

Calculating Canola Seeding Rates

Establishment is the greatest challenge in growing canola, because it is sown shallow where soil is most subject to rapid drying.

Seeding rates and plant counts are critical because of wide differences in seed size with newer varieties and seeding by pounds per acre can really throw off the actual plant stand count.

An error in seeding can be a costly mistake.

Seeding rates need to be based on the 1000 kernel seed weight (grams per thousand seeds). Begin with the desired final plant stand. In canola the optimum plant stand is 7 to 10 healthy plants/sq foot (5 plants/ft² is minimum). In 7.5 inch rows this is equivalent to 4.5 to 6 plants per foot of row.

Target seeding rates need to account for large differences in seed size between varieties and seed lots. Under ideal seeding conditions a 75% emergence rate is reasonable, but under average conditions a 60% emergence rate is a reasonable reference point to calculate seeding rates.

CANOLA SEEDING RATE (lb/ac)				
1000 Seed Weight gm	Target Seeding Rate lb/acre		Grams of Seed per opener per 100 feet (30.5 m) of travel (7.5 inch rows)	
	75% Emergence	60% Emergence	75% Emergence	60% Emergence
	6.7 seeds per foot of row	8.2 seeds per foot of row		
2.5	2.6	3.1	1.7	2.0
3.0	3.1	3.8	2.0	2.5
3.5	3.6	4.4	2.3	2.9
4.0	4.1	5.0	2.7	3.3
4.5	4.6	5.6	3.0	3.7
5.0	5.1	6.3	3.3	4.1
5.5	5.7	6.9	3.7	4.5
6.0	6.2	7.5	4.0	4.9
6.5	6.7	8.2	4.4	5.3

Note: Use 75% emergence rate under good/optimum seeding conditions.

60% emergence is based on 90% germination and 32% seed mortality when seeding under less than ideal conditions including soils prone to crusting, very early seeding or poor depth control.

These seeding rates are based on final plant population of 8 plants/ft².

Remember these key points when seeding...

- ➔ Calibrate seeding equipment before heading to the field! Bulking of seed with MAP (11-52-0), pelletized sulphur or corn cob grits are options for improving seeding rate accuracy. Seeding through the grass seed box is another option, with the seed tubes inserted into the disc openers.
- ➔ Check fluted cup opening across the drill. Watch for excessive grinding of seed in seed cup, especially under low humidity conditions.
- ➔ *Speed kills.* Even emergence is more important than plant spacing. Drill bounce is more of a problem at speeds over 5.0 mph. Trials have shown that compared to 5.0 mph, a speed of 5.5 mph required an extra 1.5 lb/ac seed to achieve the same plant population.
- ➔ Ideal target seeding date is when soil temperatures are 5^o C or higher, but let soil conditions and the five to seven day weather forecast guide you on when to seed.
- ➔ *Seed 1/2" to 1" deep* into a firm and slightly cloddy seedbed, keeping moisture near the surface. Deeper seeding reduces emergence and vigour, decreases seedling and root growth, and increased risk of crusting issues. Packing before and after planting has given the best results in dry years. Be aware that packing following planting covers over the seed furrow, and can place seed deeper than intended. If moisture is more than five cm (2 inches) deep, it is advisable to wait for moisture. Avoid having the seed start to germinate and run out of moisture.