



The North Dakota Seed Journal

DECEMBER 2006

Newsletter of the North Dakota State Seed Department

Inside

- 1 2006 Seed Quality Observations
- 1 ND Crop Improvement & Seed Association annual meeting scheduled
- 2 From the Commissioner's Desk
- 2 Jambor Joins Seed Department
- 3 Sampling and Sample Sizes Required For Testing
- 3 Tips for Submitting Seed Samples
- 4 Edible Bean Disease Testing Requirements
- 4 Variety and Brand Labeling
- 5 Managing Field Contamination
- 5 Seed Labeling Permits
- 5 New Tags Required On Outdated Seed
- 6 Calendar

2006 Seed Quality Observations

Mark Hafdahl, Seed Lab Manager

There are a lot of smiles in the Seed Lab this year. This is the first year since 1992 that small grain producers haven't had a problem with scab. Some areas of the state, where the drought was most severe, either didn't get a crop or the seed didn't properly fill. The rest of the state produced very high quality seed.

Durum, wheat, barley and oats are of high quality with germinations in the 90's. Seed size on these crops is a little smaller than in past years. Soybeans and peas generally have germinations in the 90's but some lots were damaged due to handling of low moisture seed.

Lentils, flax, and edible beans are also high quality, with germinations in the 90's.

Remember this winter, that **frozen seed of large seeded legumes is very brittle and conditioning could cause severe damage.** In the past few years we have seen an increase of chemically damaged seed. I suspect this is due to spraying to dry an uneven crop or to desiccate some weed problems. This practice causes damage to the embryos and can result in lower germination scores. Remember to send your samples in early to avoid the rush and enable us to provide better service.

*Seasons Greetings
from the North Dakota State Seed Department*

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 15 & 16 at the Doublewood Inn, Bismarck. As usual, there will be a seed show highlighting the new varieties released by NDSU. Eligible varieties include Registered class seed of Alkabo, Divide and Grenora durum, Howard HRSW, Rawson, Tradition and Legacy barley and Maida oat. Entrants receive a complimentary registration for the meeting. Cash prizes of \$75, \$50 and \$25 will be awarded for first, second and third places, respectively, for each variety. Final certification must be completed by the time entries are judged. See your county agent for details. In addition to the usual committee activities, there will be presentations by the ND Wheat Commission and Rich Ostlie, president, American Soybean Association. Duane Hauck, director of NDSU extension service will provide a legislative update. Everyone is encouraged to attend and get involved.

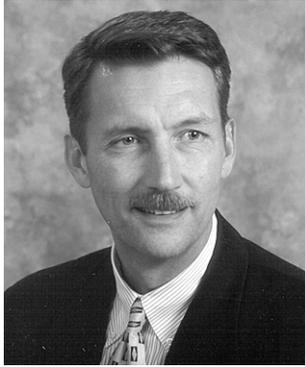
North Dakota State

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.

Steve Sebesta, Editor
N.D. State Seed Department
(701) 231-5400 Fax (701) 231-5401
ndseed@state-seed.ndsu.nodak.edu
www.ndseed.com



From the Commissioner's Desk

This edition's timely topic: The exciting world of Administrative Rules.

I'll start by saying that, from my perspective as an agency director, administrative rulemaking is without a doubt one of the most time-consuming, borderline tedious, and (ultimately) important issues we deal with. It takes time, precision and care to do it right. The rules we follow to promulgate rules (not a redundancy) are strict, and the approach we take is thoughtful. I can only speak for the Seed Department, but our agency seriously considers the impact on producers, seedsmen and the industry each time we propose and implement a change that affects any of these parties. Nevertheless, rules and regulations are often seen as negative or overbearing, or other nice words left unsaid.

Some background: State agencies go through a process called administrative rulemaking to further expand and clarify the meaning of state law. Administrative rules are intended to provide a black & white picture of how the agency will perform the administrative functions of the law, or carry out the intent of legislation. An important point that often gets overlooked is that administrative rules carry "the force and effect of law", meaning

that they are as important as legislation carried out in the century code, but they are written by government agencies, not legislators.

This is the single most important reason to take the process seriously, and look for as much balance as possible in the process of rulemaking. Seeking balance is the primary objective of this agency each and every time we write a rule. Making the choice between what's best for the individual producer versus the agriculture industry is often difficult.

Rulemaking can be proactive or reactive, either being good reasons to propose rules. We may need to write new rules in certification sections because of evolution of field and lab standards nationwide. We may propose rules in reaction to legal precedent or perceived risks to the agency or seed producers. Sometimes, we simply need to modernize outdated language. Most often, the rules we propose come from an industry group in the form of a request or resolution aimed at helping create and market better seed for use in the ag industry. Over time, rules have been developed to govern most everything done at the Department, from technical inspection standards for every crop certified, to testing and labeling processes.

As a former lobbyist I used to be on the outside looking in, and took great joy in dissecting the rules proposed by agencies. It was entertaining to discuss over-

bearing red tape and government-run-amok when seeing a rule that didn't fit organization policy. It's a whole lot less fun being on the inside being dissected. Occasionally, we must pass rules that may not sit well with an individual or group, even though it's the right thing to do. In these cases, it's similar to parenting; you have to set the boundaries, even if they are unpopular, because it's the right thing to do.

This process doesn't happen in a vacuum. North Dakota has an excellent rulemaking system, with mandated public notification, generous open comment periods and legislative oversight. Agencies like ours often go the extra step of notifying ag groups or talking about proposed rules with some of our main constituents. The checks and balances are there, and they work. Yet, once in awhile a rule doesn't sit well with the regulated community, or an individual within.

So much for civics class. There is a point to this article, which is: pay attention to the rulemaking process, especially notification. Research the rules that may affect you, provide comments to this (or any) agency. Help the agency do a good job of creating rules and regulations governing your work as seedsmen.

Best wishes for a happy and healthy holiday season.

- Ken Bertsch State Seed Commissioner
- Steve Sebesta..... Deputy Seed Commissioner
- Steve Marquardt..... Director, Potato Program
- Joe MagnussonSeed Regulatory Manager
- Galen Briese.....Seed Certification Manager
- Mark HafdahlSeed Laboratory Manager
- Jeff Prischmann..... Diagnostic Laboratory Manager
- Kris Nicklay Administrative Officer
- Mike OosterwijkPotato Program Supervisor

Jambor Joins Seed Department

Jeanna Jambor joined the Seed Department on November 6 as a Seed Analyst II.

Her primary duties will entail approximately 65% seed analysis and 35% field inspection. Jeanna holds a Bachelor of Science degree in Crop and Weed Science from NDSU and has worked the last 20 months as an agronomist/crop consultant with Scheresky Ag Service in Max, ND. She is familiar with a wide variety of crops such as small grains, field peas, flax, edible beans, lentils etc. She also has field experience as an IPM crop scout for NDSU Extension Service as well as crop and weed seed identification and judging experience. Jeanna grew up on a diversified farm/ranch near Kildeer. We look forward to Jeanna's contribution to the department.

Sampling and Sample Sizes Required For Testing

Jeff Prischmann, Diagnostic Laboratory Manager

Sampling is an extremely important part of seed testing that is often 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 entire 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 while conditioning or as the seed is 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.

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 a larger sample 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

- Anthrachnose (Edible Bean; 2 lb. seed)
- Ascochyta, 500 seed test (Field Pea, Chickpea, Lentils; 1 lb. seed)
- Ascochyta, 1,000 seed test (Chickpea; 2 lb. seed)
- Bacterial Blight (Soybean; 5 lb. seed)
- Barley Stripe Mosaic Virus (½ lb. seed)
- Blackleg (Canola; ½ lb. seed)
- Dome Test (Edible Bean; 3 lb. seed)
- Loose Smut (Barley; ½ lb. seed)

Herbicide Trait/Transgenic Tests

- Roundup® Herbicide Bioassay Test (Soybean; ½ lb. seed)
- Liberty®, Roundup®, or Clearfield® Herbicide Bioassay Test (Canola; ½ lb. seed)
- Lateral Flow Strip GMO presence (Soybean; 1 lb. Seed)
- ELISA GMO presence (Soybean; 1 lb. seed)
- PCR qualitative GMO presence (Soybean; 1 lb. seed)

Genetic Purity/Variety Identification

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

Germination/Purity Tests

Germination Tests:

The minimum size of samples submitted for a germination test shall be at least 800 seed.

Seed Purity Tests:

- Four ounces of small-seeded grasses, white or alsike clover or seeds of similar size.
- Eight ounces of sweet clover, red clover, alfalfa, grasses, millet, rape, flax or seed of similar size.
- One and a half pounds of cereals, soybeans or seed of similar size.

Tips for Submitting Seed Samples

Rhonda Rabideaux

Follow the steps outlined below to ensure your samples are processed quickly and correctly.

When sending in a sample for testing, please be sure to:

1. Include a return address so we know who to send the results to.
2. Identify the kind, variety, lot number and which tests you want conducted. Consult Bulletin 51 for specific test requirements.
3. Identify field-inspected seed by using the current field application number (e.g. S0612345) — **not** the lot number of the seed that was planted.
4. If we are supposed to send a copy to someone else, or bill someone else, let us know.
5. Submit enough seed for the tests you want done

Conditioners — when sending in a sample for final certification, please remember:

1. We need a Sampler's Report for each lot (remember — **each bin is a separate lot**).
2. Be sure to fill in the blanks on the Sampler's Report, especially the field inspection number(s), clean bushels, number of bulk certs requested, who to send them to, who to bill, and any special instructions.
3. If the seed is being re-tested or has been re-conditioned, be sure to provide the certification number from the initial sample.
4. If we are supposed to use a pre-germ, smut, dome, anthracnose or ascochyta test 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. Fill the plastic bag full and make sure you seal the zip-loc seal as well as the second sticky seal.

Edible Bean Disease Testing Requirements

Jeff Prischmann, Diagnostic Laboratory Manager

Edible bean seed producers in North Dakota are required by seed certification standards to submit seed samples for anthracnose and bacterial blight tests. **North Dakota Field Seed Certification Standards specifically state that growers are required to submit seed samples of the “harvested seed of each field or seed lot of dry field beans” for anthracnose and bacterial blight testing.** Both of these diseases are seed-borne and planting infected seed can result in field infections the next year, hence the requirements for testing.

Anthrachnose is a serious disease that can be easily overlooked by growers. In fact, symptoms of anthracnose on bean pods can look similar to those of bean blight. The main difficulty with anthracnose, in addition to seed-borne transmission, is that under low infection levels it may be difficult to detect in the field. Low infection levels in the seed have the potential to cause a severe outbreak of the disease the following year under optimal environmental conditions. Thus, testing for anthracnose is extremely important. The Diagnostic Lab currently conducts anthracnose tests using a minimum test size of 1,000 seed. Seed tests for bean anthracnose using less than 1,000 seed have a greater potential for misidentifying positive samples.

Bacterial blight testing is also conducted by the Diagnostic Lab. This test, known as the “dome test”, has been used by the department for a number of years. The dome test provides a blight rating score to each sample, permitting an easy comparison of seed lots. Lower dome scores equate to lower amounts of blight in the seed. Dome scores of four or less are considered acceptable for certification. Again, as is the case with anthracnose, planting blight infected seed can result in blight infection in the field. Blight has traditionally been the greatest factor contributing to bean fields failing field inspection.

We strongly urge all edible bean seed producers to test each field separately for anthracnose and bacterial blight. Testing each field separately is important if seed from a number of different fields is commingled into a single seed lot. If seed from a field containing anthracnose was commingled with other fields that did not contain anthracnose, the entire seed lot would then become contaminated. Bacterial blight can also be spread by commingling seed from several fields or seed lots.

For further information on edible bean testing requirements and specifics on the bacterial blight and anthracnose, please contact the department.

Variety and Brand Labeling

Joe Magnusson, Regulatory Manager

As defined by North Dakota Seed Laws, the term variety means a subdivision of a kind characterized by growth, yield, plant, fruit, seeds, or other characteristic by which it can be differentiated from other plants of the same kind. Knowledge of variety characteristics helps producers determine whether a variety will perform well on their farm. Producers need to know the variety name or number to distinguish between other varieties and to help ensure they are spreading their production risks from unknowns such as disease, maturity, and insect pressure.

In North Dakota, the seeds of wheat, durum, barley, oats, rye, soybeans, dry beans, and flax must be labeled by variety name. However, in the case of soybeans, many companies are selling these seeds as brands. Even though they are being sold as a brand, the **correct variety name must be listed on the label.**

The brand name, if being used by a company, cannot be misleading or confused with a variety name. The example seed tag below shows the correct way to label a branded product according to North Dakota law.

ABC 555 BRAND

KIND: Soybeans	Pure Seed: 98.00%
Variety: 123B	Weed Seed: 0.10%
Lot #: B12	Other Crop: 0.10%
Origin: ND	Inert: 1.80%
Germination: 90%	Date Tested: 12/2006
Noxious Weed Seed per pound: None	

ABC Seed Co.
P.O. Box 00
Fargo, ND, 58105

This year during our Regulatory season we will be monitoring all soybeans to ensure a variety is listed and the variety name or number is accurate. A “Stop Sale Order” will be issued if we find seed is incorrectly labeled. The seed will need to be relabeled or disposed of as market grain.

Managing Field Contamination

Galen Briese, Certification Manager

Looking back at the last few seasons and reviewing problems that we encounter, one situation always tops the list of concerns ... contamination from other crops.

Some of the most obvious ways seed crops get contaminated include dirty planters and combines, handling equipment such as augers, and storage bins. The department has taken some measures recently through rulemaking to help minimize some of these problems. However, there are some other situations that are often overlooked. For the inspectors in the fields, these situations are sometimes the hardest to explain, and if not handled correctly can be costly to the operator.

Fertilizer application. Do you spread or inject your fertilizer? Or, do you have a commercial firm do it for you? Dry formulations are generally hauled to the plants by truck and in some cases the trucks haul grain to market and backhaul fertilizer to the plants. A good potential for contamination exists if the trucks are not cleaned out! In this case, field inspection will reveal "other crop" between the rows, or, if the fertilizer was applied with the seed, in the row.

Erosion. Do you have fields subject to drainage problems from adjacent land? In some cases, water can fan out and cover large areas with crop seeds washed from fields many miles away. With exposed fields during the winter months, drifting soil can and will deposit many unwanted problems in your fields.

Tillage. Do you always get your fall tillage done so the seed lost at harvest and distributed by the chaff chopper, have the opportunity to germinate and grow? In dry years, discharged seed may not have sufficient moisture to germinate.

Seed dormancy. Recently we have seen numerous cases of this contributing to contamination. For example, wheat will show up in barley as long as five years later. We have seen rye in fields that had not had not been planted to that crop for seven years. Again, this is especially true after dry years. At times seed is somewhat protected by the residue, and may germinate later, producing late, short plants that escape harvest, leaving viable seed for many years to come. This is quite common in reduced or no-till situations where the topsoil is not disturbed, leaving seed to grow the next year or for years to come. Typically, rye and buckwheat are some of the worst offenders.

Crop rotations. This can be a real problem with wheat and durum since they are inseparable crops. If there is only one year between these crops, you can bet that it will be a problem.

Field observations and germination studies conducted by our department have shown that there is a significant seed load that can be attributed to dormancy or inadequate post-harvest germination from two and even three years prior, that can contribute to "other crop" contamination. This was the driving factor for revising field requirements for Foundation and Registered durum seed production.

New land acquisitions. If you do not know the cropping history on newly acquired land you'd be wise to avoid certified seed production on this land. Previous crops and weed problems, especially field bindweed, top the list of things to be concerned about. It's probably best to see how it performs before producing certified seed.

Harvest. Have any of you hired custom harvesters to harvest the certified crop? Do they clean the combines out **completely**, or do they bring seed from every field that they have been in that year?

These are just some of the problems observed every year during field inspections. Every aspect of certified seed production demands your attention. Failed field inspections or impure seed samples don't just happen. And when there seems to be no possible explanation for the "other crop" contamination, they can sometimes be traced back to field management issues.

Seed Labeling Permits

A Seed Labeling Permit is required to label and sell agricultural, vegetable, flower, and tree and shrub seeds in North Dakota. There is no cost for the permit for ND residents. If you produced certified seed and plan to clean, final certify and label that seed in your name, a permit is required. Nonresidents are required to complete a Nonresident Seed Dealers License and remit an annual fee of \$25.

The Annual Reporting Form for Seed Sales will be mailed to all permit holders the end of June. Labelers are required to report all seed labeled and sold in their name and remit fees to the NDSSD. Fees are based on sales volume. Contact the office if you need a permit application.

New Tags Required On Outdated Seed

Each year many "Stop Sale Orders" are issued on carryover seed that does not have current germination and test date on the label. Now is an excellent time to pull representative samples from this seed and send them in for a new germination test. If the seed is certified, send the sample to our department along with a copy of the previous year's bulk certificate or tag, indicate the number of bushels remaining and the number of new labels needed. For edible beans or grass seed that is not certified, you can get a new germination test done on the representative sample, and in most cases the company whose name appears on the label will send you new tags to attach to the container. Most of the problems we have encountered have been in retail outlets that sell small packages of grass seed from many different companies. Since this seed is usually not placed in a controlled environment, and is sometimes exposed to the elements, each lot of seed carried over should be sampled and tested for germination to ensure the product meets label claims.

North Dakota State Seed Department

State University Station
P.O. Box 5257
Fargo, ND 58105-5257

Non-Profit Organization
U.S. Postage

PAID

Fargo, ND
Permit No. 229

NDSSD Calendar

- Dec. 31** Application deadline for Approved Conditioners, Approved Bulk Retailers and Non-resident Seed Dealers
- Jan. 3-4** Lake Region Extension Roundup, Devils Lake
- Jan. 9** ND Grain Growers Dakota Grains Conference, Bismarck Civic Center
- Jan. 14-16** ... ND Grain Dealers Association Annual Meeting, Holiday Inn, Fargo
- Jan. 18-19** ... Bean Day, Holiday Inn, Fargo
- Jan. 24-26** ... KMOT Ag Expo, Minot
- Feb. 5-7** National Hard Spring Wheat Show, Williston
- Feb. 15-16**.... ND Crop Improvement and Seed Association Annual Meeting, Doublewood Inn, Bismarck