



# The North Dakota Seed Journal

APRIL 2016

Newsletter of the North Dakota State Seed Department

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## Kent Sather, Director of Potato Programs



Mr. Kent Sather joined the staff of the North Dakota State Seed Department (NDSSD) on February 15th as Director of Potato Programs.

Sather is responsible for managing and directing all activities associated with potato seed certification, shipping point inspections, potato tissue culture and seedstocks production and other services provided by the NDSSD Potato Programs.

Sather replaces Mr. Willem Schrage, who managed program activities with NDSSD for nine years after performing similar duties for the state of Minnesota for fifteen years.

Sather joins the NDSSD after an eighteen year career with Colorado State University potato certification service, serving as both Assistant Manager and Manager of certification programs. Prior to his tenure in Colorado, Sather served as the Assistant Manager of the Potato Certification Association of Nebraska from 1981 to 1997.

Sather obtained a BS degree in Plant Sciences from the University of Idaho, and holds a Master of Science degree in Potato Physiology from Colorado State University. A native of Madison, Minnesota, Kent and his family (wife Barb and daughter Sarah) have relocated to Fargo from the San Luis Valley.

The Seed Department is the North Dakota state agency responsible for seed certification, seed regulatory and seed testing of certified seed products including field crops and potatoes. The main agency offices and laboratories are located in Fargo, with a regional office dedicated to potato certification located in Grafton, ND. Sather's primary office location is the Fargo office, with frequent external work in Grafton and other potato seed production areas in the state.

Mr. Sather can be reached at his office in Fargo (701-231-5435) and at [ksather@ndseed.ndsu.edu](mailto:ksather@ndseed.ndsu.edu)



## Potato Program Update

*Kent Sather, Director of Potato Programs*

Since assuming the North Dakota Potato Program Director position on February 15, the most common courtesy question asked is "Are you settled in?" My answer is a tentative "Not yet." Many things are new: location, office, staff, responsibilities, relationships, growers, and geography. Many things are also the same or similar: rules and regulations, industry contacts, disease issues, shipping issues, and certification documentation.

Many things have made my transition a bit easier. First, the staff of the Potato Program continues to be important. They introduce me to protocols and routines as I am able to participate: Mike Oosterwijk and our team of inspectors; Sue Merkens and staff in the Seedstocks and tissue culture increase wing; and Jeff Prischmann in the Diagnostic Lab. Willem Schrage has also been invaluable dur-

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North Dakota State

**NDSSD**

Seed Department

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# From the Commissioner's Desk

Depending on your viewpoint, opinions on the topic of intellectual property (IP) laws related to seed vary by; important, discriminatory, annoying, critical, confusing, disturbing, serious, unfair, troubling, essential, without merit. We've all heard other descriptors ... some of them unkind. Perhaps I'm biased from a career in certification and regulatory work, but my belief is that variety protection laws are simply about fairness.

If you believe in the growth, prosperity and improvement of the seed (and agriculture) industry, I'm unsure how you could reasonably justify opposing variety protection laws. I use the term "reasonably justify" intentionally, since I've never heard a position in opposition that speaks to fairness to the variety owner.

Some individuals involved in agriculture ignore or violate state and federal IP laws, which are implemented for the purpose of advancing agriculture and rewarding innovators and inventors. The litany of reasons is long ... and astonishing.

*"It's too expensive,"* what do you suppose it costs to develop and produce the newest and best?

*"I didn't know,"* c'mon ... really? You have to be living under a rock not to be aware of the issue.

*"It's unfair,"* followed closely by *"this protection stuff is BS,"* again ... really?

*"It's a hassle,"* wait ... sending the truck to a retailer rather than your neighbor is more work?

*"I was just trying to help a friend,"* my all-time favorite ... the virtuous line of reasoning.

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on page 3

Ken Bertsch..... State Seed Commissioner  
Kent Sather..... Director, Potato Program  
Jason Goltz..... Field Seed Program Manager  
Joe Magnusson..... Field Seed Program Manager  
Jeanna Mueller..... Seed Laboratory Manager  
Jeff Prischmann.. Diagnostic Laboratory Manager  
Kris Steussy ..... Administrative Officer  
Mike Oosterwijk ..... Potato Program Supervisor

## Administrative Corner

*Kris Steussy, Administrative Officer*

This is the time of year when our admin staff is preparing for another busy field inspection season. Applications for field inspection will be mailed out in early May. Please contact us if you haven't received your applications or if you need additional forms.

### Tips on completing your field inspection application:

- Application forms are available on our website at [ndseed.com](http://ndseed.com), and can be found by clicking "Online forms" on the blue banner at the top of our home page. The application is fillable and will need to be printed and mailed with your tag or bulk certificate and your map.
- The name you complete on the application will be the name used in the directory and the same name used to label your seed. Please be sure you are applying under the name you want to use.
- Please be sure to complete all the blanks on the application.
- Don't forget to sign the application and enclose your proof of purchase and maps.

### Online Data

Your field inspection information is available on our website under "Online data." You will need to use a user name and password to log-in to view your fields and inspection status. Please contact any of our staff to get set up to start using this resource.

### Be watching your mail...

Early in July, we will be sending out a package containing:

- Annual Report of Agricultural and Vegetable Seed Sold in North Dakota
- Variety Development Research Fee Report
- Carryover seed report (for seed grown in the 2015 crop year)

The deadline for completing and returning these forms is Sept. 1, 2016.

Remember to only pay fees on seed sold for planting purposes. Both the Annual Report of Agricultural and Vegetable Seed Sold in North Dakota and the Variety Development Research Fee reports must be returned even if no sales were made.

The carry over report, which includes both unconditioned and conditioned certified seed, must be returned by September 1 if it is to be included in the 2017 Field Inspected Seed Directory.

Completed log sheets and unused bulk certificates also must be returned by Sept.1,2016.



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](mailto:tips@farmersyieldinitiative.com)

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

## Potato Program Update continued from page 1

ing our several weeks of overlap in the Seed Department. Ken Bertsch, Seed Commissioner; and Kris Steussy, Seed Department Administrative Staff Officer, did whatever they could to make a challenging move easier including offering guidance while navigating the state employee system. The rest of the staff at the State Seed Department have been very welcoming as well. Finally, I have had the pleasure of meeting several seed growers and other industry leaders. Your concern about my transition has been heartfelt, but hasn't detoured your Certification Program needs and questions. The International Crop Expo and the NPPGA research meeting was also a good introduction to industry concerns.

Along with a new job, a new growing year approaches. All stocks from the 2015 crop will soon be gone, one way or another. It was a good growing season, a good harvest and good yields. The crop stored fairly well. Certified seed lots with identified disease issues were flushed out. The price, unfortunately, is not good.

Preparation for the 2016 crop is underway. Despite farming challenges and poor prices, growers look to another year. Snow is gone and fields are slowly warming up. Price and quality of source seed lots are considered. Management of seed lots and acreage is reviewed. Equipment is prepared, maintained and sanitized for the new crop. Once emptied, storages are cleaned and disinfected. These are only a few issues a conscientious certified seed potato grower faces every year prior to planting.

The Potato Program of the North Dakota State Seed Department is doing everything needed to see certified seed potato growers through the transition from the old crop to the new crop. Our shipping point inspectors are responding to grower shipping schedules for certified seed that change by

the minute, anticipating an increase of demand over the next month. Staff trained as USDA auditors are gearing up for a Potato Sustainability Initiative survey. Our seedstock staff in Fargo are preparing and packaging all greenhouse minituber orders soon to be delivered. They are also maintaining a current greenhouse crop and increasing tissue culture plantlets for the next greenhouse production that will be shipped one year from now. Our disease testing personnel are finalizing occasional required testing of lots prior to shipping. Seed Department generated documentation supporting evidence of certification inspections and testing has been delivered to certified seed growers. Office and field supplies are being inventoried against needs for the new year. Internal staff and protocol evaluations are being conducted.

We anticipate a new disease threat to the North Dakota industry, especially that of *Dickeya dianthicola*. Our state certification office and NDSU potato pathologists are working with colleagues across the country to gather regional data about *Dickeya*. This information may influence rule and regulation edits in the near future.

In my mind, the new 2016 potato crop year begins at planting. Application for seed potato certification of this new crop is due in the Fargo office no later than June 15, 2016. If you are selling certified seed potatoes for recertification, be diligent in providing proper documentation to your receiver. Primary documents include a Bulk Certificate and a North American Health Certificate. These are necessary for application and provide the paper trail for any seed lot. Please call our offices if you have any questions.

Ask me again next year at this time, "Are you settled in?" My answer will be a more definitive "Not yet!"

Wishing you all the best this new 2016 crop year.



## Commissioner's Desk continued from page 2

Readers shouldn't get the idea that North Dakota is the wild-west of brownbagging, that's not the case. We produce and market more certified seed here than nearly anywhere in the country. Most growers are aware of and respect variety protection laws. It's unfortunate that a segment of our producer base chooses to ignore the law, simply because they self-justify or rationalize the action. I wonder whether this group might object if someone took their property ... because the thief believed he had a good reason to do it.

This is the time of year when the issue is top-of-mind. Seed is conditioned and moving, planting is starting up. Part of the reason the topic got teed up (again) in this issue of Seed Journal is the receipt of this unabridged letter from an individual that was obviously experiencing some serious guilt:

*To whom it may concern,*

*Regretfully, I am writing to acknowledge that I purchased as "brown-bagging" some Faller wheat seed several years ago. I had thought the purchase was OK until we were just about*

*loading it on the truck. What I wish I had done then, was to immediately stop proceeding. Then the transaction wouldn't have happened.*

*So, I am sorry. I want to pay for the research fee to the owners of Faller wheat seed. I think it was less than 800 bushels. So enclosed find 800x.30=\$240 for them. I'm quite sure I will be more careful now.*

*Please forgive,*

*Anonymous Me*

Any self-respecting regulatory agency would have probably sent the letter to BCI for fingerprint and DNA analysis and called out Delta Force. Instead, we (three of us) looked at it in amazement, initialed the letter and delivered the \$240 in cash to the NDSU Research Foundation. I am NOT making this up, a copy of the letter is on my desk. And good for the guy with a conscience ... whoever Anonymous Me is.

Best wishes for a safe and profitable planting season.

# What are the AOSA Rules for Testing Seed?

*Ciara Clark, Interim Seed Lab Manager*

Periodically, we get a call about our testing methods; how many seeds are tested, the type of procedure used, how long does it take? Along with answering the basic questions, we tell our customers that we use the AOSA Rules for Testing Seed.

The Association of Official Seed Analysts is a national organization, one that our agency seed lab belongs to, which focuses on promoting uniformity in seed testing. The AOSA maintains a 4 volume set of rules that each member lab **MUST** follow. The four volumes are listed below with a brief description of the contents.

*Volume 1: Principles and Procedures* provides us with all the information we need for conducting germination and purity tests on every species that is included in the AOSA Rules. This volume outlines, among other issues;

- exactly which substrate we need to use (*Rolled Towel, Petri-dishes*),
- what that substrate needs to be wet with (*tap water, RO water, KNO<sub>3</sub>*),
- if the seeds require light to grow,
- if the seed needs a dormancy breaking procedure (*KNO<sub>3</sub>, Prechill*),
- if a Tetrazolium test needs to be done at the end of germination to determine dormancy,
- if hard seed is counted at the end of the germination test,
- which temperature (*20, 20-30 or 15-25 degrees Celcius*) the sample must be grown at,
- how long a sample must be in the germinator before we can evaluate it.

Volume 1 also provides us with the information we need to do a purity test, such as how many grams we need to go through for the purity portion and how many grams we need to go through for the noxious portion. The Principles and Procedures also explain exactly how to mix and divide a sample prior to conducting the purity test, and describe exactly what a Pure Seed Unit is for every species listed in the Rules.

*Volume 2: Uniform Blowing Procedure* gives us rules to follow for the grass species that require being blown before they can be tested for germination or at the beginning of a purity test.

*Volume 3: Uniform Classification of Weed and Crop Seeds* tells us whether a contaminant found in a purity test should be classified as a weed or other crop in the species we are testing.

*Volume 4: Seedling Evaluation Handbook* has illustrations of what is considered a normal seedling and an abnormal seedling when evaluating a germination test. The information in Volume 4 provides for the greatest difference in visual analysis and evaluation of germination tests between the observation of a producer and the judgement of a trained analyst.

The North Dakota State Seed Department's Seed Laboratory is the only AOSA accredited laboratory in the state of North Dakota. By sending your samples to an AOSA lab you are ensuring that the test conducted on your sample is repeatable across other AOSA labs since all members follow the same AOSA Rules. If a seed lab conducting tests is not an AOSA lab those results will not always be repeatable, because we don't know which method was used.

## Seed Quality

The overall seed quality in seed crops tested this year has been good. We haven't seen much scab in small grains this year and germination percentages are in the 90's for the majority of samples. Soybeans have also seen high germination scores in the 90's.

Field Pea germination test percentages have ranged from the 40's to the 90's which has raised some questions and concern from the growers. Field Peas are very susceptible to mechanical damage, which is the reason for these unusually low germination test results. Mechanical damage can occur during any one of the several processes associated with harvest, storage and handling of the seed. Moisture content of the seed at the time of harvest plays a large role in the process. The drier the seed the more likely harvesting, loading, hauling, unloading and cleaning will have a negative effect on the overall quality of the seed.

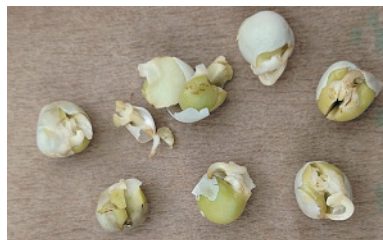
Field peas have a seed coat that holds the seeds together well and makes detecting mechanical damage harder than soybeans, which tend to split more easily. It is during germination, when the seed takes up the needed moisture to grow, that mechanical damage is most easily detected.



*Figure 1. Normal seedlings from germination test.*



*Figure 2. Abnormal seedling with the leaf broken off.*



*Figure 3. Abnormal seedlings that have started to grow and cotyledons have fallen apart (this is the most common abnormality we see in a germination test).*



# Seed Permitting and Labeling

Jason Goltz, Seed Regulatory Manager

There is an increased interest in selling seed this year as an added value to a farming operation. Producing and selling seed is a good way to add diversification to an operation. While application, inspection and testing processes are important, marketing seed also requires accurate advertising and labeling. Here are some of the basics:

A permit is required to label and sell seed in North Dakota. There is no cost for the permit and it is perpetual. Once a permit is issued, an annual report of seed sales form will be mailed to the permit holder at the end of June. The form and any fees due must be sent back before September 1st. The form must be returned even if no seed was sold.

All agricultural seed offered for sale must be properly labeled. Field inspected seed, which is eligible for final certification, can be sold unconditioned to an approved conditioner or bulk retailer who will complete final certification and labeling. In North Dakota, a legal label for any seed offered for sale must contain the following:

- Kind of seed
- Variety (required for barley, canola, dry beans, durum, field beans, flax, oats, soybeans and wheat)
- Lot number
- Percentage of pure seed
- State in which the seed was grown
- Percentage by weight of all weed seed
- Name of and rate of each restricted weed seed present and its quantity per pound if in excess of five seeds per pound
- The percentage by weight of any other agricultural seeds present
- The percentage by weight of inert matter
- The percentage of germination and the month and year the test was completed
- The full name and address of the labeler

Kind & Variety _____	Lot No. _____
Pure Seed _____ %	Germination _____ %
Other Crop _____ %	Hard Seed _____ %
Weed Seed _____ %	Germ & Hard Seed _____ %
Inert _____ %	Date of Test _____
Restricted Noxious Weeds _____	Origin _____ (Month & Year)
	(State or foreign country where grown)
Seed Count _____	Name and number per pound _____
Name and address of labeler _____	Approx number per pound _____
Loose smut _____ %	

Not all aspects of seed permitting and labeling are consistent across state lines. For example, many states require a label statement for noxious weed seed labeling even if none are present. Also, the requirement for labeling by variety name differs from state-to-state.

To ensure compliance, contact the regulatory agency in the state you will be marketing seed. Staff at the North Dakota State Seed Department are always available to assist with questions on the proper labeling and reporting of seed sales. Visit the NDSSD's website at [www.nd.gov/seed/](http://www.nd.gov/seed/) or call 701-231-5400.

# Field Crops Application and Inspection Concerns

Joe Magnusson, Field Seed Program Manager

## Apply For Inspection

If you planted, or intend to plant, Foundation or Registered seed, you are strongly encouraged to apply for field inspection. You must apply to the North Dakota State Seed Dept. by June 15 to have your field inspected for certification. The cost is \$2.00 per acre, which will allow you to sell the seed as a certified class for a premium price. An application can be obtained by calling the North Dakota State Seed Dept., your local county agent or online at [ndseed.com](http://ndseed.com).

When you apply, enclose your FSA map, copy of your bulk certificate and payment. Every year we have growers that do not apply for fields that are eligible for certification but are not inspected, and therefore cannot become a class of certified seed. If you don't have the field inspected, we cannot magically bring this field back into the certification program. Do not plant the same kind of crop that was planted the previous year unless it was the same variety and field inspected the previous year.

Remember, if you plant Foundation durum seed it must not have been planted to spring wheat the previous two years (and even that may not be enough time to control volunteers). Even if soybeans, corn or sunflower was planted the previous year, the rotation will not keep your fields from getting contaminated since the spring wheat will regrow and disseminate seed leading to field contamination.

## Isolation

A minimum 5 foot isolation strip is required between inseparable crops and varieties of the same crop. If isolation is not in place at the time of inspection, the field will be rejected and a re-inspection fee may apply. This is only required for fields that have an inseparable crop planted adjacent to them. A ditch, fencerow, roadway or a separable crop adjacent to your field will be considered proper isolation.

## Weeds

Be conscious of Field Bindweed (fondly referred to as the state flower by field inspectors) as it is not allowed in seed fields. This prohibited weed is found along ditches, fence and tree rows, hill tops, rock piles and old farm sites. Make sure to spray and destroy this weed before the inspector arrives. Many fields in western seed production areas are fully or partially rejected for the presence of this weed. Another concern is thistle (Canada or sow) in field peas. The inspector will reject areas of the field that have patches of thistle. Even though thistle seed may not be viable in the heads, they are difficult to condition from a lot of pea seed. Your customers do not want to find thistle heads in the certified seed they purchase. Do not harvest areas that have been rejected by an inspector for any reason. The only results will be a failed seed lot or an unhappy customer.

## Harvest

Prior to harvest, make sure your seed field has been inspected and passed the field inspection process. Take note of any problems or corrections needed from your field inspection report. During harvest, do not rely on custom harvesters to clean their equipment like you would do to prevent contamination. We have seen too many times that seed was contaminated from combine to bin, and we find out later that a custom harvester was used. They will not clean the combine, trucks, augers, bins and other handling equipment well enough to ensure the seed is not contaminated and a quality certified product was produced.

## North Dakota State Seed Department

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

Non-Profit Organization  
U.S. Postage

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Bismarck, ND  
Permit No. 433

ADDRESS SERVICE REQUESTED

# NDSSD Calendar

- May 1** ..... Applications due for grass seed inspections
- May 30** ..... Memorial Day, office closed
- June 15** ..... Applications due for all crops including potato (exceptions: buckwheat, millet, soybean requiring one inspection)
- July 4** ..... Independence Day, office closed
- July 11-21** ..... NDSU Research Extension Center crop tours
- July 12** ..... State Seed Commission meeting, Fargo
- July 15** ..... Applications due for buckwheat and millet
- Aug. 1** ..... Applications due for soybean requiring one inspection
- Sept. 1** ..... Reports due: Annual Report of Agricultural & Vegetable Seed Sold (labeling fees), Variety Development & Research Fees, Carryover Seed