



# The North Dakota Seed Journal

OCTOBER 2021

Newsletter of the North Dakota State Seed Department

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## Bin-run Seed Still Doesn't Pencil Out

Steve Sebesta, Deputy Commissioner

In the April issue of the Seed Journal, I wrote an article that explained the financial advantage planting certified spring wheat seed had compared to bin run seed. Last spring the commodity price for spring wheat was about \$5.75 per bushel. Commodity prices jumped this summer due to concerns about supply caused by drought in the prime production areas and spring wheat topped \$10 this summer. In difficult economic times, people naturally look for ways to economize on inputs for the next year. But now, more than ever, planting certified seed is a better financial decision compared to planting bin-run seed. How so, you ask? Follow along.

As I write, the average commodity price for hard red spring wheat at two nearby elevators is about \$9.25. We don't have a firm handle on certified seed prices this early in the season, but let's presume a modest increase compared to last spring and say \$13 per bushel for Certified class spring wheat. Also assume \$6 per bushel for cleanout. I used the final yield value (49 bu/ac) reported by the ND NASS in 2020 since this year

yields are atypical. All other variables remain the same as in my last article.

The bottom line is pretty clear. Certified seed has more than a \$24/acre advantage compared to bin-run seed. That advantage becomes greater when commodity prices are higher. In other words, bin-run seed is more expensive, has less value in high markets. Even last year, when the price of grain was around \$5, certified seed provided a greater return, around \$12/ac more than using bin-run seed. And these figures don't account for the time and effort involved in handling bin-run seed. What is your time worth?

Just because you can save seed doesn't mean you should. It just makes more sense to purchase and plant certified seed. I encourage you to use this information when you talk to your customers about their seed needs for 2022.

	Certified Seed	Bin Run Seed
Commodity Price	\$9.25	\$9.25
Yield	49	46
Avg Yield Difference (bu/ac)		- 3
Avg Seeding Rate (lbs/ac)	120	132
Avg Seeding Rate (bu/ac)	2	2.2
<b>Value of seed as grain (\$/ac)</b>	<b>NA</b>	<b>\$20.35</b>
Avg cost to condition (\$/bu)	NA	\$1.00
<b>Cleaning Total (\$/ac)</b>	<b>NA</b>	<b>\$2.40</b>
Avg Storage Cost (\$.05/bu/mo) 9 mo	NA	\$0.45
<b>Total Storage cost (\$/ac)</b>	<b>NA</b>	<b>\$0.99</b>
<b>Sub Total (\$/ac)</b>	<b>0</b>	<b>\$23.74</b>
Conditioning loss (%)	0	10
Value of cleanout (\$/bu)	0	\$6.00
	<b>NA</b>	<b>\$1.20</b>
<b>Seed Cost (\$/ac)</b>	<b>\$26.00</b>	<b>\$22.54</b>
Gross income (yld/ac x commodity price)	\$453.25	\$425.50
Seed cost (\$/ac)	-\$26.00	-\$22.54
<b>Net income (\$/ac)</b>	<b>\$427.25</b>	<b>\$402.96</b>

**Added value (\$/ac) by planting certified seed \$24.29/ac**



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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# From the Commissioner's Desk

You'll read a fair amount about seed supply issues in this edition of *Seed Journal*. Given drought, yield and the economics of high commodity prices, it's a reasonable topic for conversation this fall.

I'll focus today on intellectual property protections, and how those issues are magnified by perceived seed shortages leading into the upcoming year. Unfortunately, seed piracy issues may become more pronounced going into spring 2022. We, certification and regulatory agencies, wouldn't be doing our jobs if we didn't remind the public of important seed intellectual property (IP) protection afforded variety owners.

First, an acknowledgement that this message in *Seed Journal* is "singing to the choir" to some extent. Our readership, whether in North Dakota or elsewhere, is made up primarily of folks intimately involved with the seed industry. Most of you know and respect the rules/regulations/laws that provide for variety protection and assist us in educating the public on those protections. Thank you for the help, and be aware that our regulatory program spends the vast majority of its time and resources educating the public on IP issues.

Our Seed Regulatory and Certification program staff will spend a good share of fall and winter doing outreach-related activities (meetings, print articles, radio, etc.) on these significant points:

1. It's 2021. Seed IP has been around for decades, and one should assume all seed is protected by one of these:
  - a. Plant Variety Protection Act (PVPA), gives the variety owner the right to control and/or authorize reproduction of the variety for 20 years. The Title V option, if elected by the owner, requires seed to be certified for legal sale.
  - b. Limited Use License Agreements (LULA) specify the rights and obligations under which the purchaser may use the variety. Ordinarily,

Ken Bertsch.....State Seed Commissioner  
Steve Sebesta.....Deputy Seed Commissioner  
Kent Sather.....Director, Potato Program  
Jason Goltz.....Field Seed Program Manager  
Joe Magnusson.....Field Seed Program Manager  
Jeanna Mueller.....Seed Laboratory Manager  
Starr Thies.....Business Manager  
Mike Oosterwijk.....Potato Program Supervisor

these specify that the seed is to be planted for a single use to produce a commercial crop, and prohibit the farmer from saving grain for replanting or sale. Some companies, and even a few universities, offer products as Certified Seed Only (CSO), further requiring seed to be certified for sale. Interestingly, these agreements are becoming more common and accepted by commercial producers every year.

- c. Patents. While less common than PVP or LULA in the cereal industry, patents provide the same protections to a variety owner and prohibit saving seed for replanting.
2. The only caveat to the regulations above is the saved-seed exemption for PVPA varieties, which allows the unlimited replant of seed which has been legally purchased, only on the purchaser's own farm. Not your friend, brother, second-cousin or acquaintance-in-need's farm; your farm.
3. Seed shortages happen. Plan ahead. This situation is not a surprise, and most seed growers and retailers have been planning for potential shortages for months. The vast majority of commercial growers out there have the smarts and experience to work through a once-in-a-decade situation like this. Order your seed early and understand IP rights.

As for the minority of growers, we will encounter what I call emotionally justified seed piracy. You've seen or heard it before; the "there was no seed available - I had no choice" excuse of the buyer (who sold all his grain on the previously mentioned strong market), or the "I was just helping out my neighbor" rationale of the brown-bagger. Those reasons don't change the fact that seed IP is federal law, and no localized "emergency" can suspend or negate the legal rights of a variety owner. Our regulatory staff are not the bad guys in this situation: there may be a shortage of a preferred variety, but there isn't an absence of legal seed. The old saying "poor planning on your part does not constitute an emergency on mine" applies here.

The Seed Department is a supporting member of Farmers Yield Initiative (FYI) and Seed Innovation & Protection Alliance (SIPA). Both organizations are dedicated to educating the industry on the value of seed IP and serve as great resources on variety protection topics.

Best wishes for a safe and profitable fall season,



## 2022 Approved Facilities

*Kyle Bednar, Field Seed Inspector II*

The Seed Department's Approved Facility Program provides an assessment and approval process for facilities processing and selling seed. Facilities processing and/or handling certified seed products must be inspected and approved by a Seed Department inspector. Permits are granted on an annual basis.

NDSSD facility inspectors will be starting inspections in mid-October. While we realize that some of you will be busy handling a few different fall crops, a few minutes of your time to assist inspectors would be appreciated in order to assure you get the most out of the process. You may want to be thinking of any questions you have for the inspector; for example, the process of selling certified seed or getting set up with our new on-line bulk certificate process.

Prior to conditioning any seed lot, conditioners should request and review the field inspection report from producers in order to determine if there


## 2022 Approved Facilities

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# Tips for Completing Sampler's Reports

*Joe Magnusson, Certification Manager*

1. Lot number: An identifier of your choice. Bin number should be included for traceability.
2. List the numbers of all fields included in this lot of seed.
3. Bin number where the seed is stored for sale: You may only enter one bin. If seed is stored in more than one bin, then a separate sample, Sampler's Report and lot number and tests are required for the additional bins. Each bin is a lot.
4. Each mini bulk container (tote) must be labeled with variety and lot number. If a customer purchases multiple mini bulks, one bulk certificate can be used for the total bushels purchased.
5. Check for printing certificates online. Conditioners should not automatically assume the customer (labeler) wants bulk certificates. Labelers will be billed for each bulk cert so ask them if they print online. If so, check the box.
6. The maximum number of bushels in a bagged lot is 5,000.
7. Number of tags requested for bagged or mini bulk seed.
8. Germination, purity and seed count are required for most crops. A minimum of 2 lbs. of seed should be submitted for proper testing. Canadian noxious and OECD purity are used by companies that export seed: an additional 1,000 grams (2.2 lbs.) is required for these tests.
9. If you would like the sample to be put in the front of the line for testing, list the tests to Rush here. The fee is double the cost of the test. Rush tests do not shorten the time it takes for the test (e.g., germination).
10. List the sample number of the preliminary test (pre-germ) done prior to conditioning to use for labeling purposes. The preliminary test must have included all fields related to this lot or new tests are required. A new germination is required after conditioning for fragile crops (soybeans, field peas and field beans).
11. List the previous certification number if the seed was retested, reconditioned or was carryover.



**SEED SAMPLER'S REPORT**  
NORTH DAKOTA STATE SEED DEPARTMENT  
SFN 50307 (7-2020)

PO Box 5257  
 Fargo, ND 58105-5257  
 Phone: 701-231-5400  
 Fax: 701-231-5401

Labeler Name			Conditioner Name		
Address			Address		
City	State	ZIP Code	City	State	ZIP Code

Charge Test Fees to: <input type="checkbox"/> Labeler <input type="checkbox"/> Conditioner <input type="checkbox"/> Other _____			Send Labels to: <input type="checkbox"/> Labeler <input type="checkbox"/> Conditioner <input type="checkbox"/> Other _____		
Copy to:					

<b>Sample Information</b>	
Variety	Lot Number <sup>1</sup>
Class	
Field Inspection Number(s) <sup>2</sup>	
Date Conditioned	Number of Unconditioned Bushels

<b>Bulk Seed</b>				
Conditioned Bushels	Storage Bin Number <sup>3</sup>	Bulk Certificates Requested	Number of Mini-Bulk Containers <sup>4</sup>	Online Option <sup>5</sup>
<input type="checkbox"/> Print Own Certificates				

<b>Bagged Seed</b>				
Conditioned Bushels <sup>6</sup>	Number of Bags in Lot	Weight in Each Bag	Number of Tags <sup>7</sup>	Pre-Issued Serial Numbers (on tags)
			<input type="checkbox"/> Single	From: To:
			<input type="checkbox"/> Double	

**8 Tests Requested** (check all that apply)

Germination  Purity  Seed Count  Canadian Noxious  OECD Purity  Other \_\_\_\_\_

**9 Tests to Rush**

**10 List the Lab Sample Number** (for test results using pre-conditioned samples)

Pre-Germ Lab Number	Barley Loose Smut Lab Number	Ascochyta Lab Number
Bean Bacterial Blight (Dome) Lab Number		Bean Anthracnose Lab Number

**11 List Certification or Relabel Number** (if any apply to this seed lot)

Retest Seed	Reconditioned Seed	Carryover Seed
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**Other Instructions or Remarks**

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**Sampler's Declaration**  
This seed lot was conditioned and sampled according to North Dakota seed certification requirements and the sample submitted is representative of the entire seed lot and was not tampered with in any manner by anyone before or after it was placed in the sample bag and sealed.

Authorized Sampler's Signature	Date
--------------------------------	------

**Grower's Declaration**  
The seed below was delivered/transferred to the labeler or conditioner above for conditioning.

Type of Seed Delivered/Transferred	Amount	Measured as	Field Inspection Number(s)
		<input type="checkbox"/> Bushels <input type="checkbox"/> Pounds	
Grower's Signature			Date

## Staff Changes

Every organization has employees who quietly go about their business with little fanfare, but whose contributions to the organization are huge. Two such people at the Seed Department retired in recent months.

Seed Analyst **Linda Cebulski**, retired the end of May. Linda worked at the Seed Department for nine years primarily doing germination tests in the Seed Lab. During summer months, Linda inspected certified seed fields.

**Deb Schmidt** was a multi-functional part of our administrative support team for 22 years. Deb retired the end of September. She took care of potato certificates, seed bulk certs and tags and many other tasks that we dumped on her.

Both Deb and Linda contributed a lot to our organization and our customers and they will certainly be missed.

## 2022 Certified Seed Availability

Steve Sebesta, Deputy Commissioner

### Contact your seed supplier sooner rather than later.

That's the best recommendation we have at this time. The drought has obviously created concerns about seed availability for next year. And, rightly so. In June, we expected to have fewer fields in the system because some seed growers didn't apply due to the conditions of their fields. As the drought worsened through the summer we expected overall yields would be down. That combination will surely create supply issues. Here's what we know so far in early October.

Overall, we had saw a 10% decline in acres compared to 2020, but we were still in excess of 250,000 total acres of seed production. Spring wheat acres were up 11% compared to last year with more than 140,000 acres. Barley showed the largest increase in acreage year over year, with nearly 22,000 acres this year or a 46% increase. Most of the other major crops we inspect were down some. Durum acres were down sharply, about 60%, which is concerning, especially when one considers 38% lower yields. According to the National Agricultural Statistics Service yield report, small grain yields were down an average of 32%. Fewer acres x lower yields = less seed.

Crop	Seed		Statewide	
	Production Acres	Change vs LY	Mean Yield* (bu/ac)	Change vs LY
Spring Wheat	140,472	+ 11%	33.5	- 32%
Durum	8,162	- 59%	24.0	- 38%
Barley	21,937	+ 46%	51.0	- 19%
Oats	3,199	- 62%	48.0	- 38%
Field Beans	5,807	+ 2%	NA	-
Flax	3,689	- 14%	NA	-
Field Pea	10,972	- 17%	NA	-
Rye	4,394	- 36%	NA	-

\* Source: 2021 North Dakota Small Grain Acreage and Production report. National Agricultural Statistics Service

While the number of acres of spring wheat remained strong, buyers may notice shortages of some specific varieties and shortages in some areas of the state. According to the 2021 North Dakota wheat variety survey conducted by the North Dakota field office of the USDA NASS, the top four varieties occupied 35% of the North Dakota's spring wheat acres. Our statistics show that these same four varieties account for half of the acres in certification this year. More than half of the spring wheat certified seed production acres were in the 19 counties making up the eastern agricultural reporting district and almost two-thirds of our acres were in the northern districts. There were six varieties ranked in the top 20 that had no certified seed production this year so seed availability of those will be tight or nonexistent.

Customers (retailers, seed growers or farmers) may need to consider sourcing seed from suppliers in these areas if they can't find the varieties or quantities they desire from

their normal supplier. It may also be wise to start sourcing seed earlier this year instead of waiting until next spring to locate seed. Be sure to check the 2022 Seed Directory when it is published and on our website. Remember to check the sections for carryover seed availability also.

## What's in Your Seed?

Jason Goltz, Regulatory Manager

Labeling laws are consumer protection laws. When purchasing products such as food, clothing or getting a prescription, the buyer will be provided with labels attached to those products. Those labels inform the consumer of what the product is made of, the origin and any other required information. Seed labeling laws are also for consumer protection and the following information is required by law.

- **Lot number or other lot identification**  
This provides traceability to its source. When there is a problem with one tote or bag of seed, there could be a problem in the entire lot.
- **State or foreign country in which the seed was grown**  
Palmer Amaranth anyone? A noxious weed in North Dakota is not necessarily a noxious weed in another state or country. Remember, a customer can ask for the lab report used to label the seed lot.
- **The name of each restricted weed seed present and its rate of occurrence per pound**  
Not all weeds are bad enough to be prohibited, but some such as dodder species, hedge bindweed, wild oats and quack grass are difficult enough to control as to place them in this category.
- **The percentage by weight of any other agricultural seeds present**  
A crop can be rejected at market for too much other crop, spring wheat in durum, for example.
- **The percentage by weight of inert matter**  
How much broken seed, stones, chaff or other non-seed material is in the lot? How will this affect planter performance?
- **The percentage of germination exclusive of hard seed**  
How much of that seed lot is actually expected to germinate in the field? Many use this number to set their planting rate.
- **The percentage of hard seed, if applicable**  
Some species such as clover will have seed which is classified as hard. These are alive but don't germinate within the prescribed test period.
- **The month and year in which the germination percentages were determined**

Remember, seed is a living organism and will eventually die. Agricultural seed germination tests are only valid for nine months then retesting is required. When shipping seed across state lines, don't forget the Federal Seed Act applies, so the germination test date must have been within five months of shipping.

In North Dakota, barley, canola, dry beans, durum, field peas, flax, oats, soybeans, and wheat seed must be labeled by variety name. Do not let anyone try to tell you a label isn't necessary. Regardless of the type of transaction, when the seed changes physical ownership, a label must accompany the seed.



## 2022 Approved Facilities

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was any other crop found in the field and ascertain what common or prohibited weeds were found during the inspection process. Remember, we require a 5 pound sample for final certification if the field was conditionally passed.

Now is a good time to look around your facility and see if you have any spilled grain, missing bin numbers, inadequately labeled samples or log sheets and unused bulk certificates you haven't returned. Your seed samples (minimum of two lbs.) need to be saved for one year from the last date of sale and properly labeled with kind, lot, class and variety. A copy of the corresponding bulk certificate works best for identification.

After your facility has passed the plant inspection you will receive a copy of the inspection report and your 2022 permit. Please display your permit and review the inspection report for any deficiencies that may have been found and retain your copy.

As seed starts moving into final storage for the 2022 season, keep in mind the record high temperatures we have been experiencing this fall which could result in bin issues. Check your seed often for signs of moisture migration. On cold crisp days before the sun warms the roof tops, check the underside of roof surfaces and vents for frost. This almost always indicates moisture migration and often indicates poor grain condition. During cold weather, bins should be checked every two weeks until the grain temperature has equalized.

## Certified Seed Potatoes 2021 Crop Acreage Summary

**Kent Sather**, Director, Potato Programs

North Dakota certified seed potato growers applied for 14,481 acres for certification in 2021. This was down 533 acres (3.5%) from the previous crop.

After a reasonable but slightly delayed planting season, growers watched for rain. Not much came. The heat of summer, along with drought conditions resulted in stressed plants, especially in dryland production. The quantity and quality of irrigated seed potato lots were also negatively affected by the heat.

At least three field inspections are conducted for each seed lot. Inspections began June 24 as some earlier planted fields were large enough for visual diagnosis. The second inspection occurred about two to three weeks after first inspection. Inspectors primarily look for and quantify virus and variety mixture during the first two inspections. The final inspection happens about 90 days or more after planting as plants are maturing. Inspectors then search fields for any visible symptoms of Bacterial Ring Rot (*Corynebacterium michiganensis* subsp. *sepedonicus*). This pathogen expresses symptoms in the plant late in the growing season. Notes and results from all inspections are recorded and ultimately supplied to the seed grower. Disease issues are quantified and compared against established Seed Department tolerances. Those tolerances can be found on the NDSSD website in Rules & Standards/Administrative Rules/Seed Potato Certification Standards.

Two lots, representing a total of 20 acres, were rejected this year due to cultural conditions and variety mixture above established tolerances. These lots are ineligible to be sold as certified seed. No acres were lost to down-out this season.

Harvest began on time. Early indications are that irrigated fields did fair, but just average or slightly below. Dryland production is down considerably, being well below average. Some rain came late in the season, but likely had no impact on yields. The rains did improve digging conditions, however. Samples for our Winter Test grow-out are being collected by growers at harvest. These will be grown in Florida to determine any late season spread of PVY by aphids.

The annual North Dakota Seed Potato Directory for the 2021 crop will be published in early November. A copy will be online, and additional hardcopies will be mailed.

## WEEDS!

**Jeanna Mueller**, Seed Lab Manager

Fighting weeds and weedy species for most farmers, land owners and gardeners is a full-time job. Weedy species thrive because of their adaptability to an environment. Catching weeds at the right stage to control by chemical, cultivation, roguing or at least mowing before seed matures and spreads is key.

One basic step of weed control is your seed source. Planting high quality, weed-free seed can be a major factor. Certified seed is a great way to prevent introduction of unwanted species on your farmland and production areas. Certified seed meets certain standards for germination and purity. A high germination rate equals more competition for those weeds. A purity test can check for weeds in forages, cover crop, CRP mixes or turf grasses. Some introduced grasses have a way of becoming a nuisance even if they are not noxious. Look at the label when you purchase seed. If you save your own seed, get it tested!

The second step of weed control is understanding the species. Crop species have a short life span. They grow, mature and produce seed in one year. Although some grains such as rye can lay dormant in soil for a few years, most crop seed will not carryover. Undisturbed weed seeds tend to persist longer than seeds subjected to periodic tillage (see table). Weed seeds in deeply-worked soil tend to last longer than seeds in shallowly-worked soil. Seeds deep in the soil are "stored" below the germination zone. In the "stored" zone the seeds may germinate but are too deep to reach the soil surface to receive the sunlight they need.

Field bindweed - more than 50 years
Mustards - decades
Canada Thistle - more than 2 decades
Barnyard grass - up to 13 years
Curly Dock - more than 10 years
Wild oats - 3 to 6 years
Quack grass - up to 4 years
Perennial ryegrass - up to 3 years
Leafy Spurge - at least 2 years
Brome grass - up to 2 years
Russian thistle (tumbleweed) - up to 1 year

Send in your samples soon to avoid the busy season of testing! You can always call us with any questions you may have!

**North Dakota State Seed Department**

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Fargo, ND 58105-5257

ADDRESS SERVICE REQUESTED

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# NDSSD Calendar

- Nov 11** .....Veterans Day (office closed)
- Nov 25**.....Thanksgiving (office closed)
- Nov 30 - Dec 1**..NDAA Northern Ag Expo, FargoDome
- Dec 6**.....SE District Crop Improvement Assoc. meeting, Casselton
- Dec 7**.....SW District Crop Improvement Assoc. meeting, Dickinson
- Dec 8**.....NW District Crop Improvement Assoc. meeting, Williston
- Dec 9**.....NE District Crop Improvement Assoc. meeting, Devils Lake
- Dec 24**.....Christmas Day observed (office closed)
- Dec 31**.....New Year's Day observed (office closed)
- Jan 4-5**.....Lake Region Roundup, Devils Lake
- Jan 16-18**.....ND Grain Dealers Association, Fargo