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Soybean seed size is smaller this year

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Soybean seed size is smaller this year

Abstract

We have just started to receive the varieties that we will use for our research this year, and it looks like seed size is smaller than I expected. For example, I received two different varieties from the same company with seed size of 3,800 seeds per pound as compared to 2,500 seeds per pound in a normal year. Seed size varies among varieties but also depends on the environment where the seed is grown. Therefore, we will see some variability in seed size this year even within the same variety.

Keywords

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INTEGRATED CROP MANAGEMENT

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This year, the small seed size was caused by the drought and above-normal temperature during the seed filling period last August. However, it is important to remember that seed size normally does not affect emergence or yield potential. Therefore, smaller and larger seeds of a same variety will have the same yield potential. Fortunately, seed quality and germination rates for this year are excellent.

When planting a smaller seed, it is important to consider a few aspects concerning seed germination and growth. For example, a small soybean seed planted in the ground cannot derive the energy it needs for growth from photosynthesis. The seed is, therefore, totally dependent on its reserve of the energy produced by the parent plant. The more energy the seed contains, the longer the seedling can continue to grow without becoming photosynthetically self-sufficient. In practice, this means that a large seed with a considerable amount of stored energy can usually be sown at a greater depth than a small seed with a limited energy reserve. Therefore, seeding depth is even more crucial this year because of the small seed-size. Optimum seeding-depth is 1 to 1.5 inches.

Fortunately, we are buying soybean seeds by weight and we can, therefore, cover more acres per bag in 2004. This spring, it is very important to account for the smaller seed size when calibrating the planter or the drill. This is particularly important if you are using a vacuum planter or a drill since there is not a lot that we can adjust using a finger pickup planter.

Soybean yields often increase, up to a point, with increasing plant population. However, soybean yield responses to plant population are generally small and often inconsistent. Research conducted in Iowa, in 2003, showed the same soybean yield with 125,000 and 225,000 plants per acre. In general, however, increasing plant population will increase plant height and result in greater yield losses from lodging. A high plant population may also make your field more vulnerable to white mold if you have a history of that in your field.



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