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Project Title: *Evaluation of Sweet Sorghum Hybrids as a Bioenergy Feedstock; Germplasm Development, Agronomic Practices, and Conversion Efficiency*

DR. WILLIAM ROONEY

Project Outcomes:

- Sweet sorghum elite hybrids produce fresh biomass and sugar yields similar to the traditional cultivars while overcoming the seed production limitations.
- Sweet sorghum seed parents have increased seed yields and reduced height which allows for higher yield of seed in seed production.
- Sweet sorghum hybrids perform comparably to, if not slightly better than existing sweet sorghum hybrids.
- Yields in more eastern regions of the testing were higher than those observed in more western region of the testing area especially in dryland conditions.
- Irrigated production was more stable over years and environments, indicating that the availability of irrigation may be important to insure productivity in all years.
- Given the inability to stabilize the juice for later processing, millers will require as long a harvest season as possible to facilitate extraction and conversion. Thus, while yields were certainly good enough in eastern Kansas, Oklahoma and Central Texas, the duration of harvest season drops as production is farther north. Thus, it is more likely that initial production will be in more Southern regions of the area rather than farther North.



Other Sources of Funding:

Each of the PI and Co-PIs involved in this project had their respective institution (Texas A&M University, Oklahoma State University, Kansas State University, and New Mexico State University) matched salary and fringe benefits via cost share.



PI: Dr. William Rooney

Texas Agricultural Experiment Station
Soil and Crop Sciences

Co-PI: Dr. Jürg Blumenthal

Texas Cooperative Extension
Soil and Crop Sciences

Co-PI: Dr. Brent Bean

Texas Cooperative Extension
Texas Ag Experiment Station
Soil and Crop Sciences

Co-PI: Dr. Danielle Bellmer

Oklahoma State University
Biosystems and Ag Engineering

Co-PI: Dr. Ray Huhnke

Oklahoma State University
Biosystems and Ag Engineering

Co-PI: Dr. Donghai Wang

Kansas State University
Biological and Ag Engineering

Co-PI: Dr. Mark Marsalis

New Mexico State University
Extension Plant Sciences

Co-PI: Mr. Rick Kochenower

Oklahoma State University
Oklahoma Panhandle Research and Extension Center

Co-PI: Dr. Scott Staggenborg

Kansas State University
Agronomy

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