

# Soybean Seed Size Does Not Affect Yield Performance

By Bill Wiebold

Seed industry personnel have been discussing selling soybean seed by count rather than by weight for several years. A few companies already offer soybean seed by count, but the practice is far from standard. Indications from the seed industry are that soybean varieties that possess the new Roundup Ready 2 Yield™ trait will be sold by seed count and not weight.

Although details may change, the seed unit for pricing purposes of Roundup Ready 2 Yield™ will be 140,000 seeds. The common unit for soybean seed pricing has been the 50-pound bag. Bulk



Soybean seeds.

soybean seed sales have become common, but these large units are also priced on weight. A 50-pound bag will contain 140,000 seeds if seed weight is 2800 seeds/pound. A seed size of 2800 seeds/pound is about average, but seed size varies considerably among varieties and is also influenced by the weather conditions during seed-filling. Under current market practices, changes in seed size meant changes in the number seeds in the bag. If seed size was slightly smaller than normal at 3200 seeds/pound, a 50-pound bag would contain 160,000 seeds. Under the new market practice, a seed size of 3200 seeds/pound would mean that 140,000 seeds would weigh 43.8 pounds.

Some soybean farmers may have purposely chosen varieties with a small seed size because they would purchase more seeds for the same price. This lowers seed costs per acre if they remember to calibrate planters by seed count and not weight. For this reason farmers may resist soybean seed purchases by seed count.

I cannot advocate either method of marketing soybean seed, but there is at least one advantage of purchasing soybean seed by seed count. Farmers recognize the value of accurately calibrating planters to precise seed numbers rather than some general seed weight. Knowing the seeding rate in seed number and purchasing seed by count allow growers to accurately determine the amount of seed of each selected variety needed to plant their land area, regardless of seed size. Accurately purchasing the correct amount

of seed saves money and effort and may reduce the amount of returned seed. Although many companies allow seed returns, these returns add hidden costs to seed prices. Returning treated seed is much more difficult because there are limitations to uses other than planting for treated seed. As soybean seeds become more expensive, protecting the seeds with seed treatments is more common.

Purchasing seed by count may allow attention to shift from seed size to more important variety characteristics. Yield potential and pest resistance are far more important than seed size in determining profitability from soybean production. In most situations, seed size does not affect emergence percentage, seedling vigor, or yield potential. Smaller seeds



Soybean seeds.

have less stored reserves and planting depth control may be more important. Seeds that are small because of premature maturity due to extreme late-season stress may be less vigorous than normal because physiological systems required for germination did not develop properly. Except for these extremes, seed size should not be a factor in variety selection or seed purchases.

**Bill Wiebold**  
(573) 882-0621