



Technical Bulletin

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Managing Reduced Germination Soybean Seed

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This past growing season has influenced soybean seed germination across the entire seed industry. Reduced germination soybeans are not ideal yet can be managed to still be profitable.

Causes of Reduced Germination Seed

Weather is the biggest influence on reducing seed germination. Wet conditions during the growing season increased pressure from fungal diseases like Cercospora, and Pod and Stem Blight. As wet weather conditions extend into harvest, they continue to cause issues. Frequent wetting and drying causes the pods to split open and exposing the seed to the elements. Increasing potential of environmental and mechanical damage to the seed.

Management of Reduced Germination Seed

Use a High-Quality Seed Treatment

A seed treatment will not improve seed germination but will preserve it by reducing seed and seedling mortality by protecting the seed from soil pathogens and insects.

Plant in Warmer Soils

Soybeans will germinate at minimum soil temperature of 50°F. When planting at this temperature emergence will take about 3 weeks after planting and with potentially lower germination. Optimum soil temperature for emergence is about 77°F. Emergence time is reduced to about a week and can have a higher germination percentage. However, waiting to optimum soil temperature can also reduce the yield advantage of early planting. Balance the soil temperature and calendar date to maximize yields.

Place in Productive Fields

Soil productivity is a big factor in soybean seeding rates. In productive soils, soybeans can produce more pods and seeds per pod and lower plant populations have less effect on yield. On less productive ground, number of soybean pods and seeds/pod are reduced, and more soybeans plants are needed to compensate. By planting reduced germination seed, in more productive fields, yields will be less sensitive to plant population.

Handle Seed Gently

Soybean seed germination can be affected by physical damage the seed may experience when handling, especially on bulk seed handling equipment when transporting and filling the planter. By reducing auger/belt speed, lowering augers to minimum height to reduce the height from which seed drops, and making sure the auger is as full as possible help to keep the seeds from moving too much, minimizing physical impact.

Sources and Additional Information:

Modern Corn and Soybean Production. 1st Edition. Hoeft, Nafziger, Johnson, & Aldrich

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