



The North Dakota Seed Journal

JANUARY 2025

Newsletter of the North Dakota State Seed Department

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Bulk Retail and Conditioner Permit Requirements

Ciara Clark, Field Seed Specialist

We are wrapping up 2025 facility inspections. If you did not receive an inspection and believe you should have; please give the office a call. Overall, there were far fewer facilities put on probation this year, which means the deficiencies seen last year were corrected.

From time to time, there are questions as to who needs a bulk retail or conditioner permit. Below is a "checklist" to help determine if a facility needs a permit.

- You **NEED** a Bulk Retail Permit **IF** you buy certified seed and relabel it for resale.
- You **DO NOT** need a Bulk Retail Permit if you sell only common seed labeled by another seed company or your own certified seed; which was grown and field inspected under your name.
 - There has been some misunderstanding about *certified* vs *common* seed. Certified seed has completed the certification process (field inspection, conditioning, lab testing, final certification) whereas, common seed has not gone through the certification process.
- Most public varieties (NDSU, MN, MT and SD), as well as many private company varieties require certification and therefore **DO** require a Bulk Retail permit to handle the seed for resale.
- Most soybean varieties and a few small grains do not go through the certification process and therefore **DO NOT** require a Bulk Retail permit to handle the seed; these are what we refer to as common varieties.
- You **NEED** a Conditioner Permit **IF** you are purchasing for resale, conditioning, and labeling field inspected seed and **IF** you are conditioning field inspected seed grown by anyone other than yourself.
- You **DO NOT** need a Conditioner Permit if you are conditioning your own seed, whether it is field inspected or not, and **ALL** the custom conditioning you do is seed that has not been field inspected.

We have a deadline of September 1st for Bulk Retail and Conditioner applications, but we will accept new facility applications at any time during the year. If you have any questions about these requirements or your specific situation, please reach out to me (cclark@ndseed.ndsu.edu) and we can discuss your needs.



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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Mycotoxin Testing

Presley Mosher, Diagnostic Lab Manager

Mycotoxins are compounds fungi produce that are harmful to humans and livestock. They can cause symptoms such as vomiting, feed refusal, tissue damage, and immune suppression. Mycotoxin contamination can be cause for food and feed rejections from buyers and regulators.

Mycotoxin Testing
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From the Commissioner's Desk

A new year is upon us, and with it comes a sense of anticipation...sprinkled with as much optimism as we can muster in the ag industry. Despite commodity markets that are less-than-attractive, farmers may be the only group or occupation that can maintain a (reasonably) positive outlook on the coming year.

This year we also anticipate the goings-on in Bismarck; the 69th Session of the ND Legislature convenes next week. While there is seldom groundbreaking ag-related policy that happens at our state level, the legislative session still requires attention. I'll spend two or three hours each week prior to bill introduction deadlines checking bill titles and full texts that may be related in some way to the ag industry. This continues throughout the session monitoring committee activity, amendments and floor action.

Prior to coming to work for the Seed Commission, I spent about 10 years as a full-time lobbyist during the legislative session. In the 1990's we would often see dozens of bills or resolutions that were directly related to agriculture, and dozens more that affected rural policy and appropriation issues from taxation to natural resources and ag research/extension programs. The Senate and House Agriculture committees were busy places, and other committees had a share of policy and funding measures that impacted the ag industry and ag producers.

Fast forward 20-30 years; state-level ag policy matters are scarcer, and mostly dominated by research, rural infrastructure and the odd animal-ag policy issue. Federal policy dominates our industry to a great extent; reasonable considering the impact of farm

Ken Bertsch.....State Seed Commissioner
 Adam Winchester.....Director, Potato Program
 Jason Goltz.....Field Seed Program Manager
 Jeanna Mueller.....Seed Laboratory Manager
 Presley Mosher...Diagnostic Laboratory Mgr, Editor
 Starr ThiesBusiness Manager
 Dustin Smith.....Regulatory Program Manager
 Robert Sauter.....Potato Program Supervisor
 Ciara Clark.....Field Seed Specialist, Asst Editor
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programs and pesticide regulation. Much of the state's agriculture lawmaking activity revolves around appropriations topics. Why the change? Perhaps the Seed Department is a good example: we've "cleaned up" a number of outdated issues in code over the past 10 sessions, including doing a major re-write/modernization of all five chapters governing seed laws and agency operations. My belief is that many of the issues we debated years ago have either been resolved or are now superseded by federal law.

Does this mean the previously-mentioned time spent on legislative research is of little value? Nope, the odd pertinent ag-related topic still pops up and we need to monitor state agency and employee issues throughout the session. A key issue affecting our industry like many others is the NDSU Agriculture appropriations, especially those areas of the budget affecting variety development and seed health/quality. Many like-minded ag groups, operating as members of the Ag Coalition, work together to discuss appropriations progress and other legislation during the session. The Ag Coalition meets weekly by Zoom, and in person two to three times to discuss legislation important to individual groups and the industry. I'm anticipating that we will do the same in the upcoming session

We'll all be watching for topics of interest to emerge. If you as a seed grower or seed business see something relevant or of concern, don't hesitate to reach out and let me know.

Best wishes for a warm, snow-free and profitable winter season.



Administrative Corner

Starr Thies, Business Manager

STATEMENTS:
 We send out statements at the end of each month to the address we have on file, which details all the invoices for the month. It may be easier to save all lab and certification reports until the end of the month and compare them to the statement before paying. If you receive your statement and notice anything missing please reach out to us for copies of invoices. At this time, we are able to accept payment by check, money order, or wire.
 Have any questions about your bill? Please contact us at 701-231-5410 or accountspayable@ndseed.ndsu.edu.

MAILING SAMPLES:
 As more seed samples begin to arrive at the office, we would like to remind customers to address packages correctly to ensure packages arrive promptly at the correct location. The USPS won't deliver to our street address and the couriers won't deliver to our PO Box. Use the addresses below.

US Postal Service - use PO Box	FedEx, UPS - use street address
ND STATE SEED DEPT PO BOX 5257 FARGO, ND 58105-5257	ND STATE SEED DEPT 1313 18TH ST N FARGO, ND 58102

When "None" Doesn't Mean None

Dustin Smith, Regulatory Program Manager

It's a universal requirement that a seed label has a noxious weed statement. But contrary to popular belief, "Noxious Weeds: None" on a label doesn't necessarily mean no noxious weed seeds. In any common purity analysis from an AOSA lab like ours, the weed seeds have been checked against the noxious weed seed list of the state the analysis was conducted in. A seed lot that has been tested and labeled based on a common purity analysis is legal for sale and transportation within the borders of that state. However, as soon as that seed moves across state lines, it is (potentially) an illegal sale and transportation. A common purity analysis may not identify all of the weed seeds found, and it certainly doesn't categorize them as noxious if they aren't on their own noxious weed seed list.

According to AOSA standards, a common purity analysis goes through two parts; a purity analysis (100 grams for small grains) that sorts out inert matter, other crop seeds and weed seed, and then a noxious weed seed analysis (400 grams for small grains). The noxious weed seed analysis only reports weed seeds on that state's noxious weed seed list and disregards any additional weed seeds, even if they weren't found in the purity analysis. A certified purity analysis (only available from an AOSA lab) will go through the same purity analysis, but will also identify any weed seeds found in the noxious weed seed analysis, so you get the weed seed profile of the entire 500 grams, not just the initial 100 grams like a common purity.

Why is that important? Here's an easy example. A sample of common rye is being analyzed by an AOSA lab in Nebraska. The lab does their standard purity analysis and finds one green foxtail and one kochia seed. They are noted on the

purity analysis. Then the analyst does a noxious weed test, and finds three more green foxtail seeds, two more kochia seeds, and two quackgrass seeds. These are not included in the report, because they are not noxious weed seeds in Nebraska. The purity analysis says "Noxious Weeds: None Found"; but quackgrass is a prohibited noxious weed seed in 26 states.

If you are bringing seed in from another state, it is incredibly important to ensure that the seed lot does not contain any North Dakota noxious weed seeds. For out-of-state common seed, you need to either have the seller provide an All-States Noxious test report, or you will need to submit a sample for a weed check in North Dakota. The same is true for any seed leaving North Dakota. As the seller of that seed lot, it is your responsibility to make sure the seed is labeled in the state to which it is being shipped to. If there is any chance of shipping your seed lot across state lines (or an out of state buyer contacting you), it's worth the extra expense to have an All-States Noxious test.

Historically, NDSSD has allowed certified seed to transfer in from neighboring states without much scrutiny on weed seeds, since for the most part our standard weed species and noxious weed seed lists were similar. Now, there are many weeds that we have on our list that neighboring states don't, and going forward anyone transferring bulk certified seed into North Dakota for resale will have to submit both their bulk sale certificate and a copy of the certified purity analysis, which will allow the Certification team to verify there are no North Dakota noxious weed seeds in the seed lot. Make sure you are requesting the purity analysis if you are obtaining out-of-state certified seed. These weeds are on the list for a reason; let's keep them out of our seed so we can keep them out of our fields.

A Few Reminders about Winter Testing

Adam Winchester, Director of Potato Programs

It's that time of the year again and seed potato winter testing is underway. The plot was planted near Waialua, Hawaii on December 4th – December 6th. We will return for readings on January 2nd, 2025.

Three hundred and twelve lots were entered this year. Of these lots, thirty-four will also be Enzyme Linked Immunosorbent Assay (ELISA)-tested. All varieties that are latent for Potato Virus Y (PVY) will be ELISA-tested. Please inform the Seed Department if you wish to ship any seed potatoes into Idaho, since these lots will also require an ELISA test.

In addition to ELISA tests, the Seed Department will be conducting confirmation tests on all lots in which PVY has been visually detected. This will be done using Agdia ImmunoStrip® tests. Please contact Adam Winchester at awinchester@ndseed.ndsu.edu if you are interested in seeing the results of these tests.

As of December 27th, growth on the plot was exceptional, though lagging a few days behind last year. Weed pressure, though moderate, is being kept at bay with several applications of herbicides. Overall, we anticipate another successful winter test.



Growth on Winter Test plot located near Waialua, Hawaii. Photo taken twenty-two days after planting.

Importance of a Purity Test

Jeanna Mueller, Seed Lab Manager

When we think about seed quality, the first thing that comes to mind is germination; however, there is another component equally as important, a purity test.

Being an AOSA (Association of Official Seed Analysts) Accredited Seed Lab, we must follow their rules, including the purity working weight. To prepare the working sample for a purity test, the entire submitted sample is mixed twice; then divided into the parts of the purity test (pure seed portion and noxious working weight portion). Because dividing the seed is a mechanical process, fragile crops such as soybeans, edible beans, field peas and lentils are not divided; this would create more inert/broken seed.

After dividing the submitted sample, the purity working weight is 2,500 pure seed units and the noxious working weight is 25,000 seeds, for all species. The smaller the seed size, the smaller the weight tested. For example, a Kentucky bluegrass (common turf grass) purity tests only 10 grams total.

The example below is how the lab carries out a hard red spring wheat (HRSW) purity. The sample size is 500g or two pounds for foundation seed.

Parts of Purity test- As the purity test is performed the sample is separated into all the parts below, weighed and reported as a percentage by weight.

Pure Seed Portion (100g)- All inert matter/broken seeds, other crop and weed seeds are removed from the pure seed portion; which is then used to run the seed count. The purity test is meticulously viewed under light and magnification, seed by seed, making sure there is no contamination by other crop or weed seeds.

Inert Matter- Removed from the pure seed portion includes broken seeds, chaff, stones, ergot, etc.

Other Crop Seed –The most difficult seed to clean out is another small grain. HRSW is often found in durum samples as size and seed characteristics are similar.

Weed seed (400g) working- Weed seeds removed include common and noxious weeds. Several species impossible to visually tell apart within their genus are *Amaranthus spp.* (redroot pigweed, water hemp and palmer amaranth). Those seeds are sent off to NAGC (National Agricultural Genotyping Center) for definite identification.

Seed count (seeds/per pound) is run from the pure seed portion of the purity. Which is why we must complete a purity to perform a seed count. Our normal range for HRSW is 11,000 to 13,000 seeds per pound.

All the seed quality testing that is carried out takes skilled, knowledgeable analysts to provide accurate results for our customers. Send in your seed! Give us a call if you have any questions.



Huus Joins Seed Department

In November, the Seed Lab hired a new Seed Analyst. David Huus grew up in Eastern North Dakota and currently lives in Fargo. His previous experience was in the barley industry as a Research Technician for Busch Ag. Resources and a Lab Technician for Rahr Malting Company. Additionally, he also brings field experience from time spent scouting for volunteer crops and weed pressure.

David's main concentration will be in the Seed Lab, but will also work this summer inspecting certified seed fields.

In David's free time he enjoys watching Bison football, running the Fargo Marathon, and going to Red Hawk's baseball games.

Mycotoxin Testing

continued from front page

A common source of mycotoxins in the food supply is through infection of grain in the field by plant pathogens (e.g. *Fusarium* head blight (scab) in wheat, *Gibberella* and *Fusarium* ear rot in corn). Additionally, fungal infections can occur after harvest at various points, if conditions are right, prior to final consumption by livestock and humans.

It's important to note that even healthy looking grain can contain unacceptable levels of mycotoxins. Additionally, not all visible mold on grain contains mycotoxins. The only way to reliably determine the level of these toxins is to test a sample.

The NDSSD Diagnostic Lab offers a quantitative strip test for a specific mycotoxin called vomitoxin, also known as deoxynivalenol or "DON". This test can be used on corn, wheat, barley, oats, rye, sorghum, and other grain samples in whole and processed forms. Base range results are reported between levels of 0 ppm and 8 ppm vomitoxin and with additional steps the test can detect up to 30 ppm, if desired. Maximum advisory levels for vomitoxin set by the FDA are <1 ppm for finished wheat products for human consumption and < 5 ppm for most animal feed products.

The Diagnostic Lab also has the ability to onboard tests for additional mycotoxins and crops. Please let us know if you are interested in testing for other mycotoxins including aflatoxin, fumonisin, ochratoxin, T-2/HT-2 toxin, or zearalenone. We are happy to start a conversation about the possibility of adding these tests to our lab services. The Diagnostic Lab can be reached at 701-231-5430 or pmosher@ndseed.ndsu.edu.



Figure 1. Bleaching, pink discoloration, and shriveling can all be symptoms of *Fusarium* head blight (scab). The fungus that causes the disease can also produce mycotoxins that are harmful to humans and livestock. It's worth noting that even symptomless grain can contain mycotoxins. (Photo credit: Dr. Andrew Friskop, NDSU Plant Pathology)

Resale Request Form for Approved Facilities

Jason Goltz, Field Seed Program Manager

Approved facilities who wish to purchase seed for resale, must transfer the seed into their name. This requirement allows the facility to issue bulk certificates by administratively transferring the lot into their account; it also helps meet the requirements of the two-move rule. Certified classes of seed can only have two physical moves, so a seed lot which has been transferred to an approved facility cannot be transferred to anyone other than the farmer who plants it.

Currently, requesting the transfer of a seed lot into the facilities' name is done through email. A facility will email the State Seed Department main account at ndseed@ndseed.ndsu.edu, attach the bulk certificate(s) to the email and write any special instructions into the body of the email.

This system works well enough, but is inconsistent and people can forget to provide critical information or the attachment, which leads to unnecessary delays. In some cases, the bulk certificate is embedded into the body of the email and does not print legibly. These requests are the only thing we do that does not have a request form, which is the issue. A form would lay out the information that is required and customers would be less likely to forget critical information. Forms perform three main functions:

- Accurately and efficiently fulfill customer requests.
- Accurately generate invoices.
- Meet auditing requirements.

In order to streamline the process and avoid delays, approved facilities will see a new form titled "Resale Request for Certified Seed" under Field Seed Forms on our website; it will be a proprietary form for approved facilities.

The request must be emailed to the department main email account (ndseed@ndseed.ndsu.edu) and not to a particular individual. There are multiple employees trained to fulfill relabel requests and sending the request to the main account ensures the request can be fulfilled more quickly, by whomever is available. In some cases, customers have emailed requests to the main email account as well as to an individual. This causes duplicate requests to be fulfilled for the same seed lot, which creates administrative and billing issues.

We understand that time is critical when seed is moving. The new form will help us provide services in a consistent manner, which will reduce the chances for unnecessary delays. Please reach out to us if you have any questions.

North Dakota State Seed Department

PO Box 5257

Fargo, ND 58105-5257

ADDRESS SERVICE REQUESTED

Non-Profit Organization

U.S. Postage

PAID

Fargo, ND

Permit No. 229

NDSSD Calendar

Jan 29-31KMOT Ag Expo, Minot

Feb 17President's Day, office closed

Feb 19ND Certified Seed Potato Growers annual meeting, Grand Forks

Feb 19-20International Crop Expo, Grand Forks

Feb 24ND Crop Improvement & Seed Assn. Winter meeting, Minot

April 18Good Friday, office closed