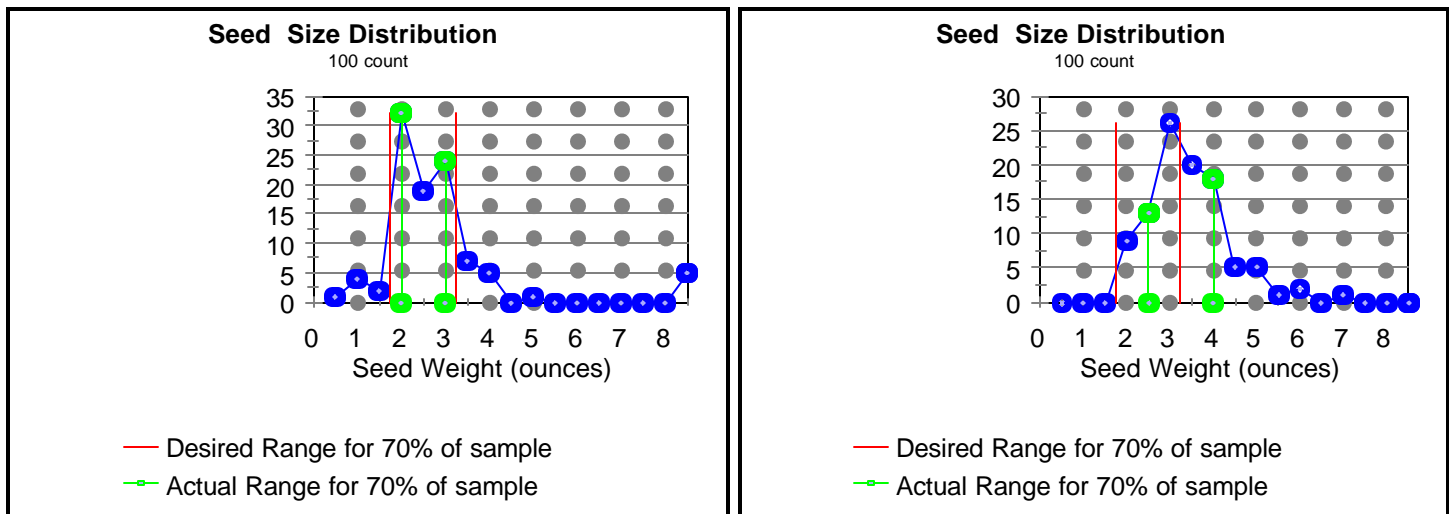




## Potato Seed Size... Can It Affect Yield?

Having the right size seed can make a big difference in your seed costs. Oversized seed creates a poor stand, reducing the number of plants per acre. Seed that is small results in less vigorous plants and many more doubles and leads to reduced yields at harvest. How do you get a more uniform stand? You first need to calibrate your cutter for better seed size distribution. A planter will have fewer skips and doubles when the seed is even in size. This will lead to a more uniform stand. When a stand has a uniform spacing, it can help you achieve those higher yields.

Below is an example of two seed profiles, the first with an excellent seed distribution, while the second shows a poor seed distribution. These graphs have been calculated with a total of 100 tubers each. The average seed size has been calculated at 2.5 oz on the first graph and 3.5 oz on the second graph. The first graph shows 70% of the seed in the 1.75 to 3.25 ounce ranges, which is preferable. The second graph shows only 48% of the seed in the optimal 1.75 to 3.25 ounce ranges.



The seed used in the second seed profile would create a stand that is less uniform. The planter would have problems trying to plant the larger seed at an even spacing. The result would be a high number of skips and doubles throughout the field.

The average size of the seed also has a big effect on the amount of seed needed to plant the field. As the weight of each seed piece increases, the total number of sacks needed per acre also increases. If you have an ideal seed size of 2.5 oz seed, it would take approximately 24 cwt/acre to get a plant population of 15,600 at a 12 in spacing. If the seed has a 3.5 oz average, then it would take 33.5 cwt/acre to get the same plant density. There would be an added cost of \$76/Acre because 9.5 extra sacks, at a cost of \$8.00/sack, are needed for planting. Even a slight increase in tuber size can make a difference. If the weight of the

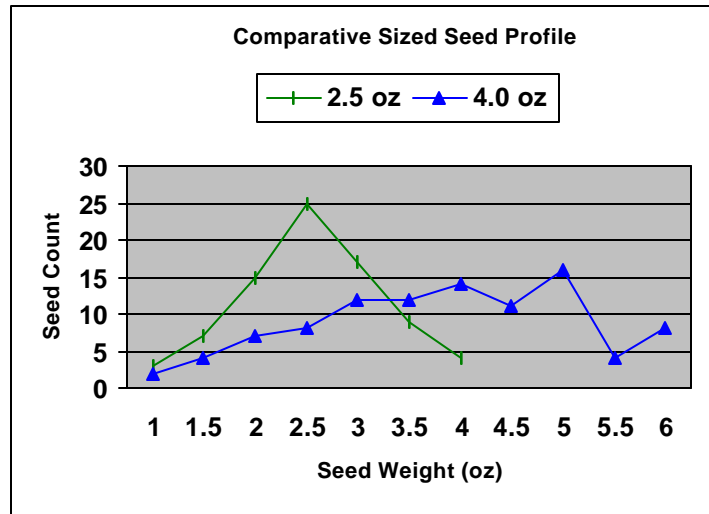
## Seed Profile Evaluations

(Continued from page 1)

seed increases by 0.5 oz, from 2.5 to 3.0 oz, the cost would increase by \$40/acre (with \$8.00 seed). When this is totaled for a 120 acre field, the increased cost of seed could be \$4,800.

The graph to the right shows a seed profile that has an average seed weight of 4.0 oz. and an ideal 2.5 oz average. The 2.5 oz profile has a nice curved shaped, while the 4.0 oz profile has a steady increase, with lots of variability in the sizes.

An ideal seed profile should have 15% of seed at less than 1.75 oz, 70% should be 1.75 – 3.25 oz., and 15% should be greater than 3.25 oz. The ideal average size should be 2.5 oz seed weight.



When you start cutting or planting your seed, Agro can perform a seed potato size evaluation. This evaluation gives you a graph of your seed profile as well as the average seed size and the percent of tubers in each weight classification described above. From these numbers, we can then calculate the amount of seed that will be needed to plant one acre. Adjustments to your cutter may be necessary if your seed is too large or small. If you have any questions or would like to have a seed size evaluation performed on your seed, feel free to call the Agro office.



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