

## Successful Carinata Stand Establishment

Establishing healthy and vigorous carinata stands are critical to achieving maximum yields and profitability. Any agronomic management or environmental factor that may reduce early season stand health may also reduce yields. Successful stand establishment is the result of an integrated management plan that focuses on seed quality (germination, purity and vigor), planting date, seeding depth and rate, row spacing, tillage and seedbed preparation, early season fertility and weed management and herbicide carryover.

### *Planting Date*

Carinata should be planted about 4-5 weeks before the first frost. In the Florida Panhandle, South Alabama, and South Georgia, it is recommended that carinata be planted between early- to mid-November. Earlier and later plantings may incur high incidence of freeze damage, reduced stand density, and reduced yield. Late plantings may result in increased pest damage and late harvest.

### *Seeding Depth*

Carinata should be planted at 0.5 inches deep because of its small seed size on medium textured soils. Fields may be prepared with a drag attached to a cultivator frame or rolled to establish a level firm seedbed to ensure good seed-to-soil contact. If broadcasted, light harrowing or cultivating is suggested to ensure there is good seed-to-soil contact.

### *Seeding Rate*

Carinata should be planted at 5 lb/ac with a target end of season plant density of 6 to 10 plants per square foot. A lower seeding rate (4 lb/acre) is suggested if air or vacuum planters are used. Increased plant densities may reduce the number of days needed to reach maturity as well as reduce yield. If seedbed conditions are less than optimum, higher seeding rates should be considered.

### *Row Spacing*

Row spacing of 7.5 to 15 inches is recommended, however the crop can also be broadcasted. From small plot research, row spacings wider than 15 inches were found to lower the plant's ability to compete with weeds and also results in significant yield reductions.

### *Tillage and Seedbed*

Previous cropping history and farm management will influence the type of tillage necessary to prepare the seedbed. Carinata can be planted into conventionally or minimally tilled soil, or it may be no-till planted in standing stubble. A firm clod-free seedbed allows for good seed-to-soil contact, germination, and uniform emergence. If deep tillage is used (turning plow or chisel plow), the area may need to be firmed, allowed sufficient time for a rain, or irrigated with enough water to create a firm seedbed.



Avanza 641 carinata planted at 5 lb/acre at 12" row spacing in tilled well drained sandy loam at NFREC, Quincy, FL. Photo taken January 4, 2018.



### *Planting Equipment*

Carinata can be broadcasted or planted with airflow and drill seeders. Seed drills should be calibrated to ensure consistent seeding depth and rate. Press wheel drills, cultipackers or other roller-type devices help create a firm seedbed to increase seed-to-soil contact.

### *Soil Moisture*

Adequate soil moisture is required in the top inch of soil for germination and emergence.

### *Manage Weeds*

Early season weeds can be controlled with preplant burndown and pre-emergent herbicides to reduce early season competition with weeds. Carinata will outcompete many winter weeds in later stages of development. *Always use labeled herbicides.*

### *Early Season Nitrogen Management*

Depending on year, excessive early season N application promotes luxuriant growth which may render the plant more susceptible to freeze injury and reduce stand count. At plant N applications should be limited to 20 lb N per acre.

### *Herbicide Carryover*

Carinata can be severely injured by herbicides commonly used for weed control in row crops, so it is critical to consider the herbicide history of the field before planting. Carinata will germinate, however, symptoms of herbicide injury will appear after the first set of true leaves or later.