



The North Dakota Seed Journal

OCTOBER 2020

Newsletter of the North Dakota State Seed Department

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Pulse USA Launches Quality Assurance Program

Steve Sebesta, Deputy Commissioner

Naturally, the bulk of the services our agency provides revolves around the certification of seed products. However, the Seed Department offers other services that provide value to the seed industry as well.

Recently, Pulse USA, Inc. a company that produces and markets a wide variety of crops, specializing in pulse and cover crops, approached us about setting up a program for some of the crops they sell that are not offered as certified seed. The company's objectives fit perfectly into a quality assurance program.

Quality assurance programs offered by certification agencies are not new. Most agencies perform service inspections or manage QA programs for customers who produce seed products outside traditional certification programs, because those customers still value professional and unbiased field inspections and lab testing for the purpose of quality control. The inspections we provide give the company assurance that the products they are producing and marketing meet their quality standards or identify issues that help them make informed decisions on the disposition of a seed lot. Over the years, most of these inspections have been for soybean seed companies.

Certification agencies also offer an official quality assurance program that is very similar to seed certification, operated under the umbrella of our national organization, the Association of Official Seed Certifying Agencies (AOSCA). This program allows products to be labeled with the official AOSCA QA label that provides instant recognition that the seed being marketed has met all of the requirements of the program. The AOSCA QA label is only used in programs that have been developed by an AOSCA agency, reviewed by AOSCA to determine whether it meets program requirements and is administered by an AOSCA agency.



In this particular case, Pulse USA wanted a program to maintain the identity and quality of their millet and cowpeas. Many of the requirements of the program mirror those of seed certification, with variety eligibility and seedstock eligibility requirements being the exceptions. The basic requirements of the program include seed production, conditioning, testing, labeling and record keeping.

QA programs offer flexibility to participants as long as they meet the basic requirements. In their program, Pulse USA identifies eligible varieties, seedstocks and growers. Seed must be conditioned by approved facilities and seed samples must be tested using certified purity standards and have the USA noxious weed exam performed.

Many customers, whether genetic providers, seed producers or farmers, understand the value of certified seed. Pulse USA has demonstrated they understand a QA program can offer similar value for them and their customers.

If you would like more information about QA programs, contact the Seed Department.



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From the Commissioner's Desk

Like most of you, this is a transitional time of year for us at the Seed Department.

Many of you are wrapping up harvest, conditioning seed crops or working through fall sales seasons. Our staff is completing inspections on soybean, finalizing food safety audits, compiling seed directories or harvesting the last greenhouse potato crop. While you prep for winter in your way, we put finishing touches on the field inspection season and assemble data for public information, while gearing up for seed testing and facility inspections.

Planning for transition this year is...odd.

Trying to predict how business, and life in general, will operate over the next few months is pointless. Field inspections, in both potato and field crop programs, have gone smoothly. And thanks to Zoom and other digital platforms we're all fortunate to complete our work in what would otherwise be face-to-face, interactive settings.

We're doing everything we can to maintain the health and well-being of staff, but it's a proverbial crapshoot for any business that must operate under a roof. We've set up a flu shot clinic here for staff and family, and hope it helps keep people healthier. We'll continue to keep doors closed to the public as long as the pandemic persists and we'll continue to beat the drum of masks/disinfection/social distancing in an effort to keep operating. Every single contingency I discussed in my April Seed Journal article is still in play. Rather than reprint the entire thing, here's the takeaway statement: *"The best I can commit to you is, we'll do our best."*

Our program managers generally look forward to fall and winter meetings with constituent groups. All of these, including our fall Seed Commission meeting, are important in wrapping up one season and transitioning to the next. While virtual meetings are adequate, they don't replace the discussion that

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

occurs in person. These engagements prompt important two-way flow of information and feedback.

As for seeking input; lack of face-time means a shortage of interaction with our constituents, partners and customers. I'm currently involved with an AOSCA (our national field crop certification group) long range planning committee and discussing, among other issues, what our members need to remain relevant in the seed industry. This will end up, as every committee action does these days, an exercise in "zooming", surveys and phone calls. We'll get the job done, but under less-than-ideal circumstances.

We need the same sort of input from our clients/customers/constituents. One of the questions asked during today's meeting was "do you know why customers use your services?". As the responsible party here, I hope the answer is more than "because they're the only game in town" or "because we have to" or even "because we like working with the Seed Department folks".

I would ask questions like: Do we provide services in a timely manner? Are we responsive to your questions and needs? Do we operate in a professional and knowledgeable manner? Is our technology sufficient and are our fees reasonable? Do you trust the results of your inspections and/or tests, and will using our services help your business? Are we reliable and communicative partners?

Absent the chance to meet with you, please let me know your thoughts. Our board (the State Seed Commission) is well connected to the industry, and gives good insight to these questions, but it's not the same as hearing from you. I'm not going to give out my cellphone number, like the guy selling fancy grills on radio advertisements, but will offer my email address for your input: kbertsch@ndseed.ndsu.edu

Best wishes for a safe and profitable fall season,



Covid-19 News

Just a reminder, the Seed Department facilities at Fargo and Grafton remain closed to the public. This policy was implemented last spring to help ensure the safety of our employees so they can continue to provide the excellent service to which you are accustomed.

The uncertainty of these times underscores the importance of self-reliance. We strongly encourage all labelers to utilize the **online bulk certificate** printing tool, accessible on our website, as it allows labelers to print their own bulk certificates without relying on our office to do that for you. The number of labelers using this tool increased 62% from the previous year, and accounted for more than 5 million bushels of seed, 63% of the total volume of seed certified. Call Amber if you would like to get set up to use this service.

Continuing Education at NDSSD

Ashley Thomas, Seed Analyst & Hilary Hafner, Diagnostic Lab Specialist

The seed industry offers a continually changing landscape in terms of new varieties, technologies, research, problems and methods of detecting problems. With respect to laboratory testing and quality control, it is important to keep up with the latest information available on best practices in testing. Seed Department staff are members of several professional seed organizations including: American Seed Trade Association (ASTA), Association of Official Seed Certifying Agencies (AOSCA), Association of American Seed Control Officials (AASCO), Association of Official Seed Analysts (AOSA), and Society of Commercial Seed Technologists (SCST). AOSA and SCST membership and certification is especially important for laboratory work in order to maintain up to date and consistent testing methods.

This spring, the Seed and Diagnostic Labs participated in two online courses offered by SoDak Labs. Each course was 12 weeks in length. The Seed Technology course focused on AOSA rules for testing seed while the Seed Biology course offered background in biological principles and practices. Both classes were beneficial for new lab members training to take the certified and registered seed technologist exams and served as a great review for those who are already accredited. Additionally, the online format was generously made available for other employees interested in expanding their knowledge and gaining insight on lab activities.

Workshops provide another important continuing educational opportunity for staff. Lab members are encouraged to attend workshops for their specialties and to earn continuing education points required for certified and registered (seed or genetic) technologists. Members of AOSA and SCST must earn five continuing education points every three years and take two proficiency tests each year to maintain active membership. Workshops provide both background information and hands on training. This training is priceless for those who conduct lab testing to learn new skills and how to apply new test procedures and technologies. They are also an opportunity to network and learn how other labs function.

In 2019, the Diagnostic Lab attended a genetic purity workshop and members of the Seed Lab attended the AOSA annual meetings, as well as a weeklong seed school at Iowa State University. There are currently three certified analysts at the Seed Department with one more training to become certified and one training to become a genetic technologist.

The Seed Department supports and encourages all employees to expand their knowledge and skill bases whether it is through webinars, onsite trainings, field days, courses, or workshops. Staying up to date on the latest information and best practices helps the department best serve its customers.

Certified Seed Potato 2020 Acreage Summary

Kent Sather, Director, Potato Programs

North Dakota certified seed potato growers applied for 14,956 acres of seed production for 2020. This was up 1,720 acres (13% increase) from the previous crop. This increase resulted primarily from new acreage from new certified seed growers and a slight increase in acreage from established growers.

After a reasonably good planting season, growers watched for rain. In some cases, irrigation systems sat idle as rainfall was sufficient. Dryland fields of the Red River Valley received good moisture early in the growing season, but were drier later, especially just prior to and during harvest. In general, 2020 summer weather patterns seemed less variable than recent years.

At least three inspections are conducted for each seed lot over the course of the summer. Field inspections began June 22 as plants in some earlier planted fields were large enough for visual diagnosis. Second inspections occurred about two to three weeks after first inspections. Inspectors primarily look for and quantify virus and variety mixture during these first two inspections. The final inspection happens approximately 90 or more days after planting. Inspectors search fields for any visible symptom of Bacterial Ring Rot (*Corynebacterium michiganensis* subsp. *sepedonicus*) which don't appear until later in the growing season. All notes and results from each inspection are recorded and ultimately provided to the seed grower. Disease issues

are quantified and compared against Seed Department tolerances. A list of those tolerances can be found at the NDSSD website; Rules & Standards/Administrative Rules/Seed Potato Certification Standards.

Nine lots representing 332 acres were rejected. Issues causing these rejections included Potato Virus Y (PVY or Mosaic) greater than the allowed tolerance, excessive *Pectobacterium* (Blackleg) and severe chemical damage caused by drift. These lots are ineligible to be sold as certified seed. In addition, 1,851 acres (37 lots) were downgraded to a Certified level due to PVY. These lots can be sold as certified seed for commercial production, but are ineligible to be entered into a certification program next year. Approximately 79 acres were lost to drown-out early in the growing season.

Harvest began about a week later than normal, since the crop was allowed to grow just a bit longer in hopes of better yields after slow tuber sizing. With that, the risk increased for late season spread of PVY vectored by aphids. Samples for winter test grow outs are taken at

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The Importance of Seed Testing

Jeanna Mueller, Seed Lab Manager

All seed sold for planting purposes must be tested and labeled. Germination and purity tests are not required if a grower has carryover seed of their own they would like to plant, but are recommended, however, as these tests are an excellent and inexpensive way to test quality. As the old saying goes, never judge a book by its cover, it may look good but looks can be deceiving.

In some situations, such as animal feed, the end use of the seed does not require such tests, but in the case of screenings used for cattle feed we have to think about the possibility of noxious weed seed content. Checking for noxious weeds such as Palmer amaranth is important now that it is



spreading to more ND counties. Small seeds may also stick to crops like sunflowers, or in native grasses and spikelets of many crops. Seed of Palmer amaranth, Redroot pigweed, and other *Amaranthus* species are impossible to identify visually. If you have to identify *Amaranthus* seed, you can send it to the National Ag Genotyping Center for a DNA test to identify it properly.

Fragile crops such as field peas and soybeans could have damage that may or may not be visible. With severe mechanical damage, cracked seeds or loose seed coats are very evident. Occasionally, with mechanical damage, the cracks are all internal and the seeds



Photo: Channel Seed Company

stay intact. Over the last few years the seed lab has seen a fair number of frost damaged soybeans, shown above. Green soybeans, in most cases, will not germinate and will be dead by the end of the germination test.

Chemically damaged seed resulting from pre-harvest burn down could have a good germination score immediately after harvest, but over time germination declines. Affected seedlings have stunted roots and will not have the vigor in adverse field conditions. As a reminder, pre-harvest burn down with glyphosate is not recommended for seed fields.

As always, please feel free to call me with any questions, take care and stay safe!

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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 2020 crop will be published in October. A copy will be online, and additional hardcopies will be mailed.

What's New This Year?

Steve Sebesta, Deputy Commissioner

Nothing is more important to a successful farm operation than variety selection. Choosing the right varieties for your farm has a huge impact on determining whether you'll hit your performance goals or fall short. Yield potential, quality, pest and stress tolerance, maturity, harvest ability, are key performance components determined by the variety. Marketability and your management practices are also important considerations. You don't get a mulligan once the seed is in the ground.

Since most of the crop varieties planted in North Dakota are certified, we usually get a first look at varieties on a large scale, and often get the question: "What's new?" or "What looks good?"

North Dakota producers benefit from the research investments by both public and private breeding programs. Excluding soybeans, we inspected 38 new varieties of 13 crops for the first time this year. Most of the new varieties were spring wheat (8) followed by field pea (7) and barley (6). Program-wide, we inspected 342 varieties of 24 crop kinds this year.

To see what's new, check the *2021 Seed Directory* online or hard copy. Remember, all varieties that are commercialized have their strengths and weaknesses. We don't make variety recommendations – only you can make the decisions on what will perform best on your farm.

New Department Website

The Seed Department has completed redesigning our website, ndseed.com, and went live earlier this summer. When we began this project, we had several objectives for the new product, specifically, update and reorganize content and make the task of finding information easier thus improving the user experience. We also now have the ability to update content in-house and post news articles and important updates without relying on an outside vendor to do it for us. This enables us to respond quickly to our customers' needs for current information. From the state's perspective, their number one priority was compliance with state IT standards for a common framework, and establish a level of effectiveness, consistency and professionalism across State of North Dakota web sites.

What's Next After Field Inspection?

Joe Magnusson, Field Seed Program Manager

Now that the field inspection season is completed, there are several things growers should do to have a quality seed product to sell to their customers or other seed growers.

Preliminary Testing and Bin Labeling

All bins containing unconditioned field-inspected seed and or conditioned certified seed must be labeled. Certified seed should be labeled with kind, variety, lot number and class of seed. Bins of unconditioned field-inspected seed should be labeled with kind, variety, and the Seed Department application number(s) of the fields that make up each bin. Labeling bins with application numbers aids in proper identification of samples submitted for preliminary germination and disease testing. If samples are submitted without the correct field numbers associated with that bin, preliminary test results cannot be used for final certification and new testing will be required.

Fragile crops such as field peas, soybeans and field beans must have a new germination test after conditioning to ensure the seed is not damaged during conditioning. Regardless, it's always a good

idea to get a new germination test on all crops after conditioning to ensure the bin has not gone out of condition.

Conditioning and Labeling Seed

Seed growers have options for marketing their field-inspected seed; either complete final certification and sell it themselves or sell to an approved conditioner or bulk retailer. To transfer ownership of unconditioned seed to an approved facility, growers must sign the grower's declaration on the sampler's report. Approved conditioners are listed in the 2021 Field Seed Directory or our website ndseed.com. When delivering seed for conditioning, growers need to provide the conditioner the field number(s) associated with that seed. It is also a good practice to show them the field inspection report(s) so they can determine if there are weeds or other crops that may be difficult to separate during conditioning. Each bin of conditioned seed must be a different lot and samples must be submitted for each bin. It's a good idea to include the bin number in the lot number to help ensure the correct variety is sold. If preliminary test results will be used for labeling, give the test number(s) to the conditioner to include on the sampler's report. Labelers may choose to have bulk certificates printed by the Seed Department and mailed or they may print their own online. Instructions for online printing can be found on our website ndseed.com or call the department for instructions.

Remember, the initial labeler is responsible for all fees associated with testing, final certification and sales.

Lessons Learned from the China (Seed) Syndrome

Jason Goltz, Regulatory Manager

The importance of seed labeling became a national headline recently when people all over the United States began receiving unsolicited seed packets in the mail. Early reports began to circulate around the first week of July but by the end of the month it was apparent how widespread the issue was. The spread of information was largely due to social media and was then picked up by national news networks.

The initial concern was the possibility of a new weed or pathogen being introduced into our ecosystem. Also, it wasn't clear why this was happening; packages of seed were intentionally mislabeled as another product such as jewelry.

On July 28, the North Dakota Department of Agriculture released a joint news release with the North Dakota State Seed Department alerting the public about the seed. The news release instructed people to do the following:

- Retain the seeds and packaging, including the mailing label
- Do not plant the seeds
- Contact the ND Department of Agriculture to report the incident

A follow-up news release was published August 3 after the USDA's Animal and Plant Health Inspection Service (APHIS) distributed a letter for information and action. The USDA, in cooperation with other federal agencies, began to look at this as a brushing scam. Brushing is where an online retailer purchases an item in another person's name and then posts a fake review in that person's name.

By the first week of September, APHIS had become aware of more than 20,000 reports of packages; mostly sent from China. Approximately 10,000 samples had been received and more than 4,000 had been analyzed. Most of the seed types analyzed were fruits, vegetables and herbs. Some noxious weeds were found as well as some insects.

Due to the publicity, Amazon.com declared they would remove listings for live plants and seeds from their site. APHIS expects other online retailers to follow that example. As of today, it looks as though the problem has disappeared as quickly as it appeared.

This is a good example of many different people and organizations working together to quickly resolve a problem. The good thing that came out of this, was a large part of the population learned quickly the importance of seed labeling. Proper testing and labeling protects everyone.

North Dakota State Seed Department

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NDSSD Calendar

Nov 11 Veterans Day, office closed

Nov 26 Thanksgiving, office closed

Nov 30 SE District Crop Improvement Assoc. meeting, Casselton*

Dec 1 SW District Crop Improvement Assoc. meeting, Mandan*

Dec 2 NW District Crop Improvement Assoc. meeting, Stanley*

Dec 3 NE District Crop Improvement Assoc. meeting, Devils Lake*

Dec 25 Christmas, office closed

Dec 30 Non-resident seed dealer applications due

Jan 1 New Year's Day, office closed

*Tentative - check with organization for final schedule