



**BRASSICA CARINATA- A WINTER OILSEED CROP FOR THE SOUTHERN FARMER
PRODUCING A NOVEL “DROP-IN” BIOFUEL**

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Development of novel energy crops, including advances in molecular genetics

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Abstract

Brassica carinata is a promising oilseed crop with great potential for profitable cultivation in the Southeast. Carinata, commonly called “Ethiopian mustard,” is native to the Ethiopian highlands. Carinata is a member of the mustard family, Brassicaceae, and has a high glucosinolate content. Carinata is agronomically superior to other oilseed crops with its high oil content (more than 40%), larger seed size, and lower lodging and shattering rates. It is heat and drought tolerant and can withstand weather extremes. However, it prefers cooler temperatures, making it well suited as a winter crop in the Southeast. Carinata’s high oil content and favorable fatty acid profile make it suitable for the biofuel industry, especially as a biojet fuel. The UF/IFAS North Florida Research and Education Center (NFREC) in Quincy, Florida, has been working to identify advanced carinata genotypes that are high yielding (seed and oil), disease resistant, early maturing, and adapted to the region. The research in Florida is being done in conjunction with Agrisoma Biosciences Inc., a crop company that has the world’s largest collection of carinata germplasm. Carinata has been grown commercially for several years on the Canadian prairie as a summer crop and more recently in the US northern plains. For the past three years, we have evaluated various strategies that allow incorporation of carinata into prevalent cropping systems with minimal modification to existing infrastructure. In the fall of 2014, 3500 acres were

contracted in the Florida, Georgia, Alabama area for commercial production with 50,000 acres planned next year.