



The North Dakota Seed Journal

DECEMBER 2009

Newsletter of the North Dakota State Seed Department

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Sampling and Sample Sizes Required For Testing

Jeff Prischmann, Diagnostic Laboratory Manager

Sampling is an extremely important part of seed testing that can often be overlooked. Seed growers, producers, and conditioners need to pay attention to how samples are taken when submitting them for testing.

The most important factor in sampling is obtaining a sample that is representative of the field or seed lot. This can be done in a number of different ways. Probing bags or bins is one way. Usually, several probes are taken and then bulked into a single sample. A portion of this sample can then be submitted for testing. A convenient way to sample is to periodically draw a sample at regular intervals as the seed is coming off the final piece of conditioning equipment or when going into or out of a bin. These samples can be bulked and mixed together in the same manner as probed samples. Growers should also keep a reference sample on hand as a backup sample.

The importance of having a representative sample to submit for testing cannot be over emphasized. **A seed test is only as good as the quality of the sample submitted.** In fact, the accuracy of some seed health tests is highly dependent upon the sample submitted. For example, bean anthracnose testing is essentially a positive or negative test. One infected seed in a seed lot would classify the sample as contaminated. For best results, 1,000 seed should be tested for bean anthracnose. However, for many seed health tests and seed laboratory tests, a minimum of 400 or 500 seed is generally tested. So having a good, representative sample of the seed lot is important.

Customers are also encouraged to submit the proper amount of seed for laboratory analysis. Large seeded varieties of some crops such as chickpea, field pea, and edible bean will require an increased amount of sample size for testing. Also, customers may request multiple tests on a sample, so submitting an adequate amount of seed for testing is important. Please contact the department with any questions on sample sizes required for testing. The following is a list of sample sizes required by the North Dakota State Seed Department for some of our more common tests.

SEED HEALTH TESTS

- Anthracnose (edible bean; 2 lb.)
- Ascochyta, 500 seed test (field pea, chickpea, lentils 1 lb.)
- Ascochyta, 1,000 seed test (chickpea; 2 lb.)
- Bacterial Blight (Dome Test, edible bean; 3 lb.)
- Barley Stripe Mosaic Virus (barley; ½ lb.)
- Blackleg (canola; ½ lb.)
- Loose Smut (barley; ½ lb.)

North Dakota State
NDSSD
Seed Department

The North Dakota Seed Journal is published and edited by the Seed Department, State of North Dakota, under the provisions of Chap. 258, S.L. 1931, as administrative and instrumental matter required for effective transaction of the Department's business and for properly fostering the general welfare of the seed industry in the state.

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From the Commissioner's Desk

Looking Forward by Looking Back

North Dakota is blessed (depending on your viewpoint) with a constitution that provides for biennial sessions of the legislature. Many people believe that this is adequate time for lawmakers to reasonably do the business of the people in session. Many believe that we need annual sessions to accommodate changing conditions of the economy, budgets and agencies. Others feel that 180 days every two years is more than enough time for a legislature to cause problems for citizens...sort of the "devils playground" theory of legislative utility.

All that aside, in North Dakota the legislative interim is spent doing an intensive review of various issues "chosen" for study by the passage of resolutions. The Legislative Council assigns a group of interim legislative committees to study a broad range of topics, usually leading to draft legislation that will be heard in the next legislative session. Occasionally a resolution is passed calling for a review of an entire chapter of century code. These "re-writes" are some of the most extensive of interim legislative projects, often taking more than one interim to complete. The Interim Agriculture Committee began its review of agriculture code during the 2007-2008 interim.

The Seed Department is in the initial

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Joe Magnusson.....Seed Regulatory Manager
Galen Briese.....Seed Certification Manager
Mark HafdahlSeed Laboratory Manager
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phase of such a code re-write. House Concurrent Resolution No. 3001 (of the 61st Legislative Assembly), passed during the 2009 Session, calls for the Interim Agriculture Committee to "... continue its study of ND Century Code provisions that relate to agriculture for the purpose of recommending changes to laws that are found to be irrelevant, inconsistent, illogically arranged, or unclear in their intent and direction...".

Seed Department code is (surprisingly) the most extensive of any agriculture related code. Despite being one of the smaller agencies of state government there are seven chapters of code that relate directly to the Seed Department, totaling **thirty seven pages** of state law.

While North Dakota is unique by comparison to other states in that all seed related matters are handled by a separate agency of government, this is still a LOT of law on the books. Taken to heart, the terms "irrelevant, inconsistent, illogically arranged, or unclear in their intent and direction" guide the effort to condense and reorganize the current code. The legislative process in North Dakota is perhaps the most inclusive in the country, giving the public a chance to weigh in on the end result of the study process, and providing legislators public input in making a more concise and easily understood product during the 62nd Assembly.

Recently, while cleaning out some outdated materials in my office, I found some interesting historical documents. Senate Bills No. 68, 69 and 70 of the 21st Legislative Assembly were the original laws organizing the State

Seed Department and seed certification, along with two separate potato programs. The certified copies are still here, and in reading the bills I was shocked at how closely the language resembles today's code. In many cases, the sentence structure and organization of the sections written in 1931 is nearly the same as in state law of 2009.

Subsequent legislatures have expanded the role of the Department (to seven chapters from the original three) and the number of pages of century code. All of this probably fit the agriculture and seed industries at that time. I imagine some of the language is due to be modernized, even though many of the structural components and authorities drafted in 1931 are very relevant even today.

I'm confident century code can be updated, condensed and improved. We've already begun to work with counsel on the review process, and can guarantee that this will be an extensive project. We may find "irrelevant, inconsistent or illogically arranged" language, and the door is open now to make improvements to benefit the industry and agency operations.

I look forward to insight and input from our constituency. I hope that the industry will take an active interest in the review process, and will be happy to provide information and receive feedback throughout the process.

Best wishes for a safe and profitable end-of-year.

New Administrative Rules Proposed

The Seed Department has proposed a number of changes to seed certification regulations that were approved by the Seed Commission at its fall meeting. By law, state agencies must provide for a public hearing and comment period prior to submission to the attorney general's office for review. Anyone interested in North Dakota certified seed regulations is welcome to provide comment on the proposed changes. The date of the public comment period has not been determined yet, but it will likely be mid-January. As required by law, public notification will be made at least 20 days prior to the comment period.

2009 Seed Crop Quality

Mark Hafdahl, Seed Lab Manager

This year has been a tough one for seed production. A cool wet spring, a cool summer, and a wet fall pushed the crop back more than I have ever seen in my 23 years here. Despite the weather, it appears that the seed produced in North Dakota reached adequate maturity and from what we have observed so far the quality is quite good with only a few exceptions.

Scab is a problem in some wheat lots from the extreme southeast corner of the state. The remainder of the state has some scab but in much smaller amounts. Soybeans and field peas appear to be in fairly good shape due to their high moisture content at harvest time. Soybean maturity could be an issue on the late varieties which haven't been harvested yet.

One issue we have seen in the Seed Lab is high moisture seed. Seed needs to be dried to acceptable levels before it goes into winter storage. Monitoring storage bins will be very important this year. The NDSU Extension Service has excellent information on drying grain.

The Seed Lab is here to serve your needs. About 45% of the samples we receive for testing arrive here between February 1st and April 15th. Needless to say we get very busy during that period. It would be very helpful if some of those samples were sent in earlier so that we can provide timely service. If you have any questions or requests give us a call.

Sampling continued from page 1

HERBICIDE TRAIT/TRANSGENIC TESTS

- Roundup® Herbicide Bioassay Test (soybean; ½ lb.)
- Liberty®, Roundup®, or Clearfield® Herbicide Bioassay Test (canola; ½ lb.)
- Clearfield® Herbicide Bioassay Test (wheat, lentils; ½ lb.)
- Lateral Flow Strip GMO presence (soybean; 1 lb.)
- ELISA GMO presence (soybean; 1 lb.)
- PCR qualitative GMO presence (soybean; 1 lb.)

GENETIC PURITY/VARIETY IDENTIFICATION

- Seed Protein Electrophoresis Test (wheat, oat; ½ lb.)
- DNA Test (barley, field pea; 1 lb.)

GERMINATION/PURITY TESTS

Germination Tests: 800 seed minimum.

Seed Purity Tests:

1. Small-seeded grasses, white or alsike clover or seeds of similar size (4 oz.)
2. Sweet clover, red clover, alfalfa, grasses, millet, rape, flax or seed of similar size (8 oz.)
3. Cereals, soybeans or seed of similar size (1½ lb.)



Promotional Changes for the New Year

Steve Sebesta, Deputy Commissioner

The primary objective of our promotional activity is to help you promote the value of certified seed to your customers and increase your sales. We invest in a number of different media to do this.

Radio advertising is the most significant component of our promotion budget each year. This year we made a significant change to our station lineup, teaming with AM890 Fargo-Lisbon as our flagship station. Daytime programming on 890AgNews is focused 100% on agriculture. They feature the American Ag Network and the Red River Farm Network. The savings we realized in reduced advertising costs has allowed us to purchase two more months of airtime on the front side of our traditional radio campaign. We know many buying decisions are made at the end of each calendar year and we wanted to promote certified seed to your customers during this important time. Therefore, we began airing promotional ads in November and will continue through planting season next spring. To help cover the entire state, we also purchased airtime on KCJB Minot, KFJR Bismarck and KNDK Langdon. We hope you will listen to these great stations!

The other significant change this year is the addition of a half-page ad in a major regional publication. Prairie Grains Magazine is circulated to members of the North Dakota Grain Growers Association, the Minnesota Association of Wheat Growers, South Dakota Wheat, Inc, the Montana Grain Growers Association, the Minnesota Barley Growers Association as well as non-member growers who produce 250 acres or more of spring wheat and barley in the four state area. Prairie Grains Magazine has a total circulation of more than 18,000. We understand the importance of small grains to this region and wanted to focus directly on advertising to this group of producers.

If you have any ideas on other ways to promote certified seed please pass them along to me. Promotional dollars help you succeed.

Seed Regulatory Issues

Joe Magnusson, Regulatory Manager

The seed sales season is about to get under way and now is a good time to review some of the requirements for selling seed in North Dakota.

Out-of-Date Seed Labels

Check your inventory. Most carry over seed must be re-tested for germination and new seed labels with current test date must be attached to the container. If you retail seed for another company (and the seed is labeled in that company's name) you should contact them concerning outdated seed labels. They may get samples of the out-dated seed, retest the germ and supply you with new tags for the remainder of the lot. If they will not provide that service, you need to send a sample to our department, request a new germination test and then replace the tags with the current labeling information. Use the following chart to determine if the germination test is current:

Cereal grains, soybeans and edible beans	9 months excluding the month of test
Vegetable seed and native grasses	12 months excluding the month of test
Cool season lawn and turf grasses	15 months excluding the month of test
Interstate seed transactions	5 months excluding the month of test

Seed Labeling Permit is Required to Sell Seed

Any person labeling seed in this state must obtain a permit before any sales are made. In 2009, 97 certified seed growers did not have a permit to sell seed. The department will be sending a permit application to

these growers. If you are a new certified seed grower this year and plan to label seed in your name but do not have a permit, call the department and request an application. There is no charge for the permit. A Stop Sale order will be issued on any seed if the labeler does not have a permit.

Clean and Monitor Your Bins

Thoroughly clean bins and handling equipment prior to moving clean seed. Examine the first few bushels on the bottom of the bin to be sure that you have not damaged or contaminated your seed with other crop seeds. Last year we had twenty-five lots of certified seed that were out of tolerance with ND certification standards due to insufficient cleaning of bins and augers.

Monitor bins closely for any signs of heating or insect damage that may occur. When the temperatures fluctuate during the winter months, monitor the bins so air can be added as needed. If you use a pre-germ on your seed lot, and the seed was tested before spring, it would be wise to probe the top and bottom of the bin and send a sample to the seed lab for a new germination test to ensure the seed lot has not gone out of condition and is properly labeled. These procedures should avoid an unnecessary "Stop Sale", and allow you to sell a quality product to your customer. When our regulatory inspector arrives at your location to obtain samples for truth in labeling testing, we recommend you accompany them to the bins so you will be satisfied with the sample they draw. This is especially true for samples taken from the bottom of the bins, where the seed is subject to the most damage and contamination.

ND Crop Improvement & Seed Association Annual Meeting Scheduled

Seed producers, conditioners and retailers are invited to attend the annual meeting of the North Dakota Crop Improvement and Seed Association, February 8 & 9 at the Grand International Inn, Minot. Seed growers are encouraged to participate in the seed show this year. Eligible varieties include Brick, Mott and Barlow hard red spring wheat, Ashtabula soybean, Rockford oat, Celebration and Tradition barley. Cash prizes of \$75 first, \$50 second and \$25 third will be awarded and \$25 to the county agent with the 1st prize winner. Seed must have completed final certification. We hope to see you in February.

Monsanto's Patent on Roundup Ready Soybeans

We have received several questions about the status of Monsanto's Roundup Ready patent recently, and the topic merits some discussion in order to help growers, conditioners and farmers remain legal.

According to Monsanto, **the patent on Roundup Ready soybeans does not expire in the United States until mid 2014**. However, the Canadian patent on that same trait will expire in 2011. Given our proximity to Canada, farmers in North Dakota and Minnesota may be hearing discussions regarding the Canadian patent and not understand that the information applies only to Canada. As long as the U.S. patent is in place, U.S. farmers cannot import Roundup Ready soybeans from Canada for planting in the United States.

Sign up for On-Line Data

According to our records a few more than 200 people are utilizing online data access available on our website. That's a surprisingly low number considering we work with more than 800 seed growers, approved conditioners and approved bulk retailers each year.

The Online Data tool is the quickest method to access your field inspection, seed testing and final certification records. Using the online data access tool is easy and fast. It is accessible from our website homepage. Go to www.ndseed.com and select ONLINE DATA. You will be quickly directed to the Customer Login Page where you will enter your login id and password. You will then have the option to view the different types of records.

- View Seed Inspections
- View Seed Lab Samples
- View Seed Certificates

The Field Inspection Inquiry page lists each field for that customer and all the pertinent inspection information. Online data is not a substitute for hard copy reports. Customers still get the paper copies of all reports, this is just an easy way to track inspections and testing and to quickly find the results you're after. Best of all, it's secure. No one else has access to the information ... unless, of course, you give them your password.

If you are interested in using the online data access tool call Char to get your password. We believe you will find it a useful tool.



Wet Harvest Conditions May Mean Higher Disease Levels

Jeff Prischmann, Diagnostic Lab Manager

The wet harvest conditions that occurred this fall may equate to higher levels of seed diseases. Seed growers should be on the look out for seed infected with several different types of molds. Most notable would be seed infected with *Penicillium*, *Fusarium*, and *Aspergillus* species. These molds can reduce the quality of seed and they may produce mycotoxins which can be detrimental to animals if consumed. Seed stored under high moisture conditions may also provide good growing conditions for these molds. Seed stored under the appropriate moisture conditions for the particular crop should reduce the spread and growth of these molds.

Tips for Submitting Seed Samples

Now that seed conditioning season is here, it is extremely important to provide all the required information along with your sample. Without proper information we cannot process a sample for testing. Here are a few tips to remember when you submit samples.

When submitting any sample for testing:

1. For common seed or certified samples submitted for preliminary testing use the manila envelopes (supplied by NDSSD).
2. Include a return address so we know who to send the results to.
3. Identify the kind, variety and lot number
4. Identify which tests you want conducted. Consult Bulletin 51 or our website for specific test requirements.
5. Identify field-inspected seed by using the current field application number (e.g. S0912345) – **not** the lot number of the seed that was planted.
6. If we are supposed to send a copy of results to someone else, or bill someone else, let us know.
7. Submit enough seed for all the tests you want done. See our website (www.ndseed.com) for sample size requirements for specific tests.

When sending in a sample for final certification:

1. Include a Sampler's Report for each lot (remember – **each bin is a separate lot**).
2. Be sure to fill in all blanks on the Sampler's Report, especially the kind, variety and class, the field inspection number(s), clean bushels, lot number, bin number, labeler's name, number of bulk certificates requested, who to send them to, who to bill, and any special instructions.
3. List the tests to be conducted.
4. If we are supposed to use a pre-germ, smut, dome, anthracnose or ascochyta test result that was previously done for the lot you are submitting, be sure to provide those test numbers so we don't repeat those tests.
5. If the seed is being re-tested or has been re-conditioned, be sure to provide the certification number from the initial sample.
6. Have the Grower's Declaration signed, if required.
7. Fill the plastic bag making certain to seal the zip-loc seal as well as the second, sticky seal.

Consult the [North Dakota Approved Seed Conditioner's Manual](#) for more details or call 701-231-5400.

North Dakota State Seed Department

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ADDRESS SERVICE REQUESTED

NDSSD Calendar

- Dec. 31**..... Application deadline for Non-Resident Seed Dealers License
- Jan. 5-6** Lake Region Extension Roundup, Devils Lake
- Jan. 14-15**.... 35th Annual Bean Day, Holiday Inn, Fargo
- Jan. 17-19**.... ND Grain Dealers Association Annual Meeting, Holiday Inn, Fargo
- Jan. 27-29**.... KMOT Ag Expo, Minot
- Feb. 1-3** National Hard Spring Wheat Show, International Inn, Williston
- Feb. 8-9** ND Crop Improvement and Seed Association Annual Meeting, Grand International Inn, Minot