The Agrower

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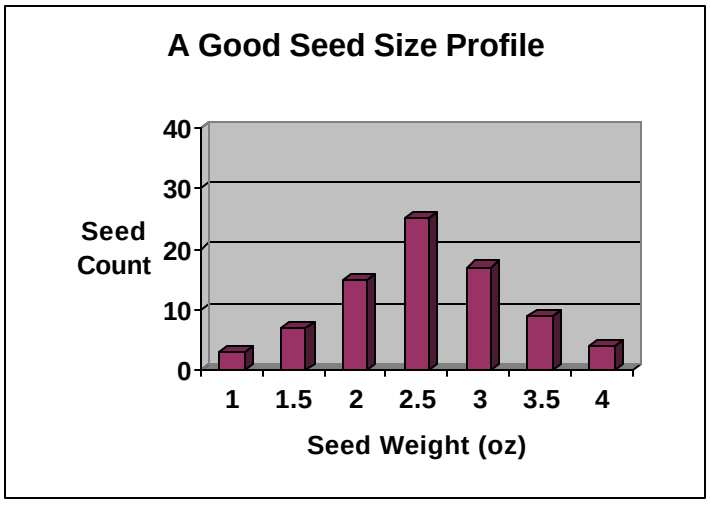
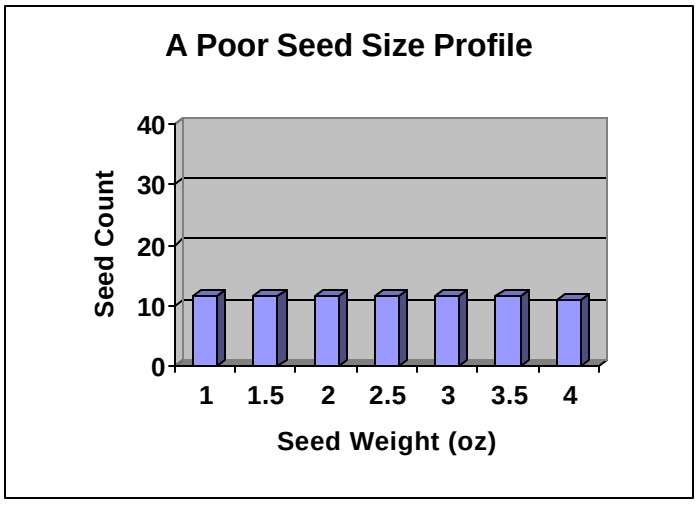
Agro Engineering, Inc.

Seed Size Can Affect Yield

Having the right seed size can make a huge difference on your seed bill. Having 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. All this adds up 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 an even size. This will lead to a more uniform stand. When a stand has a more uniform spacing, you can achieve those higher yields.

Below is an example of two seed profiles, one with an excellent seed distribution while the other one shows a poor seed distribution. These graphs have been calculated with a total of 80 tubers. The average seed size has been calculated at 2.5 oz. The first graph shows 70% in the 1.75 to 3.25 ounce ranges, which is preferable. The second graph shows only 43% in the 1.75 to 3.25 ounce ranges.





The seed that comes from the second seed profile would create a stand that is non-uniform. The planter would have problems trying to plant 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 15600 at a 12 in spacing. If the profile has a 4.0 oz seed average, then it would take 39 Cwt/Acre to get the same plant density. There would be an added cost of $120/Acre if 15 more sacks are needed at a cost of $8.00/sack. Even a slight increase can make a difference. If the weight of the seed increases by 0.5 oz, then the cost would increase by $40/Acre with $8.00 seed. When this is totaled for a 120 acre field, the in-

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Seed Profile Evaluations

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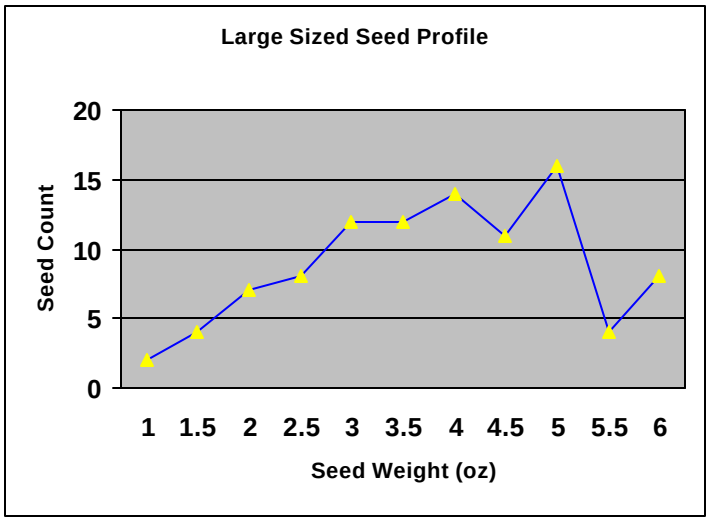
creased cost of seed could be $4800. The graph to the right shows a seed profile that has an average seed weight of 4.0 oz.



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

When you start cutting 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 an acre. Adjustments may need to be made to your cutter 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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