: 1) look for any plant performance differences within and/or between accessions of commercial varieties, and formal and informal releases of green sprangletop and Arizona cottontop in common garden studies, and determine the best performers of those accessions assembled; 2) determine if any differences exist between plants produced from commercial varieties of 'Van Horn' green sprangletop and those produced from the foundation seed of that variety; 3) if the data suggests, make a recommendation that seed producers grow 'Van Horn' green sprangletop from breeder seed of the original foundation seed source in *certified* fields; and, 4) if the data suggests, make a recommendation to the West Texas Natives program to move ahead with a full evaluation of Arizona cottontop in order to research and develop a west Texas-specific germplasm release.



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