



Water Resource Monitoring

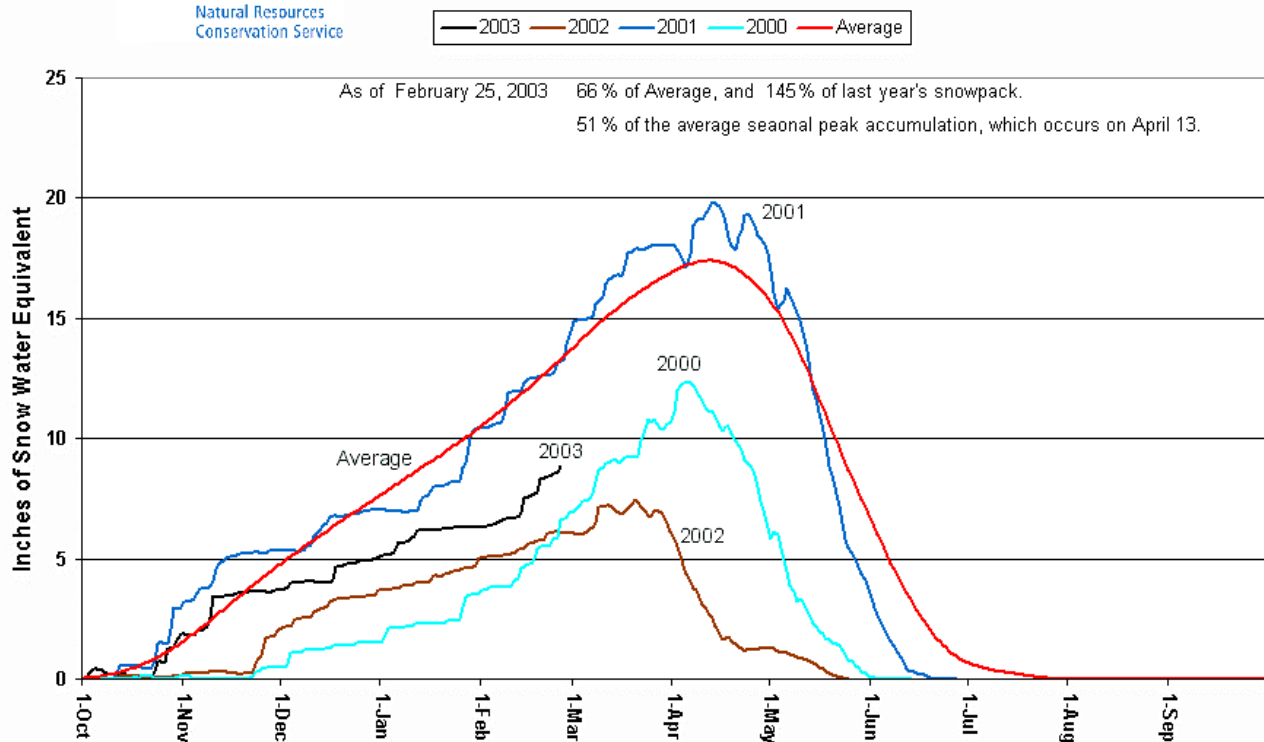
The drought situation continues. The current snow pack survey for the upper Rio Grande Basin is shown below. Current snow pack is at 65% of normal. The snow over the last two weeks has improved the situation by 12%, but it is still fairly dismal. While we are 45% better than at this time last year, it looks like this could be another year with far below average runoff. We all recognize the further impact on the unconfined aquifer that the lack of available surface water recharge could have. Water conservation strategies will be very important. Having a good understanding of your irrigation system's capacity and efficiently managing your irrigations will also be crucial this year.

This year Agro is offering a water resource-monitoring package which includes weekly monitoring of system pressures and water levels through the pumping season. This will help to maintain accurate percent charts. A weekly report will be provided to track changes in flow, pressure, and water levels through the season, and recommendations will be provided when operating conditions fall below critical levels. We also continue to offer our crop and irrigation management services to assist in scheduling irrigations. Periodic water resource monitoring is a service also provided with the crop and irrigation management packages. Talk to your Agro consultant if you are interested in these services.



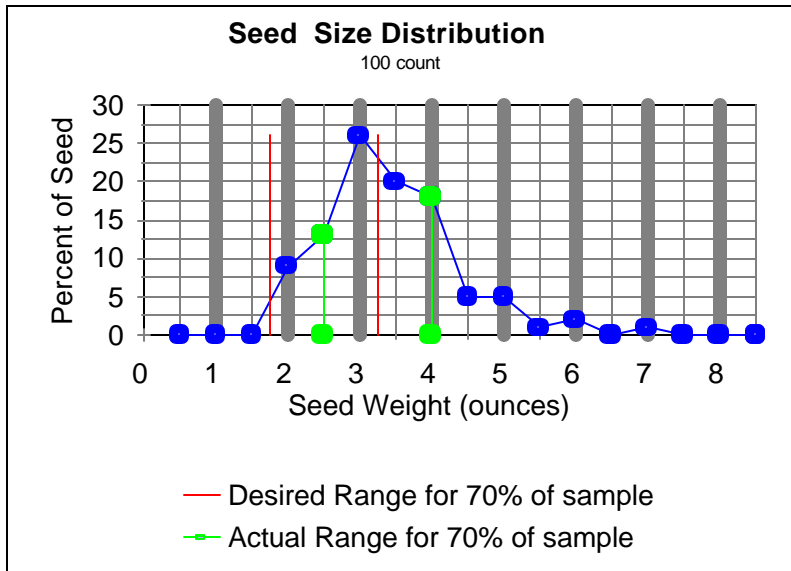
Rio Grande Basin Snowpack

Based on provisional SNOTEL data.



Is your seed cutter calibrated to the right settings?

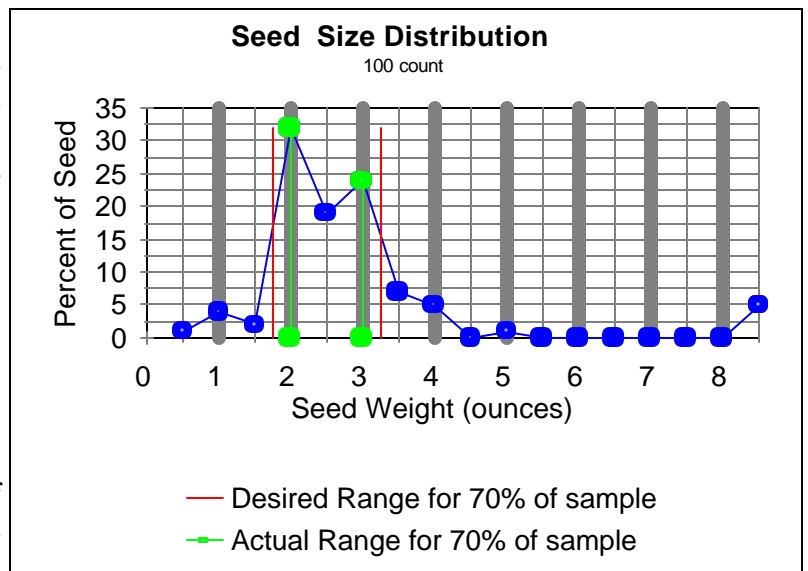
Having the right size seed can make a big difference in your seed costs. Oversized seed creates a poor stand, reducing the number of plants per acre. Seed that is small results in less vigorous plants and many more doubles and leads to reduced yields at harvest. How do you get a more uniform stand? You 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. When a stand has uniform spacing, it can help you achieve those higher yields.



When you first start cutting your seed, you may be getting a seed size distribution as shown in the graph to the left. The range of samples is large, from 1.5 oz to 7.5 oz seed. The average seed size has been calculated at 3.5 oz. This graph shows only 48% of the seed in the optimal 1.75 to 3.25 ounce ranges. If you are planting seed that averages 3.5 oz per seed piece on a 12 in spacing, it will require about 33.5 cwt. per acre to get a desirable plant population of 15,000+ plants per acre. At a cost of \$8.00/cwt seed, this will be a seed cost of \$268/acre.

This cutter needs some adjustment. The sizer may be open too wide, leaving large seed pieces uncut. By making a few adjustments, this can be changed to create a profile as in the second graph.

When the adjustments are made to the cutter, a more desirable seed size distribution can be obtained. The second graph shows a seed lot that has a pretty good size distribution. The average seed size in this graph is 2.5 oz. This graph shows 70% of the seed in the 2.0 to 3.0 ounce range. For this seed lot, it will take about 24 cwt./acre to get the same plant population as the previous seed lot. This seed would cost \$192/acre, a savings of \$76/acre. Both of these graphs have been calculated using a total of 100 tubers each.



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, feel free to call your Agro consultant.

Management of Cut Seed Tubers in Storage

There are several factors that determine if your potato seed is of good quality seed. One of the important factors that you need to consider is the storage of your recently cut seed. Below is a short list of things to keep in mind once you have cut your seed.

- The temperature of the seed usually jumps up 4 to 5 degrees just because of the injury suffered during the cutting process.
- Make sure to not pile the seed too high. A pile height of 6 feet is the maximum for storing the seed.
- Once the seed is back in the storage, put as much air and humidity through the pile as possible. Keep the system running all day for a couple of days.
- It is a good idea to leave the temperatures in the 46 to 48 degree range for about 2 weeks to allow the seed to suberize.
- Once this two week period is over, then bring the temperature back down to holding temperature.
- Bring seed temperatures back up to about 50 degrees prior to planting.

General Guidelines for Cutting Seed

Cutting seed is one of the first important steps to getting a quality potato crop. Whether you pre-cut or cut and plant depends mostly on your preference. Both have advantages and disadvantages. There are some general guidelines that you should be aware of whenever you cut your seed. First and foremost, make sure your seed is clean and all of your equipment is disinfected. Also, periodically clean and disinfect the equipment throughout the seed cutting process, especially when you change seed lots. Warm up the seed before you cut it. Try to get even sized seed pieces that are blocky, with 3 to 4 eyes per seed piece. The slivers or chips won't produce effective plants, so these should be minimized and discarded. Try to minimize the number of cut surfaces on each seed piece. Make sure the knives are kept sharp for a good, clean cut. Treat the seed with a seed treatment to help prevent disease organisms, and also to help dry out the cut surface.

It's very important to allow the seed pieces to heal, whether in the storage or in the ground. Temperature and oxygen are two important factors to remember. The healing process occurs best when temperatures are around 50 degrees. Good air circulation around the seed piece is needed to keep the surface dry, protecting it from rot. So whether you plant directly after you cut, or place the seed back into storage, it is critical to allow the wounds to heal.

Do you know how your potatoes are holding?

With the slow movement of potatoes recently, and the high yields from the previous year, we are seeing several storages still packed full of potatoes. With all of the extra spuds around, do you know how your potatoes are holding? Storage management has become critical the past several years. Growing a good quality tuber is one thing, but keeping it in good shape is another. Several factors need to be looked at when you're holding your tubers for a long period of time. First, are they starting to sprout? Almost everyone has used some kind of sprout inhibitor at some point this winter. They work great, but can run out of effectiveness. Make sure your tubers are not starting to sprout. Second, hot spots can occur in the pile due to rotting potatoes. What can be done to prevent these problems? The best solution is to prevent a problem from beginning. The key is to control the temperature of the potatoes in storage. When temperatures are below 40 degrees, most diseases are dormant. Tubers are less likely to break dormancy and start sprouting. For these reasons, it is very important to keep checking on the progress of your storages. If you want Agro to monitor your storages on a regular basis, or just check up on the status of your storage, please contact your Agro consultant.



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