



How Much Do Skips Hurt Final Yield in Soybean?

Many of us agree that soybeans are normally over planted and that we have a high % more plants in the field than what we need for maximum yield. However our concern with lower germinating soybeans probably has two questions. What is the vigor of the seed that does germinate and what are my chances of having large skips.

The first question about vigor is very real. Because of the mechanical damage it is somewhat difficult to sort the abnormal seedlings from a low vigor seedling. Using the warm germination sand test gives us a better picture of the seeds ability to push through soil and therefore, while the germinations are lower, we feel confident that the seed that does grow in this test will have the ability to emerge. Field emergence in soybeans is never as high as germination, but here are some suggestions that can improve field emergence.

1. Wait for near optimum soil temperature of 65° F to plant.
2. Avoid cool damp soil conditions. Give the beans an environment that they can grow as quickly as possible in.
3. Avoid planting before moderate to heavy rain. While the rain can cause crusting it can also cause these extremely dry soybeans to absorb water too fast.
4. Plant as shallow as possible but maintain good seed to soil contact and cover.
5. Handle every seed (bag) like it is an egg.
6. If seed is not planted until air temperatures are constantly above 80° F, move the seed to storage that remains cooler with higher humidity. Don't dry this seed out more than it already is.
7. Remember that proper planting speed will increase accuracy of spacing for seeds.
8. While this year's seed is not the best seed, it is the best that we have to work with this year.

A second question relates to the skips in the field that one might expect to find. One can compute a statistical probability we can share, however field conditions will still cause variance, especially with uneven soils. We would expect the following results if 7 out of 10 seeds emerge and we are planting 10 seeds per foot.

- We have a 9.0% chance of having two seeds in a row will not emerge.
- We have a 2.7% chance of having three seeds in a row will not emerge.
- We have a .8% chance of having four seeds in a row not will emerge.
- We have a .2% chance of having five seeds in a row will not emerge.

We would expect the following results if 5 out of 10 seeds emerge and we are planting 10 seeds per foot.

- We have a 25% chance of having two seeds in a row will not emerge.
- We have a 12.5% chance of having three seeds in a row will not emerge.
- We have a 6% chance of having four seeds in a row will not emerge.
- We have a 3% chance of having five seeds in a row will not emerge.

CREDITS: