



The North Dakota Seed Journal

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Newsletter of the North Dakota State Seed Department

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2007 Post-harvest Test for North Dakota Seed Potatoes

Willem Schrage, Potato Program Director

The North Dakota State Seed Department carries out its post-harvest test for seed potatoes on land owned by the North Dakota Seed Potato Growers Association at Dunn's Farm, near Homestead, FL. 600 tuber samples of seed lots are planted to determine which seed lots are eligible for re-certification. Planting was carried out under optimal circumstances with the help of two ND seed potato growers.

The majority of the varieties were at the correct growth stage for reading when the inspectors arrived the first of January. The timing of the inspection was optimal. Slow emerging and slow growing varieties were inspected during the last days of the trip.

Varieties that were performing better than expected, as far as virus content was concerned, were Shepody, Russet Norkotah and Silverton. Red Lasoda and Dakota Diamond did less well.

Last year, discussions took place about possible "current season infection" i.e. virus transmission by aphids in the field in Florida. "Current season infection" is not an unknown phenomenon for North Dakota inspectors. This year over 2,000 leaves were tested in the Seed Department Diagnostic Lab in Fargo and some in Florida. All test results were compared to symptoms in the field. There were no discrepancies. To keep the possibility of current season infection to a minimum the first reading and laboratory testing was done as soon as possible after arrival.

State seed potato certification agencies in all 15 seed potato producing states are aware of two reasons for the growing need for more laboratory testing. One reason for more testing is the fact that potato breeders have been releasing varieties which may be symptomless carriers of Potato Virus Y (PVY). A second reason is that the national PVY survey has indicated that there are combinations of PVY

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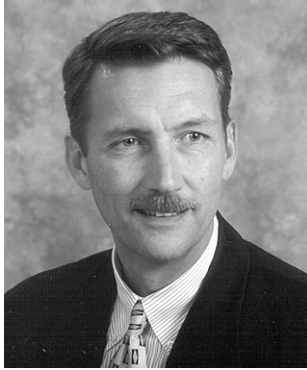
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Seed Department

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Mike Oosterwijk reading the winter test, with visitors from North Dakota.



From the Commissioner's Desk

My grandfather was one of those old-timers that you just had to love. He had a way of looking at things in a very practical, borderline ultra-conservative, manner especially in regard to running his farm. He retired in the mid-1970's, not too long after the last commodity price explosion like we are seeing today. Of course, farming in the last half of the 1900's was a bit different than today.

One of the things my grandpa always preached was never completely emptying your bins before harvest. Or the alternative; hurry up and get that first field harvested. Both theories were predicated on having enough seed to plant the farm next year in case of a hailstorm. Having something "in the bin" meant more than grain in inventory, it meant being prepared to deal with an emergency.

Things were different then. Farmers were more self sufficient regarding seed. Booking early wasn't an issue. Folks seldom sold out completely.

Sometimes, the more things change the more they remain the same.

You have been hearing or seeing press related to seed supplies, much of it generated by this agency starting in

Ken Bertsch State Seed Commissioner
Steve Sebesta Deputy Seed Commissioner
Willem Schrage Director, Potato Program
Joe Magnusson Seed Regulatory Manager
Galen Briese Seed Certification Manager
Mark Hafdahl Seed Laboratory Manager
Jeff Prischmann Diagnostic Laboratory Manager
Kris Nicklay Administrative Officer
Mike Oosterwijk Potato Program Supervisor

September, 2007. The specter of high commodity prices leading to an erosion of seed supplies led us to survey cereal seed growers to try to determine potential supplies. The results are in an article by Steve Sebesta (who did all the heavy lifting for the survey), and may surprise you.

Clearly, we have always been less concerned with seed grower inventories than with producer planning. Our survey indicates that our confidence was well-founded: seed growers have held tremendous inventories of seed produced, as of January, 2008. In my opinion this is a patient and courageous effort to supply your customers, and one where nearly all the financial risk of inventory management is squarely on the back of the seed grower. It is also my opinion that the patience will not (and shouldn't be expected to) last long.

North Dakota produces more certified seed acres than any other state, and last year's production should have yielded a healthy supply of seed. Assuming a "normal" certified seed use rate (something around 25-35%), supplies should be adequate to meet

demand. This "adequacy" idea also assumes normal disappearance, which **cannot** be expected this year given the astounding market prices.

The real question this year is not supply, it's demand. Will demand be up this year, expressed by lower rates of bin-run use? Will bin-run use decrease dramatically, because bins are mostly empty? Will growers recognize the need to purchase/contract/cover in some manner their seed needs, or will they assume seed supply exists AND is going to be cheaper by spring? Have commodity producers prepared for this situation, ensuring an inventory, so to speak?

I am inclined to believe that the risk of carrying seed inventory will catch up at some point, and that disappearance of seed stocks must accelerate between February and April. I'm certainly not advocating a sellout by seed growers, I'm just saying...

Do grain producers have something in the bin, figuratively speaking?

Federal Seed Act Facts

Q. When is it necessary to change a lot number?

A. Federal Seed Act Regulations Part 201 define a seed lot as a definite quantity of seed identified by a lot number, with every portion or bag being uniform, within permitted tolerances, for the factors appearing on the label. A lot number is the primary identifying tool on a label and is used for tracking a specific quantity of seed. The lot number should be unique to that specific lot or specific quantity of seed.

A lot number should be changed anytime the seed in the lot is altered. Here are some examples:

- If the seed lot is reconditioned resulting in a change in seed quality;
- If the seed lot is blended with another lot;
- If a lot is subdivided into portions that are no longer uniform because of treatment, conditioning, different storage conditions, or other factors or
- If coating material or seed treatment is added to an existing lot.

Variety Eligibility Requirements for Certification

Steve Sebesta, Deputy Commissioner

Each year, the State Seed Department receives several applications for field inspection for new varieties. Obviously, we promote the production and sale of high quality certified seed and strive to assist producers in this area. However, the Federal Seed Act Regulations § 201.68 specify the eligibility requirements for certification of varieties. Those regulations require the originator, developer or owner of the variety to provide this information to an AOSCA certification agency when certification of a variety is requested. AOSCA member agencies are required to enforce these regulations by determining whether varieties meet the requirements.

Federal Seed Act Variety Eligibility Requirements

- a. The name of the variety
- b. A statement concerning the variety's origin and the breeding procedure used in its development
- c. A detailed description of the morphological, physiological, and other characteristics of the plants and seed that distinguish it from other varieties
- d. Evidence supporting the identity of the variety, such as comparative yield data, insect and disease resistance, or other factors supporting the identity of the variety
- e. A statement delineating the geographic area or areas of adaptation of the variety
- f. A statement on the plans and procedures for the maintenance of seed classes, including the number of generations which the variety may be multiplied
- g. A description of the manner in which the variety is constituted when a particular cycle of reproduction or multiplication is specified
- h. Any additional restrictions on the variety, specified by the breeder, with respect to geographic area of seed production, age of stand, or other factors affecting genetic purity
- i. A sample of seed representative of the variety as marketed

There are four methods variety owners may use to enter varieties into certification. A variety will normally be accepted as eligible for certification after favorable action by:

- a national variety review board
- Plant Variety Protection Office (with additional information)
- Organization for Economic Cooperation and Development (OECD)
- an official seed certification agency

Regardless of the method by which a variety is accepted for certification, the Federal Seed Act requirements must be satisfied. We strongly encourage utilization of AOSCA Variety Review Boards. These boards review applications to determine whether a variety meets the eligibility criteria and following a positive review, eligibility status is provided to all AOSCA member agencies, greatly simplifying the task of determining eligibility during review of field inspection applications.

The next most common method for entering a variety into certification is through evaluation and approval by a state certification agency. State agencies have the authority to enter varieties into certification under AOSCA Operational Procedures. While procedures may differ by state, they are still obligated to collect and review the required information to ensure compliance with FSA regulations. Even if a PVP certificate is provided it does not contain all of the information required, even if the Title V option was selected. The PVP certificate satisfies items a through d above, but the variety owner or breeder must still provide additional information to satisfy e through i.

Variety owners are encouraged to complete this task in the next couple of months, before field inspection season arrives, to avoid problems. Certification benefits everybody and we're happy to assist variety owners with the process of entering varieties into the certification program. Call for more information.



Association of Official Seed Certifying Agencies

Field Inspection Application Problems

Galen Briese, Certification Manager

It may seem a little early to begin thinking about field inspection but the next Seed Journal won't be mailed until mid June, about the same time applications are due. When filling out applications for field inspection, please take time to fill out the form entirely and include all required documentation before sending them in. Lack of information is the most common problem with field inspection applications.

The two greatest problems are missing bulk certificates (or tags) and missing FSA maps. Bulk certificates provide proof that the seed planted is an eligible variety and eligible class. FSA maps are the best way for us to verify the location (legal description) of your field. FSA maps are also a real time-saver for our inspectors.

Clear instructions are located in the middle of the application form. There are nine instruction and information statements in bold print. Take the time to read them before you complete the form. When completing the application form, fill out every section. This information determines eligibility of the fields for inspection.

Do not list small grains, soybeans or field beans on the same application. Use separate applications for each of those crops. They are inspected at different stages and often by different inspectors. Finally, make sure you sign the application.

Applications will be mailed to seed growers in May. If you need assistance please call us for help! 701-231-5400.

Sample Sizes Required for Testing

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.

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 (Soybean; 5 lb.)
 Barley Stripe Mosaic Virus (½ lb.)
 Blackleg (Canola; ½ lb.)
 Dome Test (Edible Bean; 3 lb.)
 Loose Smut (Barley; ½ lb.)

HERBICIDE TRAIT/TRANSGENIC TESTS

Roundup® Herbicide Bioassay Test (Soybean; ½ lb.)
 Liberty®, Roundup®, or Clearfield® Herbicide Bioassay Test (Canola; 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; 1 lb.)

GERMINATION/PURITY TESTS

Germination Tests (800 seed minimum)
 Seed Purity Tests
 Small-seeded grasses, white or alsike clover or seeds of similar size (4 oz.)
 Sweet clover, red clover, alfalfa, grasses, millet, rape, flax or seed of similar size (8 oz.)
 Cereals, soybeans or seed of similar size (1½ lb.)

PVP Violations Are Costly

The Seed Department has received several calls from seed producers concerned about farmers cleaning and selling bin run grain of protected varieties.

Most varieties of small grains and pulse crops are protected by the Plant Variety Protection Act (PVPA) with the certification option (Title V). Any variety protected by this option can only be sold as a class of certified seed. Anyone selling these varieties without completing the certification process is in violation of state and federal seed laws.

Damages for state violations of this act can be as high as \$5,000 per violation, along with numerous labeling violations, each of which carry a potential \$5,000 fine. Additionally, the owner of the variety can also collect triple damages on the seed that is sold and on the seed produced from the illegal seed. The owner can also collect damages from the conditioner of that seed.

Reminder: These varieties cannot be sold as common seed to your neighbors or anyone else.

Seed Availability Survey

Steve Sebesta, Deputy Commissioner

As early as last September, we began hearing questions from seed producers regarding the impact high commodity prices might have on seed availability. In response the Seed Department sent surveys to 573 spring wheat, durum and barley growers with the primary objective of determining the amount of seed that was still available for spring planting. Record commodity prices have undoubtedly created some disappearance of eligible seed, but a review of the statistics provided by seed growers indicates that the certified seed industry is healthy in North Dakota.

Statistics have shown that, on average, only 40% of surveys or questionnaires are returned. Recognizing the potential impact of high commodity prices on seed inventories, North Dakota's seed growers responded significantly better than the norm. As of February 1, 352 growers responded, an amazing 61% response rate. These growers represented nearly 75% of the acres inspected for the three crops.

Given the high commodity price for durum since harvest, and now recently for wheat, we expected to see a significant number of growers disposing of their seed production. However, only 12 growers (3.4% of those responding) sold their entire seed inventory to the elevator. That means 96.6% of the seed growers who responded have maintained some level of inventory of certified seed for sale. Also, keep in mind that these numbers are only as good as the data provided by respondents.

The critical issue, however, is the number of bushels available for spring planting. Overall, it appears that approximately 16% of the seed was sold as commodity, leaving approximately 84% of the seed inventory available for sale.

To us, these numbers demonstrate the commitment North Dakota's certified seed producers have to providing high quality seed products to the region's farmers.

	Hard Red Spring Wheat	Durum	Barley
Acres passing field inspection 2007	116,721	24,376	47,263
Acres represented by responses	92,425	15,683	31,805
% of Total acres	79.2%	64.3%	67.3%
Total bushels reported	2,796,219	392,345	1,171,873
Reported bushels available for seed (%)	2,338,778 (83.6%)	347,617 (88.6%)	993,370 (84.8%)
Reported bushels dumped (%)	457,441 (16.4%)	44,728 (11.4%)	178,503 (15.2%)

ND Crop Improvement and Seed Association Annual Winners

Post-harvest continued from page 1

strains of which the symptom expression in the field is unknown. Cultivars with poor symptom expression may require testing to support the inspection.

However, this year there is every indication that a visual inspection is still an excellent tool to determine the quality of seed potatoes. There did not seem to be a problem in North Dakota, where all positive laboratory results were confirmed by expression of symptoms in the field in Florida.

Our inspectors prefer field inspection to testing alone, since field readings show symptoms of viruses other than Potato Leaf Roll Virus (PLRV) and PVY. They also show variety mixture and possible chemical damage. Realizing that chemical damage can cause much greater yield reduction in the next crop than most viral infections, laboratory testing alone is not seen as an alternative to field readings, but as a complement to field inspection.

Post-harvest test results are available from the North Dakota Department of Agriculture. To obtain a copy please contact the NDSSD in Fargo or download it from the NDSSD web site, www.ndseed.com



Tom Weippert, Preston Thiele and Tom Nilson help plant the winter test in November.

2008 Premier Seed Grower Award — Bob Finken



(L to R) DeAnne and Bob Finken, Premier Seed Grower Award winner, and Joe Magnusson, Seed Regulatory Manager.

The Premier Seed Grower Award recognizes certified seed producers who have significantly contributed to the certified seed industry. This year's Premier Seed Grower Award was presented to Bob Finken, Douglas, ND.

Bob has produced Registered and Certified seed since 1996. His seed production business involves many crops including several varieties of durum, spring wheat, winter wheat, barley, flax, field peas and canola. In the past five years alone, he has sold approximately 175,000 bushels of certified seed.

Bob is an active member of the Ward County Crop Improvement Association, having served as director and president. He is a member of the ND Farmers Union, Northern Pulse Growers Association, US Durum Growers Association, and Dakota Growers Pasta Company. Bob is also a member and board chairman of Meridian Seeds, a grower owned seed company, working to bring access to new genetics and to develop hard white wheat varieties. Bob has served as National Farmers Union delegate and Washington, DC Fly-in participant, director of the Man Dak Zero Till Association and Ward County representative on the ND Wheat Commission. Bob has also served on the North Central Research Extension Center board of visitors, and helped raise capital for construction of the new main building and agronomy research lab at the NCREC.

Bob and his wife DeAnne have four children, Tracy, Holly, Katie and Dylan.

2008 Distinguished Service Award — Mike Rose



(L to R) Marla and Mike Rose, Distinguished Service Award winner, with Brian O'Toole, NDCISA President.

Mike Rose was presented the Distinguished Service Award, which recognizes individuals for outstanding contributions to North Dakota agriculture and community. Mike is the Ward County Extension agent and is in charge of agronomy and horticulture programs and administration of the county seed increase program.

Mike is a 1970 graduate of NDSU with a degree in agricultural education. Following graduation he began his Extension career in Richland County. In 1973, Mike assumed the position of Stark-Billings County Extension agent in Dickinson where he was responsible for the agronomy, livestock, horticulture, and 4-H programs. The agronomy program included an active seed increase program and county ag improvement association. In 1978 Mike moved to Langdon to manage the family farm until 1988. While farming, Mike participated in the NDSU barley carlot testing program. He quit farming in 1988 and returned to Extension in McHenry county and helped revitalize the McHenry County Ag Improvement Association and seed increase program. Mike was president of the North Dakota Association of Extension Agents and an ex-officio director of the North Dakota Crop Improvement and Seed Association.

Mike and his wife Marla have two children, Karla and Matt.

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NDSSD Calendar

- June 15.....** Field Inspection applications due for all crops except conventional soybeans, buckwheat and millet
- July 1.....** Bulk certificates due
- July 15.....** Field Inspection applications due for conventional soybeans, buckwheat and millet
- July 31.....** Labeling Fee Report due