



# The North Dakota Seed Journal

MARCH 2005

Newsletter of the North Dakota State Seed Department

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## Department Participates in PVY Survey

Jeff Prischmann, Diagnostic Lab Manager

The North Dakota State Seed Department is participating in a national Potato Virus Y survey as part of the USDA-APHIS Canada/US Management Plan for Potato Viruses. The purpose of this project is to conduct a scoping survey to better assess the presence of different strains of PVY and their incidence in seed potatoes in both Canada and the US. The Seed Department is conducting the North Dakota portion of this survey, which represents 10,000 tubers or 5,000 PVY tests.



*Sprouted tubers to be tested for Potato Virus Y.*

Each sample is comprised of two tubers. Higher generation samples were collected from North Dakota seed lots and brought to Fargo in November 2004 for sprouting and testing. Potato sprouts from 127 tuber samples are currently being tested by the diagnostic lab with testing nearing completion by March. Each of the several states involved in this survey are either testing their own samples or sending the samples to another state for testing.

Once the initial PVY screen has been completed on the sprouts from the 10,000 tubers, each positive sample will be retested to verify its positive status and to identify positive tubers. Also, PVY positive tubers will be tested for PVYn to determine strain. All positive tubers will then be sent to USDA for confirmation testing and strain identification.

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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## FSA Maps Are Required

Seed producers applying for field inspection with the North Dakota State Seed Department **MUST include FSA maps** for all fields. Applications will be considered incomplete without proper maps. The boundaries of each seed field must also be clearly identified on the map.

Hand-drawn maps are undesirable because too often they are drawn incorrectly. In addition, FSA maps allow our staff to identify incorrect legal descriptions on the applications. These common errors cause inspectors downtime, which in turn reduces the number of fields they are capable of completing each day and may even cause us to miss your field. Inspection delays ultimately reduce our efficiency and yours. Help us serve you better by including FSA maps with your application this year.



## From the Commissioner's Desk

North Dakota is blessed with an abundance of good things; one of them is biennial sessions of the Legislature. You may interpret that statement however you want.

By the time this newsletter reaches you, we will be well into the second half of the 2005 Session. From an agency perspective, there aren't many issues of concern or controversy. Obviously, we take the appropriations process very seriously, and our agency budget bill is working it's way through. Additionally, an interim study forged SB 2044, mainly provides for updated language in Seed Department chapters of Century Code.

From a seed industry perspective, there are three bills that I find interesting and valuable to seedsmen our agency serves.

**SB 2277** provides "right to farm" type protection to the agriculture industry, by limiting political subdivisions ability to pass ordinances prohibiting farmers from planting any type (read: genetically enhanced) of seeds. This type of "preemptive" legislation is common nationwide regarding the application of federally approved and commercially available pesticides. Now it is being applied to the sale and use of seed, primarily to avoid situations like those in California and other states where county moratoriums on planting of GE seed sources have been passed.

**SB 2326** brings two positive points into laws governing potato seed. First, the bill repeals what is commonly called the "year-out" exemption, which allows the planting of seed (for commercial production) that is one year removed from certified class. The repeal will help the seed and commercial industries move forward in a number of areas; from efforts to create national standardization in the seed industry, to assuring quality factors required for crop insurance coverage. These are largely prospective changes, since both these issues are likely to emerge as problems after the legislative session is completed. From my perspective, removal of the exemption will help create a much healthier environment for seed and commercial potato production in North Dakota.

Second, SB 2326 creates language that requires imported seed to carry the same documentation and testing as that required in the exporting country or state. In other words, if Manitoba (as an example) requires incoming seed to carry a health certificate, import

certificate, phytosanitary certificate and proof of testing from a Canadian approved laboratory; we should be able to require the same of them. This is simplified for purposes of explanation, but you get the point. This is simply an attempt to provide baseline language in code that helps North Dakota deal with inequities in border requirements for imports and exports.

**SB 2023** creates bonding authority to NDSU that provides for partial funding for construction of greenhouse facilities on campus. Currently, the authorization falls short of the full \$9 million needed to construct Phase I of the project; the Governors budget allows only one-half of the estimated cost.

I believe this may be the most important legislative issue of the session, considering the long-term impact on agriculture. Without infrastructure improvements on campus, adequacy can be maintained, but **advancements** in breeding and pathology programs cannot move forward. This statement is not critical of the outstanding efforts of breeding programs and scientists, it proclaims the need to provide infrastructure to allow those programs to excel.

These are a smattering of issues that impact all of us. I encourage anyone interested in the seed industry to be aware of and involved in legislation that affects your business.

- Ken Bertsch ..... State Seed Commissioner
- Steve Sebesta ..... Director, Field Seed Program
- Steve Marquardt ..... Director, Potato Program
- James Swanson ..... Seed Regulatory Manager
- Joe Magnusson ..... Seed Certification Manager
- Mark Hafdahl ..... Seed Laboratory Manager
- Jeff Prischmann .... Diagnostic Laboratory Manager
- Kris Nicklay ..... Administrative Officer
- Galen Briese ..... Field Seed Specialist
- Mike Oostewijk ..... Potato Program Supervisor

## North Dakota Crop Improvement and Seed Association Names Award Winners

The NDCISA presented two awards at its 53rd annual convention in Bismarck February 8.

The **Premier Seed Grower Award** recognizes individuals who have successfully grown registered or certified seed for several years and have significantly contributed to the certified seed industry in the state. The Distinguished Service Award recognizes individuals for their outstanding contributions to North Dakota agriculture and their community.

### Research Fee Collection Procedures

As communicated previously, the North Dakota State Seed Department is responsible for the collection of research fees on certain NDSU, SDSU, U of M, and Busch Agricultural Resources, Inc. varieties.

A Seed Use Report Form will be mailed to labelers of fee-bearing varieties in July. The report will indicate the number of bushels certified by variety and lot according to department data. Labelers will be required to reconcile the number of bushels sold for planting, planted on their own farm, sold as commodity, carried over or not conditioned. **Labelers only need to pay the research fee on the number of Registered or Certified bushels SOLD AS SEED.** Fees must be paid by September 15 for sales that year.

#### Premier Seed Grower Award — Marlow & Sandy Werth

Marlow and Sandy, both natives of the Lehr area, started farming in 1975 and began their seed business in the early 1980s. Approximately 85 percent of their crop acres are devoted to registered and certified seed production. They produce many crops including several varieties of wheat, flax, durum, oats, soybeans and dry edible beans. To produce the highest seed purity possible the Werths meticulously clean all equipment, rogue and spray fields, and maintain clean fields thru selective rotations. In the past ten years alone, they have sold over 185,000 bushels of certified seed.

Marlow and Sandy's daughter Shelly was also very involved in the farming activities and seed business while



*Sandy and Marlow Werth and Shelly Werth Konopa*

growing up, but has since married and moved to Santa Rosa, California. Sandy serves on the McIntosh County Farm Service Agency Board and Marlow is a member of the ND Grain Growers Association, ND Soybean Association, Past Board of Director of the Farm Bureau.

#### Distinguished Service Award — Terry Gregoire, NDSU Area Extension Specialist

Terry graduated from NDSU with a master's degree in Agronomy and joined the NDSU Extension Service in 1972. After several years in Barnes and Emmons counties Terry moved to Devils Lake. Producers, extension agents, state specialists and industry representatives have benefited from his expertise in agronomy. Terry has also assisted with annual inspector training for the Seed Department.

Terry has conducted many on-farm fungicide and herbicide research trials and has also conducted many different small grain and row crop research trials. He was instrumental in determining the value of frost-damaged crops, in the northeastern part of the state last fall.

Terry developed Pro-Crop, a computer software program, providing information on crop production and pest management that is used extensively by producers, extension agents and industry representatives throughout North Dakota. He developed the "Lake



*Terry Gregoire (left) with NDCISA President Del Gates*

Region Round-Up", one of the most successful trade show/educational meetings in the state.

Terry is well respected, throughout the upper Midwest, with his wide range of knowledge in crop production. He is a valuable asset to producers and is a well-respected and resourceful member of the Lake Region community.

## Seed Quality Observations

Mark Hafdahl, Seed Lab Manager

Seed quality this year is more variable than I have seen in the last 19 years. In the northern third of the state the quality has been fair at best. We have seen germinations ranging from 10% to 98% in small grains and soybeans. This was due to the cool summer and a frost that damaged undeveloped seed. High moisture contents at harvest also contributed to problems in storage.

Here are some specific crop observations.

**Soybean** seed size is smaller than usual. Many lots failed to mature before the frost and those green seeds are dead. There should be seed above 85% germination available.

**Wheat** was also adversely affected by the frost. In some areas the germinations are below 85% for the most part.

**Flax** is another crop that didn't completely mature and germs are in the 70 to 80% range. Test weights are light due to partially filled seed.

**Barley** fared the best this summer. There are some poor lots but most of the seed germinates around 95%

**Durum** ranges from good in the SW to poor in the NW. The germs are around 80% in the rest of the northern area.

**Edible beans** are variable in quality. Generally, if the seed looks good it is, but there are some lots that suffered frost and the germs are in the 80% range.

**Lentil** quality is good.

**Field peas** are of fairly good quality except those that were damaged due to low moisture at harvest time.

With the lower quality seed we are seeing this year, I recommend seed treatment and planting in good conditions. Don't plant seed of questionable quality in a stressful environment. You don't want to be the first one in the field this year.

## AOSCA Audit Results

All seed certification agencies are required to complete a self-audit annually to verify that the agency is complying with Association of Official Seed Certification Agencies standards and procedures. In addition to that AOSCA auditors periodically conduct an official outside audit. Last November, AOSCA audited the North Dakota State Seed Department.



Diagnostic Lab Manager Jeff Prischmann (left) with AOSCA CEO Chet Boruff (center) and Dr. Dennis Thompson, Illinois Crop Improvement Association (right).

Lead auditor, Dr. Dennis Thompson, of the Illinois Crop Improvement Association, conducted the audit, along with new AOSCA CEO Chet Boruff. The day-long audit examined all aspects of our business including availability of reference materials and manuals, operational procedures including field inspections, conditioning plant inspections, sampling, seed testing, labeling, documentation and record-keeping.

Our staff viewed the audit as an educational opportunity to critically review our operations and identify any weaknesses in our program. Dr. Thompson recommended three action items and concluded that the NDSSD is in compliance with AOSCA standards and procedures. State Seed Department customers can be assured that your state seed certification agency is performing its duties professionally.

## Soybean Rust Found in Southern US

Jeff Prischmann, Diagnostic Lab Manager

Soybean rust has now been found in the continental US. The first report of soybean rust in the southern US occurred last fall in Louisiana and by the end of the year, several other southern states were confirmed by USDA-APHIS to have soybean rust including Arkansas, Alabama, Florida, Georgia, Mississippi, Missouri, Tennessee, and South Carolina.

There are two fungal species that cause soybean rust, *Phakopsora pachyrhizi* and *Phakopsora meibomia*, with the former being the more aggressive of the two species. *P. pachyrhizi* is also known as the Asian soybean rust as it was first reported in Japan more than 100 years ago. In 1994, Asian soybean rust was

reported in Hawaii and was believed to be introduced into Argentina, Brazil, and Paraguay in 2001. The less aggressive species of soybean rust, *P. meibomia*, is present in Puerto Rico. Both species of soybean rust have not been reported in the continental US until last fall when the Asian type was confirmed.

The primary concern with soybean rust is that all current US soybean varieties are susceptible. Soybean yields can be drastically diminished by soybean rust. This fungus attacks soybean leaves and can cause significant damage to the plant canopy. Another important factor with soybean rust is how it is transmitted. The primary means of spreading is

Rust continued on page 5

## Seed Testing Trends

*Jeff Prischmann, Diagnostic Lab Manager*

The testing season is past the midway point and we have noticed some interesting trends. Some of the trends that we are seeing in the lab with testing include:

Dome test scores of edible beans are higher in general than they were last year. We are not scoring many samples above a 4, but a majority of samples seem to be rated with test scores of 3-4. Last year, we saw many samples with scores of 3 or less. We have conducted more than 40 bean anthracnose tests so far this year. There have been no positive samples found. Many bean samples do contain much higher levels of mold than we have seen in past years. The additional mold and bacteria present in the seed appears to have affected the appearance and quality of some seed lots. We have seen many edible bean seed lots that contain dark, discolored seed that contain mold. This indicates wet growing or harvest conditions.

**Rust** continued from page 4

by the movement of spores via wind. This is a concern for northern soybean producers since as rust infections develop in southern states, the spores could easily be carried long distances by wind currents and infect soybeans in our region. It is believed that soybean rust spores are not capable of overwintering in North Dakota, so the primary means of infection in our area would be by wind-blown spores.

Alternate hosts of soybean rust will also be a concern that growers need to be aware of. There is a long list of alternate hosts for soybean rust, including many legume crops. One of the most important crops in North Dakota that is an alternate host is edible bean.

Ascochyta testing of lentils, chickpea, and field pea is running ahead of last year. So far this year, we have performed over 100 ascochyta tests with the majority of these on lentil samples. We have noticed a similar trend here as with edible beans. Many samples have higher levels of mold than we have seen in the past. In addition, some lentil seed lots have appeared discolored. Testing results seem to back up these observations as we have seen ascochyta levels in lentils running slightly higher than in

previous years. Chickpea and field pea ascochyta tests have also revealed the presence of high levels of mold in many seed lots. This again suggests wet growing or harvest conditions.

Barley loose smut also appears to be at higher levels than we have seen over the past couple of years. 'Drummond' is one of the barley varieties that we routinely test for the presence of loose smut that typically scores higher than most other varieties. That trend has continued this testing season.

## Random Sampling of Seed Lots Offered to the Public

*Jim Swanson, Seed Regulatory Program Manager*

One of important functions of the Seed Regulatory program is the random sampling of seed lots that are made available to the consumer. The purpose of the random sampling process is to sample and test products and compare the results to the claim made on the seed label representing the seed lot. If a discrepancy is found between the two results that exceeds the tolerance a "Stop Sale" order is issued on the seed lot until the problem is either corrected or the seed lot is disposed of in non-seed channels.

The State Seed Department has inspectors located throughout the state that work in assigned areas inspecting seed warehouses, seedhouses, and any business that sells seed. In addition to the random sampling, the inspectors check all seed lots to insure that they are labeled properly and that the labels are current. Seed that is carried over from the previous year must have an updated germination test that meets State and Federal Seed Law requirements. Seed laws and regulations apply to all seed sold to the public from the smallest flower or vegetable seed packet to the large seed lots that are stored in containers containing several thousand bushels.

Other duties that inspectors are involved in are checking record keeping procedures, checking for required file samples, and seed plant and bulk handling facility equipment. Inspectors are prepared to assist seed vendors in complying with all rules and regulations if some problems surface during the inspection process.

**The primary purpose of seed regulation is to ensure the consumer that the product they are buying meets all of the label claims made on the product.**

**North Dakota State Seed Department**

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**NDSSD Calendar**

**March??**