



# The North Dakota Seed Journal

DECEMBER 2011

Newsletter of the North Dakota State Seed Department

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## Seed Shortages a Potential Problem

Shortages of seed in some crop types are almost a certainty leading into the 2012 planting season. Due to poor spring planting conditions in North Dakota, durum, barley and edible bean seed acres were greatly reduced in 2011. In the case of barley, a reduction in malt contracts over the past two years has also negatively influenced seed production.

Nearly every commonly used small grain variety is protected by Plant Variety Protection Title V and may only be sold as a class of certified seed. Brown bagging, or farmer-to-farmer exchange or sale of protected varieties, is illegal. The Seed Department is utilizing several media sources to convey this information this year and encourages certified seed producers, conditioners and retailers to assist in this educational effort as well.

Under current circumstances, the temptation to circumvent seed laws by accessing seed from a neighbor may be strong. Participants in illegal seed sales must be aware: consequences of breaking seed laws are stiff for both buyer and seller (up to \$5,000 fine per sale for violating PVP laws). Variety owners will also go after violators, and they can collect up to triple damages for the seed sold and the production from illegally acquired seed. It is the responsibility of all parties involved, the seller, the conditioner and the buyer to understand the limitations of PVP laws. (See related article on page 5.)

Seed certification ensures that high quality seed of known genetic identity and purity is available to the agricultural industry. Illegal seed sales are detrimental to the entire seed industry. The Seed Department will work with other agencies and seed industry partners to investigate violations and enforce seed laws.

The buyer's proof of seed certification is either a valid seed tag or a bulk sale certificate issued by an official seed certification agency such as the North Dakota State Seed Department. Seed sellers are required to provide this documentation with each container of certified seed sold. Seed regulatory agencies may ask for these documents when examining potential seed violations.

Additionally, North Dakota seed laws require that seed sold in North Dakota be labeled with specific information regarding the variety and quality of the seed in the container. The full name and address of the person who labels or offers the seed for sale must also be included. Proper labeling is required for all seed, whether it is a protected variety or not.

We cannot emphasize strongly enough; if it isn't a legal seed source, don't sell it, don't buy it and don't plant it. Legal seed may be difficult to find in certain crops, but not impossible.

For more information about seed sales or a list of protected varieties contact the State Seed Department at 701-231-5400 or see [www.ndseed.com](http://www.ndseed.com)

North Dakota State

**NDSSD**

Seed Department

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# From the Commissioner's Desk

A couple of recent events got me thinking about the public's knowledge and perception of the Seed Department.

First, I received a query from a fellow in Houston asking for information on a relative who worked at the Department back in the 40's and 50's. Now, some might consider it a waste of time for the Commissioner to pore through issues of the Seed Journal for hours looking for reference to a former employee. I, however, consider it a learning experience; you gain a lot of insight into the history of the agency by scanning publications from decades ago.

Secondly, we were asked to host tours of the facility for groups of producers being honored at the NDSU Harvest Bowl. Steve Sebesta and I spent Saturday morning doing show-and-tell about the laboratory, tissue culture and greenhouse facilities. We also had the chance to explain the breadth of programs and services offered to the public, and how the linkage between field inspection, laboratory analysis and seed regulatory work leads to satisfying our mission: *"To assure the integrity of the seed industry through a commitment to client service and product quality"*

The historical search revealed that, even though the mission statement was put in print only a few years ago, the Department has been pursuing these same objectives for decades. The Department, a separate agency of state government, was created by Senate Bill(s) 68-70 of the 1931 Legislative Session. The Department's main thrust in the 30's was seed certification (primarily potato) and consumer protection. The legislature believed (logically) that the agency should

be collocated with the land grant college, and situated the Department on campus at ND Agriculture College (now NDSU). There are volumes of historical records that show the strong working relationship between NDSU breeders, plant scientists and administration and the Department.

Today, there are many similarities and differences in the seed industry and the Seed Department, if compared to the 1930's version of each.

Varietal improvement and trait technology has led to a revolution in agriculture, a good kind of revolution. Yields of all crops have expanded by amazing amounts through improved genetics. Seed is the vehicle for traits that protect the plant, and allow farmers to gain tremendous efficiency in production. Seed certification and quality assurance programs ensure that these genetic and trait improvements reach the farm.

The Seed Department has the same foundation and objectives as the 30's version; but has evolved in tune with the seed industry. We are still a state agency, governed by a board of directors (the State Seed Commission), and still wholly self-funded by service fees. We still maintain a facility on the NDSU campus and one in Grafton that serves our Potato Certification program.

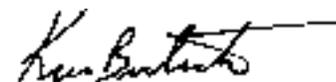
We are still a one-stop agency, dealing with all seed related matters for the state's producers. Certification of field crops, potato and seed regulatory work are all done here; in other states these services may be provided by a private certification association, a university plant science department or a division of a state department of agriculture...or all the above.

We've grown and changed. We are still the state's designated authority for seed certification, and now operate the largest field crop and second largest potato seed certification programs in the U.S. We've added a seed health and diagnostic laboratory, and a tissue culture/pre-nuclear potato seed production unit. We operate 4-5 different types of federal inspection and audit programs at any given time under a cooperative agreement with USDA. We still do germination and purity testing of seeds, but also test for GM traits and variety identification with seed protein and DNA testing technologies.

We've grown and changed our mix of partners too. Certainly, our grower base (numbering from 500-700 in any given year) is the foundation of everything we do. Our partners in NDSU breeding, pathology and seedstock programs are still a mainstay in daily work. We work closely with numerous private seed companies on services that fit their needs, and with regulatory efforts that help them protect their intellectual property. Working relationships with agencies at the state and federal level allow us to expand the delivery of services such as Good Handling/Good Agricultural Practices and RR sugarbeet compliance inspections and audits.

I could go further, but will instead offer an open invitation: stop by sometime and take the "nickel tour". Learn more about your seed inspection, testing and regulatory agency. More importantly, offer suggestions and ideas of how we can better satisfy our mission and serve the agriculture industry.

Best wishes for happy holidays and a profitable New Year.



Ken Bertsch ..... State Seed Commissioner  
 Steve Sebesta ..... Deputy Seed Commissioner  
 Willem Schrage ..... Director, Potato Program  
 Joe Magnusson ..... Field Seed Program Manager  
 Mark Hafdahl ..... Seed Laboratory Manager  
 Jeff Prischmann ..... Diagnostic Laboratory Manager  
 Kris Steussy ..... Administrative Officer  
 Mike Oosterwijk ..... Potato Program Supervisor

## NDCISA Hires Toni Muffenbier



Toni Muffenbier

Toni Muffenbier has been hired by the NDCISA Board of Directors to assume the duties of executive secretary. Toni has a strong background in office and administrative management with Bismarck State College, University of Minnesota Extension, North Dakota Division of Independent Study and the Red River Valley Fair Association. Toni will provide administrative services to the NDCISA, the NDCISA's Dakota

Select Seed Grower Group as well as the NDSU Foundation Seedstocks Project and the North Dakota Dry Edible Bean Seed Growers Association. Toni started work on October 3, overlapping with retiring executive secretary, Paulette Neva, for a couple of months to develop an understanding of the complex tasks of supporting these organizations.



## Fiebiger Appointed to Seed Commission

David Fiebiger, manager of the Finley Farmers Grain & Elevator Company was appointed to serve on the Seed Commission representing the North Dakota Grain Dealers Association. David replaces Myron Uttermark, manager of the Harlow Coop Elevator. Myron was appointed to the Commission in January, 2004 by the NDGDA and has represented the seed retailers, handlers and conditioners on behalf of the association. Our thanks to Myron for his many years of service to the seed industry and we welcome David to the Commission.



## 2011 Seed Quality Observations

*Mark Hafdahl, Seed Lab Manager*

Since July 1, we have received about 2,500 samples for testing. The following observations are based on what we have seen so far.

Soybean quality is really dependant on their stage of development on September 15, the day freezing temperatures ended the growing season. Some lots have a fairly high percentage of oblong, green beans with a loose seed coat. For the most part these seeds are dead. We also see some lots that have high percentages of light green beans that are of normal shape. These beans germinate well, but may benefit from a seed treatment. We have also seen some lots that have moderate levels of mechanical damage due to handling when the beans were too dry.

There is a broad range of seed quality in spring wheat lots. Scab is the primary culprit. Germinations range from 80 to 98%. Durum has a range of seed quality but most of what I've seen is very poor due to scab. Germinations for durum range from 50 to 90%, with most of it below 85%. Wheat and durum will benefit considerably from seed treatment.

I haven't seen enough samples of other crops to get a feel about seed quality.

## Use of New Bulk Certificates Implemented

*Steve Sebesta, Deputy Commissioner*

In the September issue of *The Seed Journal*, I introduced changes to the bulk certificate system. Over the course of the last year, we have been working on plans to move this project forward. We put a lot of thought into this project. We consulted with the ND Crop Improvement and Seed Association about the format of the form and came away from the annual meeting with a decision to develop and implement the new product. Beginning November 1, the Seed Department made the switch to new the forms.

While we believe that the changes in how you handle these forms are minimal and fairly self-explanatory, I wanted to provide a little more explanation on their use.

When certification of a bulk seed lot is approved, the labeler will receive from our office, bulk certificates, a log form and a bin label.

### 1. Completing the new bulk certificates

- a. When you make a sale, complete the top and bottom halves of the bulk certificate with the buyer's information, number of bushels, mark whether or not the seed is eligible for resale and sign it.
- b. Separate the bottom half of the form and give it to the buyer. That is his record of the legal transaction and proof of eligibility for certification (if Foundation or Registered seed).
- c. Retain the top half for your record.

### 2. Completing the log sheet

- a. The log sheet provides a simple, consolidated record-keeping system and replaces the need to hold onto all the yellow copies of the old forms. There is a single line, preceded by a serial number for each certificate you requested.
- b. When a sale is made, simply record the transaction on the log sheet.
- c. When you have used all of the bulk certificates for that seed lot or you have sold all the seed, return the completed log sheet and any unused bulk certs to the Seed Department. No more yellow copies!
- d. The deadline for returning log sheets to our office is still July 1, but we suggest that you return completed log sheets to our office as soon as possible.

### 3. Need additional bulk certs?

It's just as easy as before. Call the department and request additional bulk certificates and we'll issue you another set of certificates and a new log sheet.

The new bulk certificates and log sheet won't require any significant changes in how you do business. They should make your record keeping and reporting responsibilities less complex. Please feel free to call the office if you have any questions.

# Pulse *Ascochyta* and Bean Anthracnose Testing

Jeff Prischmann, Diagnostic Lab Manager

Pulse crop *Ascochyta* and bean anthracnose are potentially devastating seed-borne diseases that seed growers should be concerned about. Seed testing is an effective and inexpensive way to detect and measure these diseases.

*Ascochyta* is a serious fungal pathogen that infects chickpea, lentil, and field pea. The *Ascochyta* fungus is crop specific, meaning chickpea *Ascochyta* only infects chickpea and not lentil or field pea. This is true for lentil and field pea *Ascochyta* as well. Many parts of North Dakota experienced growing conditions that may be conducive to the development and spread of *Ascochyta*. For this reason, seed testing is important, especially for chickpea and lentil.

*Ascochyta* tests on pulse crops are conducted using a 500 seed sample. Results are reported as the percentage of infected seed found. Small amounts of *Ascochyta* may be acceptable depending on the crop. For example, field pea may have a higher acceptable level of *Ascochyta* than other pulse crops such as chickpea. Generally, the following guidelines are what we tell growers about the acceptable amounts of *Ascochyta* in a seed lot: For chickpeas, 0.3% seed infection or less is acceptable. We recommend a grower purchase new seed if the score is higher. For lentils, 0.5% seed infection or less is considered acceptable. Levels of 0.5% to 1.0% are considered ok, however, growers are cautioned to monitor fields closely for infection. Lentil *Ascochyta* infection levels of 1.0% to 3.0% require seed

treatment and levels above 3.0% are considered unacceptable. Compared to chickpeas and lentils, *Ascochyta* does not cause as many problems for field peas. However, some sources report high infections as those greater than 5%. In this case, growers or producers may want to look for other seed sources.

Bean anthracnose is a serious disease that can be easily overlooked. It has been found in Manitoba, Michigan, Ontario and several bean growing North Dakota counties since 2001. 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. Beans infected with bacterial blight and anthracnose can make symptoms more difficult to detect. Low infection levels of anthracnose 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 reinfection. Thus, testing for anthracnose is extremely important.

The North Dakota State Seed Department has taken measures to ensure certified bean seed produced in North Dakota is free from this serious pathogen. In addition to field inspection, bean 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. The use of certified seed that has been field inspected and lab tested for anthracnose is recommended. Good management practices are important to prevent anthracnose. Growers should avoid planting bin run seed.

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 commingled into a single seed lot. **If seed from one field containing anthracnose is commingled with other fields that did not contain anthracnose, the entire seed lot will be contaminated.**

The North Dakota State Seed Department Diagnostic Lab 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 fungus. A positive test result indicates the sample is contaminated. Growers should submit at least three 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. **This test is a pass or fail test and any positive test result will result in a failed test.**

The bottom line on most seed health tests is to look at the results in relation to the crop and consider finding different seed if the results are high. Most seed-borne diseases need optimum conditions to spread during the growing season. So, just because a pathogen is present in a sample doesn't necessarily mean that the disease will be found in the field next year. However, it is more likely that the disease will be present in the field the next year with increasing levels of seed infection. Please contact the department with any questions or comments regarding seed health testing.

## NDCISA Executive Secretary Retires



Paulette Neva

Paulette Neva, executive secretary for the North Dakota Crop Improvement and Seed Association retired December 1 after nearly twenty years of service to the North Dakota seed industry. Paulette started with Crop Improvement in 1992. She has been the association's key contact with registered seed growers in the county seed increase program for new varieties released by NDSU. Paulette's responsibilities have grown over the years and in 1994 she also began working part-time for NDSU Foundation Seedstocks. She also provided office support services for the ND Dry Edible Bean Seed Growers Association for approximately 15 years. All three organizations will miss Paulette's organizational skills and institutional knowledge. She and her husband, Bob, plan to spend more time at their lake home and travel. We wish them both the best.

## Seaver Joins Seed Department

Dylan Seaver joined the Seed Department in September as a Laboratory Technician I in the Potato Seedstock Program. Dylan's primary responsibilities include tissue culture and greenhouse seedstock production. Dylan has three years of experience at the department as a part-time employee and was instrumental in the smooth transition between program managers.



## Yoder Joins Seed Department



Nile Yoder was hired as a Seed Inspector I in October. Yoder began working as a part-time field inspector with the Seed Department in 2007. He earned additional

responsibilities as facility inspector and regulatory inspector in the fall of 2008. This year he assisted the Potato Program with shipping point inspections. Yoder's new duties will include expanded responsibilities with potatoes, including field inspection. He will continue with facility inspections for the Field Seed Program and site audits and sampling for the Regulatory Program.



## Horsley Named NDSU Plant Sciences Chair

Dr. Richard Horsley was named chair of the NDSU Plant Sciences department in October. Horsley received his Bachelor's degree from the University of Minnesota, and Master's and Doctorate degrees from NDSU in plant breeding. He began his professional career at NDSU as barley breeder in 1988.

## Golva Couple Fined for Illegal Seed Sale

*Steve Sebesta, Deputy Commissioner*

The North Dakota State Seed Department recently settled a case concerning state and federal seed law violations against a Golden Valley county couple for an illegal seed sale of a protected variety.

Gary and Brenda Maus of Golva, ND agreed to pay the Seed Department \$11,500 in fines for illegally selling Alsen spring wheat. Alsen, an NDSU release, is protected under the Plant Variety Protection Act and Title V of the Federal Seed Act. The 1994 amendments to the PVPA prohibit the sale of any farmer-saved seed without permission from the variety owner. Title V requires that the seed is certified by an official seed certification agency. In addition to the federal violations, the sale violated several North Dakota seed laws, principally labeling requirements.

In a separate settlement, the Mausés agreed to pay the NDSU Research Foundation, which owns Alsen, the sum of \$17,500 for infringement of NDSU's intellectual property rights.

Additionally, the USDA Seed Regulatory and Testing Branch has been notified of the violation. In addition to issuing a warning letter the SRTB maintains a registry of violators for three years and will take further action if additional violations occur within that time frame.

The State Seed Department, which is responsible for the enforcement of seed laws in North Dakota, regards these violations as very serious. State and federal seed laws were established to protect consumers and provide for standardization of testing and labeling requirements. Research fees generated by legal sales of seed help fund development of new cultivars that benefit the entire state. In addition, illegal seed sales are detrimental to the state's seed industry and the hundreds of legitimate seed producers, conditioners and retailers engaged in legal seed trade.



The Farmers Yield Initiative, or FYI, promotes legal seed trade, research, education, seed certification, and the enforcement of intellectual property rights authorized under the Plant Variety Protection Act (PVPA) and patent laws. The purpose of the initiative is to educate the public and encourage compliance with existing state and federal seed laws embodied in the PVPA and state seed certification regulations.

If you suspect illegal seed activity please consider submitting a strictly confidential tip to help put a stop to illegal seed trade. You need not identify yourself during the phone call. The caller can remain anonymous, and it is toll-free.

Phone completely confidential tips using the toll free number:  
**(877) 482-5907**

Email tips to:  
**tips@farmersyieldinitiative.com**

Mail tips to: Farmers Yield Initiative  
PO Box 8850  
Fayetteville, AR 72703

## North Dakota State Seed Department

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Fargo, ND 58105-5257

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# NDSSD Calendar

- Dec. 31 .....** Application deadline for Non-resident Seed Dealers License
- Jan 3-4 .....** Lake Region Extension Roundup, Devils Lake
- Jan. 15-16 ..** N.D. Grain Dealers Association Annual Meeting, Fargo Holiday Inn
- Jan. 19-20 ..** 37th Annual Bean Day, Fargo Holiday Inn
- Jan. 23-24 ..** Northern Pulse Growers 19th Annual Convention, Holiday Inn, Minot
- Jan. 25-27 ..** KMOT Ag Expo, Minot
- Feb. 7-8.....** N.D. Crop Improvement and Seed Association Annual Meeting, Grand International Inn, Minot