



# The North Dakota Seed Journal

OCTOBER 2024

Newsletter of the North Dakota State Seed Department

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## Submitting a Sample for Pre-germ Test

*Jason Goltz, Field Seed Program Manager*

Submitting a sample for a germination test prior to conditioning is referred to as a pre-germ. Pre-germ tests are not allowed for labeling Field Beans, Soybeans, Lentils, Field Peas, Chickpeas or Hemp. For all other crops, to use a pre-germ you must enter the lab sample number in the correct field on the Sampler's Report when submitting the conditioned sample for final certification.

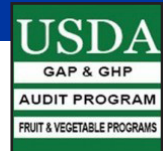
The Sampler's Report must match the information from the lab test. If multiple field application numbers are listed on the Sampler's Report but the pre-germ lists a single field application number, we will not be able to use the pre-germ test.

Too often customers send germination samples and do not provide field application numbers; in many cases we cannot use the test because we cannot trace the sample back to the field. Providing the necessary information and indicating the sample is to be used for labeling purposes can save a week or more in delays.

When sending in a pre-germ sample, use the manila sample envelopes; check the box for field inspected seed and provide the field application number(s). If you need manila sample envelopes please call or stop into the office.

## USDA GAP Audit Program is Growing in North Dakota

*Adam Winchester, Potato Program Director*



Last April I discussed the USDA GAP (Good Agricultural Practices) Audit Program in North Dakota. NDSSD is the only program in the state that offers this valuable service. Depending on the needs of a farm, a USDA GAP audit entails one-to-two visits a year from auditors who will observe harvest and/or storage operations; Food safety training and other documents are also reviewed. The audits are typically conducted from August through November, though they may be conducted at any time depending on an operation's needs.

The program is growing in North Dakota. Four new farms have entered the program this year, bringing the total number of audits to 75. The program is also expanding to cover other products besides potatoes; onions, watermelons, leafy greens, dry beans and herbs have joined the program.

NDSSD has also trained additional staff as auditors; four new auditors were added this year and we plan to train more auditors to conduct Harmonized Plus+ Audits in the coming years. The Seed Department hopes to increase the number of audits from 75 to nearly 150 in the future.

The cost of these audits is \$155.00 per hour; a typical audit takes anywhere from three-to-eight hours to complete. Larger operations may require more time. It is not uncommon for USDA auditors, from a variety of USDA offices, to travel the country conducting audits. Travel and housing costs are subsumed into the cost of the audit, meaning auditors that travel long distances may charge a large sum. North Dakota growers have an advantage in regards to the cost of these audits compared to other states, as our auditors are local and travel costs are kept to a minimum.

The NDSSD has conducted these audits for nearly fifteen years, and we plan to continue to work with North Dakotans so they can get this valuable service. If you are interested in being GAP certified, please contact Adam Winchester at 701.960.8232 or [awinchester@ndseed.ndsu.edu](mailto:awinchester@ndseed.ndsu.edu).



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# From the Commissioner's Desk

Many of our local readers are familiar with the Survey of Wheat Varieties, published annually by the National Ag Statistics Service (NASS). The survey is conducted in June each year by the North Dakota Field Office of USDA/NASS and reports planted acreage of wheat varieties in North Dakota. The survey reports statistics for plantings of spring wheat, winter wheat and durum wheat as the major classes produced in North Dakota.

The survey has traditionally been sponsored by the ND Wheat Commission (NDWC) until 2019 when the Seed Department and NDSU Ag Experiment Station became partners in the effort. While the NDWC carries the majority of the costs associated with the survey, the information is of great value to the Seed Department as the certification authority for the state.

Certification of wheat, especially hard red spring wheat, is the mainstay of our Field Crop Certification program. We commonly inspect 120,000 to 140,000 acres of spring wheat in any given season; durum wheat may range from 10,000 to 25,000 and hard red winter wheat acres in the 2-5,000 acre range. For perspective, the Department inspects anywhere from 240,000 to 300,000 acres of all field crops on any given year, depending on a host of variables. Clearly, wheat is the "big dog" in our field crops program.

The information provided in the survey (part of which may be found in the tables attached to this article) is extremely useful to our staff and the seed industry, and often fascinating in terms of annual trends. You will note that for the second year in a row WB9590 (WestBred/Bayer) is the #1 variety planted at 13.8% of acres reported. Of the total 5.4 million acres of spring wheat planted in 2024, WB9590 accounts for 743,000 of those acres. WB9590 is followed closely by SY Valda and AP Murdock (Syngenta/AgriPro), both of which have been at the top of the use list for a number of years. Not surprisingly, all three are short-stature/

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stiff-straw/high yield varieties. Back to that topic in a minute.

For the Seed Department, an interesting aspect of the survey is comparing planted acres to final certified bushels. Using WB9590 as our example, our Field Crop/Lab Service programs final certified 1,895,428 bushels of WB9590 in the year ending June 30, 2024. If you're

a WestBred associate, those numbers make sense: 1,895,428 bu/743,000 ac = 2.55 bu per acre. Assuming that some of the bushels that were final certified disappeared (moved out-of-state, went unsold or moved to commercial channels), a planting rate closer to 1.9-2.0/bu per acre is very realistic.

It is impossible for us to accurately estimate final certified bushels to actual planted acres in most cases; WB9590 and other single use licensed varieties are the exception. WB9590 was released in 2018 as one of the first varieties planted in ND governed by a single use agreement, commonly called Certified Seed Only (CSO). WB9590 is protected by PVP, is patent pending and WestBred/Bayer requires sale as a class of certified seed.

In the case of single use/CSO varieties like WB9590, we can reasonably predict the number of acres that will show up in the survey. If 1,000,000 bushels of Variety X (a single use variety) have been final certified, rough math suggests 500,000 acres of that variety may show up in the survey of acres planted for commercial production. We can't account for disappearance by export or disposal to commercial channels, or the bushels of Variety X imported from another state, but you get the basic math.

Most of the public and private company varieties represented in the survey are PVP Title V varieties which, absent any technology agreements like a CSO, allow for farmer replant. Thus, we wouldn't know if an acre was planted with certified seed or was replanted/bin-run seed.

There are a couple of interesting developments over the past few years regarding the Variety Survey.

1. There is a dramatic increase in planting of private company (WestBred, Syngenta, LCS, TCG etc.) varieties and decrease in use of publics (NDSU, U of MN etc.). Clearly there are exceptions to that statement, but since 2015-18 this statement is generally true.

In visiting with growers, Extension agents and seed companies this trend appears to be related (primarily) to straw strength and yield, as noted in paragraph 4. Commercial grain growers have spoken with their proverbial pocket-books by moving to the top 5 varieties on the list- all of which classify as short, stiff straw, high yielding.

2. The use of CSO/single use agreements has not proven to be negative to the purchase and production of a variety. Variety selection, in virtually

Spring Wheat Varieties, Percent of Acreage Planted North Dakota: 2020-2024						
Variety	2020	2021	2022	2023	2024	
					Per-cent	Acres Planted
	(percent)	(percent)	(percent)	(percent)		(1,000)
WB 9590 .....	6.1	7.5	8.8	8.7	13.8	743.0
SY Valda .....	12.5	9.5	11.0	6.9	10.0	538.5
AP Murdock .....	0.4	4.7	8.8	8.4	9.8	529.2
MN Torgy .....	-	0.3	2.0	4.5	4.7	255.9
SY Ingmar .....	19.2	13.2	9.4	6.4	4.4	239.7
AP Smith .....	-	0.1	0.6	2.0	3.7	200.3
Faller .....	3.5	4.2	2.9	3.1	3.0	162.8
WB 9719 .....	0.9	2.2	4.1	3.1	2.6	140.5
LCS Trigger .....	0.7	1.5	1.8	2.4	2.1	111.6
Glenn .....	3.6	4.4	2.7	2.6	1.7	92.7
Velva .....	0.5	0.9	0.7	2.7	1.7	92.2
Shelly .....	2.9	3.3	3.9	3.3	1.6	88.1
TCG Spitfire .....	0.6	1.5	0.6	1.0	1.6	87.5
Lang .....	0.6	0.5	1.3	1.1	1.6	86.8
WB 9606 .....	-	-	0.3	0.7	1.5	81.2
MN Rothsay .....	-	-	-	0.1	1.4	76.6
ND Vitpro .....	2.3	2.9	3.0	0.6	1.4	76.2
ND Froberg .....	-	0.1	0.4	0.3	1.3	72.6
Barlow .....	2.3	2.7	1.4	1.6	1.3	72.5
Elgin ND .....	2.7	2.2	3.0	1.8	1.3	72.4
Other Varieties .....	41.2	38.3	33.3	38.7	29.5	1,579.7
All Varieties .....						5,400.0
- Represents zero.						

## "Some Records Aren't Meant to be Broken"

*Dustin Smith, Regulatory Program Manager*

It's easy to get caught up in the busyness of the seed business, no doubt. When it's time to plant, to field inspect, to harvest, to condition, to submit samples for analysis, there are a lot of things that must be done in order to have seed available for sale. But it's easy to forget about the other stuff.

One of the things often forgotten about is record keeping. According to state statute 4.1-53-39:

Invoice and records.

**A labeler shall:**

1. Retain a record of each lot of seed handled for three years after final disposition of the lot;
2. Retain a file sample of each lot of seed handled for one year after final disposition of the lot; and
3. Make the records and file samples required by this section available to the seed commissioner upon request.

As the labeler, you are responsible for ensuring there is a paper trail of the seed lot. This includes any documentation of the production, conditioning, and analysis if you're the initial labeler of the seed lot, or the purchase documentation if you're acquiring previously labeled seed. This also includes any documents related to the packaging, transportation, sales and disposition of the lot. In addition to a paper trail, you also need to keep a file sample of the seed lot. A sample needs to be pulled and retained off the conditioning line, out of the truck as it's being delivered, or when retesting carryover seed.

Now is a great time to be thinking about record keeping as the new seed crop is being harvested. At this point, you can start with labels for seed that was planted to produce your seed crop

## North Dakota Certified Seed Potato Growers Association Meeting

The ND Certified Seed Potato Growers Association meeting was held on July 24th. Topics covered included Association business, the current state of the 2024 seed crop, the upcoming winter test and direct tuber testing.



Director of Potato Programs, Adam Winchester, presents at the annual summer meeting, hosted at the NDSSD office in Grafton, ND.



Seed Commissioner, Ken Bertsch, presents at the annual summer meeting.

## "Some Records Aren't Meant to be Broken"

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## Sperling Joins Seed Department



Christy Sperling joined our Field Seed Program in August as the new Western Region Field Seed Specialist. She is based out of her hometown of Williston and will be conducting field, facility, and regulatory inspections on the Western side of the state. She comes to the Seed Department with a wealth of experience in the agricultural field.

Christy grew up on a small ranch in NW North Dakota where her family raised cattle and worked in the oil fields. After graduating from NDSU with degrees in both Animal and Equine Sciences she was employed by the NDSU Central Grasslands Research and Extension Center (REC). Christy also worked as the Dryland Research Technician at the Williston REC where she worked with a variety of researchers and private companies, learning a great deal about multiple cereal grain and broadleaf crops. Most recently, Christy was employed by the Williams County Soil Conservation district where she helped producers by implementing shelterbelts and community outreach programs.

In her free time, Christy runs a small herd of commercial cattle and has a flock of chickens that keep her busy. She is looking forward to her new position and working with the farmers and ranchers in the region.

## NPGA Field Day



NDSSD Potato staff attended the 2024 Northland Potato Growers Association (NPGA) Field Day in Inkster, ND.

L-R: Seth Mathison, Dylan Seaver, Brianna Tufte, Presley Mosher, Ken Bertsch, Robert Sauter, Adam Winchester and Amanda Monson.

## In the Seed Lab

*Jeanna Mueller, Seed Lab Manager*

Since July, we have had 794 samples enter the Seed Lab. The seed kinds are typical for this time of year, including fall/winter crops, legumes, nurse crops and some spring wheat. For the most part, we have received bin run or common (non-certified) samples.

Some of the seed quality is slightly concerning. I hope it does not mirror what this year is going to be like. We have seen a fair number of sprouted seed samples (Figure 1) and scabby samples (Figure 2). As far as scabby samples, we will start planting in 50 seed replicates instead of our normal 100 seed replicates. These procedures reduce the growth and help prevent the spread of scab to healthy seeds. It is then more time efficient reading the scabby samples at the end of the germination period.

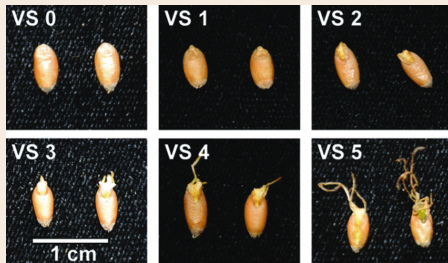


Figure 1: Pre harvest sprouting on a scale of 1-5.

Our procedure for planting sprouted grains is as usual, although we will note the sample is sprouted. The note gets our attention and gives insight into the problems seen at the end of the germination period. Sprouting can lead to vigor problems. Pre-harvest sprouting can lead to degradation of seed starch. Less seed starch (energy) can lead to shortened coleoptiles (shoots), decreasing the chance of the seedling to emerge from the soil.



Figure 2: Scabby kernels

It is very important to get all seed tested before planting. Looks can be deceiving. We start to get busy after December so send in your samples sooner rather than later to ensure a timely result. Most germination tests take 7-10 days, but some native grasses take 30 days so keep that in mind.

## Isolation Requirements

*Ciara Clark, Field Seed Specialist*

Every year during field inspections we get questions regarding isolation requirements.

If you answer YES to any of these questions your field DOES REQUIRE isolation:

- Is the adjacent field the same kind of crop? (wheat next to wheat?)
- Is the adjacent field the same variety, but not being inspected for certification?
- Is the adjacent field the same variety also being inspected for certification, but a different class of certified seed (Foundation and Registered or Registered and Certified classes)?
- Is the adjacent field an inseparable other crop according to the specific crop standards for the field being inspected (wheat next to barley)?

Even if the whole field is planted using the same seed lot, the boundary of the field for inspection must be clearly marked. The inspector must know where to begin and end their inspection and the harvester must know where to end harvest of the certified field. Harvesting more than what was inspected may result in failed final certification.

When a field of Foundation seed is planted adjacent to a field of Registered seed the grower can leave a 5-foot isolation strip or flag the boundary 10 feet into the Foundation field; the 10 feet is allowed to be harvested with the Registered field. If at the time of inspection that boundary is not properly marked, it will result in both fields being failed until the correction is made; the same principle applies to Registered planted next to Certified.

When a 5-foot isolation strip is required, it needs to be maintained. Mowed isolation strips must be mowed into the certified field to ensure varietal purity. If at the time of inspection, the isolation strip has regrowth or weeds that cause an issue with final certification the grower will be required to correct the issue. Verification by the inspector will be required prior to harvest.

All fields requiring isolation without an adequate 5-foot isolation at the time of inspection will be failed pending verification by the inspector. If a field is harvested prior to the inspector verifying isolation, the field will remain failed and be ineligible for final certification. If an inspector must return to an area just to verify isolation there may be additional time and mileage fees incurred.

If you have a question about isolation, reach out to your field inspector or the office.



## From the Commissioner's Desk

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Durum Wheat Varieties, Percent of Acreage Planted North Dakota: 2020-2024						
Variety	2020	2021	2022	2023	2024	
					Per- cent	Acres Planted
	(percent)	(percent)	(percent)	(percent)		(1,000)
ND Riveland .....	11.0	22.6	38.9	52.7	44.0	493.1
AAC Stronghold.....	-	-	-	1.6	9.1	101.8
Joppa .....	29.3	26.5	15.2	12.5	6.9	77.0
ND Stanley .....	-	-	-	0.6	4.9	55.3
AAC Cabri .....	-	-	1.0	5.1	4.1	46.1
AAC Strongfield.....	-	-	0.6	0.1	4.0	45.1
Divide .....	20.0	9.7	9.8	7.4	3.8	43.1
Other Varieties.....	39.7	41.2	34.5	20.0	23.2	258.5
All Varieties .....						1,120.0
- Represents zero.						

every crop produced in every region of the U.S., is a value proposition. Evidently the value of single use cereal varieties has reached the point where the replant provision is becoming less important. Certainly, certified seed quality and the reduced labor associated with on-farm handling/ conditioning are driving factors. I suspect that in the future the use of hybrid varieties in spring wheat will be the next value proposition/balance/choice for producers.

From an admittedly selfish standpoint- single use or CSO variety use is great. Certification agencies inspect and test more seed; the seed industry grows as a result of more acres produced/bushels certified and sold.

From a commercial standpoint- also good. More high quality, inspected seed used in the field should create a better, higher quality product for domestic and export consumption.

The next few years will be interesting in terms of the variety survey. Private companies continue to release good, solid varieties and the regional public breeding programs have some excellent material in in pre-release or recently released stages. Ultimately, the choice between single-use and Title V/replant for growers, and the use of public or private company varieties, are both positive for the agriculture industry.

Best wishes for a safe and profitable harvest season.



## "Some Records Aren't Meant to be Broken"

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and any field inspection documentation. As more documents become available, they should be added to your records. In the event of an issue with a seed lot, you as the labeler become the primary focus. Producing complete records and file samples serves as evidence of what you provided the customer, and often will make issues go away quickly. If you are unable to produce complete records, we can't verify what the customer was provided and we may have to open a regulatory audit. Please take the time to ensure your records are complete and up to date, and feel free to reach out with questions.

## Seed Health Testing Sample Submissions

*Presley Mosher, Diagnostic Lab Manager*

As I write this harvest is in full swing. Now is an excellent time to consider submitting samples for seed health testing. A number of these tests are required for certification. Several of these tests require a week or more to complete, so plan accordingly. Please be advised, during periods of high sample volume test length may vary. There are typically many samples submitted in the spring to complete the necessary testing prior to planting. Avoid the rush and consider submitting early!

Seed health tests are reliable methods to determine the presence and levels of seed-borne pathogens in seed lots. Often, infected seed may look like otherwise healthy seed. Testing is the best way to determine the presence of many of these pathogens.

Additionally, it is important to collect a representative sample of each seed lot. A test is only as good as the sample that is provided. More details on seed health testing and other Diagnostic Lab tests are located on our website at [www.seed.nd.gov/diagnostic-lab-tests](http://www.seed.nd.gov/diagnostic-lab-tests). Please contact the Seed Department with any questions.



Dome test for bacterial blight of edible bean.

### Seed Health Tests offered by the NDSSD Diagnostic Lab

Crop	Test	Sample Size Required
Barley	Barley Stripe Mosaic Virus	1/2 pound
Barley, Wheat	Loose Smut	1/2 pound
Canola	Blackleg	1/2 pound
Edible Bean	Bacterial Blight (Dome Test)	2 pounds
Edible Bean	Bean Anthracnose	2 pounds
Field Pea	Pea Seed Borne Mosaic Virus	1 pound
Lentil	Fungal Scan (Botrytis, Ascochyta, Anthracnose, Sclerotinia)	½ pound
Pulse Crops (Field Pea, Chickpea, Lentil)	Ascochyta (500 seed)	Lentil ½ pound All other pulses 1 pound
Wheat	Vomitoxin	½ pound

**North Dakota State Seed Department**

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# NDSSD Calendar

**Nov 11** .....Veterans Day observed, office closed

**Nov 28** .....Thanksgiving, office closed

**Dec 2-3** .....NDAA Agribusiness Expo, The Delta by Marriott, Fargo

**Dec 9** .....NDCISA Western Regional meeting, Minot

**Dec 11** .....NDCISA Eastern Regional meeting, Grand Forks

**Dec 25** .....Christmas Day, office closed

**Jan 1** .....New Year's Day, office closed

**Jan 20-21** .....ND Grain Dealers Association, Fargo