

Seed Quality

Overview

Soybean seed produced during summers with high heat and drought conditions can lead to a wide range in germination rate of seed lots available for the next growing season. The quality of some seed lots may fall below customary industry standards. Learn about factors causing reduced germination and adjust seeding rates, if necessary.

What you should know

- Seeding rates for optimum soybean yield potential vary by row width, geography, local conditions and environments. Get local recommendations for ideal seeding rates for specific varieties and yield goals.
- Check seed tags for each seed lot to determine seed germination percentage. The acceptable industry standard for soybeans is 90%.
- Adjust seeding rates for seed tagged at less than 90% to ensure adequate plant stands. Divide the planned seeding rate (seeds per acre or seeds per row) by the percent germination listed on the seed tag. *(See table.)*
For example, if the planned seeding rate is 160,000 seeds per acre and the seed tag lists the germination percentage as 85%, divide 160,000 by 0.85 to get the correct seeding rate of 188,235 seeds per acre.

Action steps

1. **Reduce early-season stress:** Reduce stress on lower-germination seeds during the germination and emergence stages of growth by not planting in cool, wet soils. Plan to plant highest-quality seed lots first, then plant lesser quality lots when soils are warmer and less saturated.
2. **Handle with care:** Lower-germinating seed lots are fragile and should be handled carefully to prevent further damage to individual seeds. Treatments applied to seed can lessen the potential for early-season stress, but do not improve quality.

Seeding Rate Adjustments for Varying Levels of Germination

Row Width	Percent Germination as Given on Seed Tag		
	90% or Better	85%	80%
	Seeds per Acre (Seeds per Foot of Row)		
7.5 inch	200,000 (3.0)	235,000 (3.5)	250,000 (3.0)
7.5 inch	144,000 (4.7)	169,000 (5.53)	180,000 (5.88)
7.5 inch	130,000 (7.4)	153,000 (8.71)	163,000 (9.25)

Courtesy of Purdue University.

Calculate seeding rates when using lower-quality seed.



30-Second Summary

- Check the tags of each seed lot to determine germination percentage and seed size.
- Adjust the seeding rate for seed tagged at less than 90% to achieve optimum plant populations for high yields and profitability.

NOTES:
