Camelina (Camelina sativa (L)) is an old-world crop used primarily for oil. It can be grown under semi-arid conditions. Breeding efforts have resulted in very few improvements. It is a member of the Brassicaceae or mustard family and related to canola and cole crops. The seed is about 35% oil, and the oil is high in omega-3 fatty acid, which has been cited as having health benefits. Camelina meal can be fed to livestock, producing eggs and meat that are higher in omega-3 fatty acids. Interest in camelina is not only due to its high level of omega-3 fatty acids but because it is a renewable source of feedstock for biodiesel and advanced biofuels.

Camelina has a wide range of adaptability, fitting into many different cropping systems due to its short period of growth (70–90 days). Camelina seedlings can survive intense cold (into the teens) and can be planted before or after main cash crops in southern latitudes in either the spring or fall. Even though the crop has been grown for thousands of years, research related to production is limited and will develop as its value increases as a renewable energy crop. Many of the production practices being used are taken from related crops (mainly canola). In dry climates, camelina can be grown in fields lying fallow between other crops, allowing the fields to produce income and serving as a renewable energy and rotation crop.

Since camelina breeding efforts have been limited, only a few varieties are available. It can be established with no-till drills in firm seedbeds or with a grain drill on prepared land. A cultipacker seeder may be the best implement for establishing stands for new growers on prepared seedbeds since seeding depth is critical to establishment and deep planting can lead to stand failures. From 3–10 lbs/A of seed can be planted at a depth of ¼ – ½ inch deep. Seed size is small, about 400,000–500,000 seeds per lb. Getting a stand is a critical component of production.

Figure 1. Wild radish between rows of camelina in Florida

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At present no broadleaf weed herbicides are labeled for use on camelina. Therefore, it is essential to plant into a weed-free seedbed. The growth period of wild radish (*Raphanus raphanistrum* L.) may coincide with camelina production in Florida Fig. 1. Fields with a history of wild radish infestations should be avoided. Little is known about impacts of residual herbicides from other crops on camelina establishment. Currently, most university researchers working on camelina suggest that the same restrictions on residual herbicides for canola be followed for camelina. Likewise, it is suggested that camelina not be planted more than once every three years in the same field to prevent the spread of sclerotinia stem rot and other diseases common to the mustard family.

Seed yields of 1000–1500 lbs/A or more have been reported with N application rates of 60–90 lbs/A. Soil tests should be followed for other nutrients. No nutritional trials have been conducted in Florida, and there may be no yield response to phosphorus and potassium when camelina is planted in rotation with well fertilized crops. Direct harvesting can be done with a grain combine when pods turn yellow. Like canola, reel speed is critical to keep shattering low during the harvest operation. Recommended moisture for seed storage is 8% to minimize damage and spoilage.

Little is known about camelina production in Florida at the present time. However, research is underway to determine optimum planting dates and nitrogen rates and other management practices. Some breeding work for yield or oil content is being done because camelina offers potential as a short season biofuels crop that could fit into many different cropping systems in Florida. No data are available on the impact of residual herbicides on camelina grown after harvest of peanut, cotton, or other row crops. Information will be provided as we learn more about production, management, and markets. Small seeded crops like canola and camelina can shatter if not harvested at the proper time. In 15 years of canola research and production, volunteer camelina plants never presented a problem in subsequent crops.