



The North Dakota Seed Journal

DECEMBER 2010

Newsletter of the North Dakota State Seed Department

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Bean Anthracnose

Jeff Prischmann, Diagnostic Lab Manager



Bean anthracnose, a potentially devastating bean disease, is a concern for edible bean producers in North Dakota. It has been found in Ontario, southern Manitoba, Michigan, and in several North Dakota counties since 2001.

Anthracnose 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 bacterial 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 conditions. Also, low infection levels can cause significant yield losses and provide additional inoculum for re-infection. Thus, testing for anthracnose is extremely important.

Field symptoms of anthracnose appear as small, angular brick red to purple-brown lesions on the bottom of leaves. Later, these lesions become darker, extend to the upper leaf surface, and proceed along veins. Pod lesions are sunken, circular in shape with brown to black coloring that have a dark margin surrounding the lesion. There is typically a thin zone of red tissue around the lesion. On the lesion surface, tan spores dry into dark granular masses. Lesions on seed can be similar in appearance to pod lesions. Bean anthracnose is easily spread by infected seed, rain splashing, and by being blown from field to field on crop residue.

The North Dakota State Seed Department has taken measures to ensure certified bean seed produced in North Dakota is free from this serious pathogen. Anthracnose testing is required on all certified seed grown in the state. Additionally, service testing is promoted and utilized by the seed industry on seed lots offered for sale in North Dakota. Growers should be aware as to where the seed they are purchasing comes from. Seed from known infected areas should be avoided. Good management practices are important for prevention of anthracnose. The use of certified seed that has been field inspected and lab tested for anthracnose is recommended. Growers should avoid planting bin run seed.

North Dakota State
NDSSD
Seed Department

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From the Commissioner's Desk

Abundance.

If you click on this word in your thesaurus, you will find terms like "great quantity", "plenty", "wealth".

In many places around the country, you won't find the term abundance applied to many things...except perhaps, unemployment lines, budget deficits or bedbugs. Not so much here in North Dakota, where someone must be smiling down on us.

On the heels of a borderline-magical crop year, and with Thanksgiving still a recent memory, I thought the term abundance was an apt descriptor for the current situation in agriculture. Good crops, good prices, good harvest conditions...it's not often all these things line up in the same year. I know, not everyone had an easy harvest or a big crop, but generally speaking, life is good here right now.

The abundance theme applies to the seed industry as well. We inspected a great crop in the field (for the most part), and early lab results indicate good quality in virtually every type of seed analyzed. I don't normally gush on both of these issues at once, since there is (normally) a divergence in either yield or quality that is geographi-

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cal in nature: north-south, east-west. Or, the year is good for cereals/potatoes and bad for row crops. Again, at least this year, life looks pretty good if you're a seed grower.

And then, there is the pesky issue of economics. If there is plenty of seed available next spring, does that mean the price will be suppressed? Is abundance (in terms of seed supply) a bad thing?

Understanding who the audience is for this publication, I hope this statement resonates with you: abundance is a damn good thing. It's especially good for the agriculture industry in this state, the "target audience" for the product that we produce. Anyone who argues otherwise has a short-sighted view of the situation. And pardon the language.

Some in our industry believe that fewer seed growers, or acres, or bushels produced, somehow magically relates to a "better" seed industry. I suppose, to try and translate that mentality, it means that seed will be higher priced or worth more. In my way of looking at agriculture, the only inputs in short supply that are more valuable are fertilizer, fuel or chemicals. Strangely enough (and maybe this is my real premise), those inputs are produced and offered by a very limited group of manufacturers. When faced with short seed supplies/

high seed prices, how do farmers (all too often) respond? By finding "seed" in a grain bin. One can't find those other inputs lying around just anywhere, after all.

Who profits in that scenario?

A large and thriving seed industry in North Dakota benefits everyone involved. Variety developers win; a little price competition means higher certified seed use industry-wide. Higher use generates increased royalties. Seed businesses benefit; increased use means more investment in variety development and more opportunity to sell product. It also means more growers interested in the extra work associated with raising seed. The real winner? North Dakota agriculture. By and large, this state markets agricultural products based on high quality. Certified seed contributes to product quality. Any measure that somehow limits the opportunity to have an abundant supply of good quality seed for use by agricultural producers in this state seems counter-productive, if not ridiculous.

Abundance (in the seed industry), meaning "great quantity" and "plenty", creates "wealth" for all involved. Best wishes for good hunting, happy holidays and a profitable year.



Bean Anthracnose continued from page 1

We strongly encourage all edible bean seed producers to **test each field separately for anthracnose**. Testing each field separately is important if seed from a number of different fields is going to be commingled into a single seed lot. If seed from a field containing anthracnose is commingled with other fields that did not contain anthracnose, the entire seed lot would then become contaminated.

The Seed Department currently conducts a 1,000 seed grow-out test for bean anthracnose that requires a minimum of 14 days to complete. Seedlings are evaluated for the presence of the anthracnose causing fungus *Colletotrichum lindemuthianum*. A positive test result indicates the sample is contaminated, resulting in failure. Growers should submit at least 3 pounds of seed for a Dome test and Anthracnose test. A good representative sample of the seed lot is important, as very low levels of anthracnose infection are a serious problem. **Again, this test is a pass or fail test and any positive test result will result in a failed test.** Please contact the department for further information.

Seed Quality Observations

Mark Hafdahl, Seed Lab Manager

This year's seed crop is a vast improvement over last year's. Soybeans are germinating mostly around 95%. We have observed a few samples that have some mechanical damage, but nothing we can blame on the weather. Small grains are good, with most germinations of wheat and barley around the low 90s. We have seen some scab from various locations. The condition of durum samples is all over the board, though. There are locations with scab or weathering or both. Germination scores range from the low 70s to around 90.

Glyphosate should not be used on seed fields.

We are still seeing some self-inflicted germination reduction from glyphosate application. Glyphosate is a systemic herbicide and thus is translocated to all parts of the plant. The seed is a part of the plant and thus gets its share of the chemical. For several years, we have been warning seed growers of the detrimental effects of improper use of glyphosate on germination. However, from our observations, it appears that this practice is gaining popularity in lentil production.

To illustrate the problem, the picture below is from a sample of lentils in which pre-harvest application of glyphosate was confirmed by the Seed Lab. The germination was 37% after nine days. Normal lentil seedlings are shown on the left side of the photo. The effects of the glyphosate are obvious in the seedlings at the right. The hypocotyl, primary root and secondary roots are all stunted.

Any individual conducting a "home germination test" on saved seed might mistakenly think these seed are normal. They are not, and likely would not emerge to produce a viable plant. If you have seed that was sprayed with glyphosate, I recommend looking for another seed source to plant next spring.

One of the problems we have in the seed lab is that seed that was sprayed with glyphosate doesn't always exhibit a germination reduction until some time has passed. We find in some cases that germinations in the fall might

be in the 90's and if the seed is tested again in the spring the germination might drop 10 to 20%. Vigor of the seed can also be affected without a noticeable reduction in germination.

Saving seed from fields that have been sprayed with glyphosate as a harvest aid may not save you money on planting seed. We recommend new certified seed that has been properly tested for germination and purity.



Normal lentil seedlings (L) and seedlings damage by glyphosate (R).

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 2 & 3 at the Doublewood Inn, Bismarck. In addition to the normal committee meetings, this year's annual meeting will be held in conjunction with NDSU's "Best of the Best" conference, which is always very informative. We hope to see you in February.



Research Fee Reminder

Thanks to everyone who paid their research fees on time. As a reminder, research fees are due each year on September 15. If you haven't responded to our previous notifications, please do so immediately. Final notices were mailed to labelers who have not paid as of November 1. Delinquent accounts will be turned over to the variety owners soon, so we encourage you to pay promptly. Continued disregard for research fee payment could jeopardize your ability to acquire and produce certified seed in the future. If you have any questions regarding your bill, please contact us.



Seed Labeling Permits Required

Joe Magnusson, Regulatory Manager

A Seed Labeling Permit is required to label and sell agricultural, vegetable, flower, tree and shrub 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. An annual reporting form for seed sales is sent to permit holders the end of June. Labelers are required to report all seed labeled and sold in their name and remit fees based on sales volume to the NDSSD. Contact our office if you need a permit application.

Know Your Seed Source

Joe Magnusson, Regulatory Manager

There have been several occasions where common seed has been labeled and sold as one variety but during the growing season, it was determined to be a different variety. In this case, you, as labeler, may be liable for mislabeling the seed unless you have taken certain precautions to properly identify your seed source.

North Dakota seed law has an exemption that states: A person is not subject to the penalties of this chapter for having sold, exposed for sale, or transported for sale in this state any agricultural, vegetable, flower, or tree and shrub seed that was incorrectly labeled or incorrectly represented as to kind, variety, or origin and which could not be identified through examination, unless the person has failed to obtain an invoice or grower's declaration stating the kind, or kind and variety, and origin, if required, or has failed to take other precautions as may have been necessary to ensure that the seed was properly identified.

When purchasing seed of other crops from growers for resale such as alfalfa, grasses, radish and varieties that do not require certification and can legally be sold as common seed, it is wise to test the variety for identification or receive a declaration from the grower stating the kind, variety and origin of the seed.



State Seed and NDSU/RF Reach Agreement on Fee Collection

In August, the Seed Department and the NDSU Research Foundation reached an agreement allowing the department to collect research fees for NDSU varieties on behalf of the foundation. The agreement is effective through December 31, 2013, covering the 2012 production year. The Seed Department is pleased to be able to continue providing an efficient and user-friendly service for the North Dakota seed industry, NDSU and our other partners.



Research fees are an important source of revenues for variety owners. Those funds help ensure continued investment in variety development. The future success of agriculture in our region depends on continued improvement of crop varieties.

Certified Seed Marketing and Promotion Plans

Steve Sebesta, Deputy Commissioner

A portion of the money generated by final certification fees funds the department's efforts to promote North Dakota certified seed. Our 2010-11 promotion budget is just shy of \$75,000. Our radio campaign alone, which began November 1, accounts for more than 40% of the budget; television sponsorships during state high school playoffs and tournaments are another 17%. We are increasing print advertising this year to about 10% of the budget. The remainder is divided into promotional products and trade shows.

Even though our promotion budget is significant, it is not intended to satisfy everyone's needs. The goal of our program is to raise the public's awareness of quality seed in a general way. However, this kind of campaign falls short of advertising your seed products. With nearly 800 seed growers, approved conditioners and retailers all selling seed of multiple crops, from multiple variety owners, it is impossible for us to develop a broad promotion plan specific enough for an individual's business or product lines.

That's where your individual efforts come into play. How do companies that sell the same product differentiate themselves from their competitor? Successful businesses promote their products and services. We encourage you to invest in your seed business and take advantage of our broad-scale promotions by advertising your business locally. Local radio and print advertising can specifically target your customers in ways our program cannot. Reach out to new customers, determine what their needs are and work to meet their expectations. Developing positive relationships with your customers will yield future sales and grow your seed business.

Additionally, information published in the *Seed Journal* each quarter may be helpful in promoting your products. Besides information related to seed certification and testing, we try to include information that can help you differentiate certified seed from common or bin-run seed. For example, how many of your neighbors use glyphosate on their fields as a harvest aid? Do they plan to use that grain for seed? Do they know glyphosate can reduce germination? Have you talked to them about the benefits of purchasing new seed each year?

Promote your seed as a quality farm input that has been properly inspected and lab tested to ensure it meets North Dakota certification standards. Certified seed is a value added product that yields dividends on the farm.

Sign up for On-Line Data

The Seed Department 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

Below is an example of the Field Inspection Inquiry page. It 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.

App. #	Field #	Crop	Variety	Acres	Class	Inspected	Status	Date Inspected	Acres Passed	Inspector
S09	7	WHEAT	BARLOW	15	Foundation	Completed	08/05/09	15	MAGNUSSON, JOE	
S09	8	WHEAT	BARLOW	54	Foundation	Completed	08/05/09	54	SEBESTA, STEVE	
S09	11	WHEAT	BRICK	8	Foundation	Completed	08/06/09	8	MAGNUSSON, JOE	
S09	12	WHEAT	BRICK	80	Foundation	Completed	08/06/09	80	MAGNUSSON, JOE	
S09	9	WHEAT	ND 308EXP	30	Foundation	Completed	08/06/09	30	MAGNUSSON, JOE	
S09	13	WHEAT	RB07	75	Foundation	Completed	07/29/09	75	MAGNUSSON, JOE	
S09	14	WHEAT	RB07	90	Foundation	Completed	08/06/09	90	MAGNUSSON, JOE	
S09	10	WHEAT	SD3948	11	Foundation	Completed	08/06/09	11	MAGNUSSON, JOE	

See you at the show!

Seed Department staff will be making the rounds again this year to a number of trade shows promoting North Dakota certified seed and department services. Stop by and visit if you get a chance. Our show schedule is listed in the Calendar on the back page.



Sauter Joins Seed Department

Robert Sauter joined the North Dakota State Seed Department Potato Program in November as a Potato Inspector I. He began training in shipping point inspection, potato field inspection and GHP/GAP auditing.

Robert worked on the potato cyst nematode project for the Minnesota Department of Agriculture the past two years. He also has experience with a vegetable production company and habitat conservation programs. Robert holds a Bachelors degree in biology from the University of Minnesota, Morris.

We are very pleased and excited to have Robert join our Potato Program team. Robert's experience and educational background will translate well to potato certification.

Sample Sizes

Occasionally, we receive samples that are scant of seed for the tests requested. As a reminder, beginning with the 2010 crop, we are now testing all hard red spring wheat, barley and field peas submitted for final certification for variety identity. Variety testing will not be done on pre-conditioned seed. Please submit a **full plastic sample bag** for these crops to ensure there is enough seed for all the required tests. If we have to call you for additional seed, it may delay testing.

More on Pre-Germs

Producers and conditioners are encouraged to keep the following in mind if they utilize pre-germs.

- Field numbers must be listed on the sample paperwork or envelope to verify the field(s) represented by that sample. Samples submitted without field numbers will not be considered representative of a finished lot.
- Pre-germs will only be accepted for final certification if all field numbers match exactly. If no field numbers are linked to the pre-germ test, we will automatically set the sample up for a new germination test.
- Pre-germs are not accepted for final certification of fragile crops such as soybeans, lentils, field beans, field peas and chickpeas. Germination tests must be conducted on the sample submitted for final certification.
- While the pre-germ sample may indicate whether the seed is suitable as a seed crop before the added expense of conditioning, we recommend doing another germination test on the conditioned seed lot to ensure that the test is conducted on the sample that is representative of the finished seed lot.

North Dakota State Seed Department

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NDSSD Calendar

- Dec. 31**..... Application deadline for Non-Resident Seed Dealers License
- Jan. 4-5**..... Lake Region Extension Roundup, Devils Lake
- Jan. 16-17** ... ND Grain Dealers Association Annual Meeting, Holiday Inn, Fargo
- Jan. 20-21** ... 36th Annual Bean Day, Holiday Inn, Fargo
- Jan. 24-25** ... Northern Pulse Growers 18th Annual Convention, Minot
- Jan. 26-28** ... KMOT Ag Expo, Minot
- Feb. 2-3**..... ND Crop Improvement and Seed Association Annual Meeting, Doublewood Inn, Bismarck