



U.S. Department of  
Agriculture  
National Institute of  
Food & Agriculture



## Project Title: Heat and Drought Effects on the Oil Formation of Southern Great Plains Winter Canola

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#### Project Goal

The long-term goals of this project are to enhance national energy security through the development of a bio-based canola economy, promote sustainable production of wheat and canola through crop rotation, and coordinate efficiency of bio energy research and development by establishing canola oil as a potential new energy source.

#### Objectives

1. Quantify drought and heat stress impacts on the formation and quality of oil in canola seeds.
2. Identify cultivars that produce greater oil content and oil yield under challenging weather conditions.
3. Endorse best production practices under limited irrigation and dryland conditions that enhance oil formation.
4. Managing limited irrigation resources to benefit canola yield, oil content, and oil yield.

#### Expected Outcomes

1. The advancement of a bio-based canola economy for the USA.
2. The development of heat and drought resistant canola cultivars that produces great oil content and oil yield. A deliverable will be a screening tool to identify commercial or experimental cultivars that maintain greater oil content under stress.
3. Sustainable canola acreage growth as a rotation crop with wheat. Documented benefits to a wheat-canola rotation exist. Improved understanding and implementation of best management practices such as harvest management and limited irrigation production will lead to greater comfortability by the producer.



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