

Field Selection and Preparation

Canola has similar moisture requirements as cereal grains and can be grown on a wide range of soil types. It is best suited to clay-loam soils that do not crust.

If grown on soil with poor internal drainage, good surface or subsurface drainage is essential because canola cannot tolerate standing water or waterlogged soils. Do not till soils when they are too wet because, as soil clods dry, getting the proper soil-to-seed contact will be difficult. In regions of the state where the risk of heat and drought stress is high, avoid planting on light or sandy soil.

Canola is less tolerant to drought than small-grain crops. Canola should not be planted on salt-affected soils because it is less tolerant than cereal grains.

Canola can be grown in a no-till or conventional tillage cropping system. Avoid excessive tillage in the spring to prevent the seedbed from drying out. Canola is very susceptible to soil crusting. The seedbed must be firm for seeding. Seed must be placed in moist soil. This is critical for rapid emergence. We do not recommend seeding canola into dry or excessively wet soils.

Planting Guidelines

Canola can be planted with a variety of seeding equipment. However, having good depth control is important. The optimum depth to seed canola is ½ to 1 inch. Seeding depth should not exceed an inch

with small-seeded canola varieties. Large-seeded hybrid varieties may be seeded deeper than 1 inch; however, planting depth should not exceed 1½ inches. Seeding canola where a uniform depth can be obtained always is best. We do not recommend broadcasting or spreading canola seed. In most cases where this has been tried, uneven emergence and poor stands have occurred. If broadcasting the seed is considered, incorporating the seed with a harrow is essential.

In no-till, we recommend an even distribution of residue on the surface over the seed slot to maintain moisture in the seed slot and allow shallow seeding.

The minimum soil temperature for germination is 38 F. Soil temperature will determine the length of time from planting to emergence. If soil temperatures average in the low 40s after planting, canola will take 17 to 21 days to emerge. If temperatures average in the low 50s, canola will take approximately 10 days to emerge.

Planting Dates

If possible, canola should be planted prior to planting cereal grains. To maximize yield, canola should be planted in April to early May. Planting date research indicates that delayed planting beyond May 5 in the southwestern region, May 15 across most of the state and May 31 in the northeastern region may result in yield reductions. When deciding whether to replant or if planting is delayed due to weather, canola should

not be considered for planting later than May 15 in the southern and southwestern regions of the state, no later than May 31 in the east-central and west-central regions of the state and no later than mid-June in the northern and northeastern regions of the state. Canola is very susceptible to heat and drought stress during flowering, and canola seedlings tolerate temperatures as low as 24 F.

Rates and Establishment

Canola seeding rates will vary depending on seed size. Seeding rates will range from 4 to 8 pounds per acre for Argentine varieties and 3 to 6 pounds for Polish varieties. A common rule of thumb for seeding canola is 5 pounds per acre or 10 acres per 50-pound bag. A major difference occurs in seeds per pound among canola varieties. Adjust for these differences to avoid too thick or too thin of a stand.

The optimum seeding rate is 600,000 pure live seeds (PLS) per acre, which equates to 14 PLS per square foot. Knowing the number of seeds per pound and establishing a seeding rate by plant population is very important for a grower. As a general rule for the Argentine canola, hybrids will contain 75,000 to 100,000 seeds per pound, whereas open-pollinated varieties will contain a range of 135,000 to 160,000 seeds per pound. Seed counts for Polish varieties usually will be greater than 200,000 seeds per pound.

Seeding rate/plant population research indicates that planting 14 PLS per square foot should establish an optimum stand of eight to 12 plants per square foot. Four plants per square foot are considered a minimum stand for canola. However, with herbicide-tolerant canola varieties, stands can be as low as two plants per square foot, providing weeds are controlled and plants are uniformly spaced with no large areas where canola is not growing.

Dormant Seeding

Dormant seeding of canola can be defined as seeding canola in cold, nearly frozen soil late enough in the fall to inhibit germination. The objective is that the seed remains dormant after planting until early spring. As conditions become favorable in the spring, the canola germinates and emerges earlier than spring-planted canola. Research results have shown that fall seeding canola is a high-risk practice, especially in growing areas with variable winter temperatures and soils having a potential to dry out significantly during the winter.