

DIRECT SEED LINK

PACIFIC NORTHWEST

direct seed ASSOCIATION

Pacific Northwest Direct Seed Association

Winter 2017



“Provide information exchange, advocacy on conservation policy issues, access to value-added benefits, and research coordination that supports the adoption of environmentally sustainable and economically viable direct seed cropping systems.”

PNDSA MISSION STATEMENT

THE CROPPING SYSTEMS CONFERENCE IS AROUND THE CORNER!

It's that time of year again, when for two days you have the opportunity to receive powerful information and network with others in the direct seed industry! Learn about what is working for other PNW farmers, how to build a Cash Flow Budget, and which equipment is best for your operation. Discover the importance of understanding pH and nutrient stratification, find out about the safety of Glyphosate, and hear about what PNW farmers can learn from no-till farmers Down Under! Also, sign up for seed and carbon contracts, enter for free raffle prizes, and learn about the latest advances in equipment and services from our many exhibitors

Hear from expert speakers, such as:

- [Darren Hefty](#), founder of AgPhd
- [Gordon Stoner](#), Montana Farmer and Pulse Crop Advocate
- [Paul Jasa](#), University of Nebraska Engineer
- [Dr. Jill Clapperton](#), soil scientist and founder of Rhizoterra
- [Cherily Nagel](#), Saskatchewan Farmer and Ag Advocate
- [Bill Crabtree](#), Australian Pioneer of No-Till farming

Learn from Producer Panels on such topics as:

- Soil Health and Soil Testing
- The Future of Technology in Precision Ag
- Crop Rotation and Cover Crops
- Consumer Trends and Marketing
- Direct Seed 101



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CROPPING SYSTEMS CONFERENCE

Healthy Farms, Healthy Foods, From the Soil Up
January 9-10, 2018

President's Pen: A Time To Be Grateful



By Douglas Poole,
President of PNDSA Board of Directors
Much to be thankful for!

It is that time of year to reflect on the past year to take stock in our successes and challenges as well as take a moment to be thankful for what we have in our lives. I'm sure I am not alone when I am most thankful for my family's support and their good health and successes. The weather brought a fortune of moisture to our area and in a blink of an eye mother nature reminded us who is in charge with 6 months of high temperatures and no rain. If farming was easy, everyone would be doing it!!

I am also thankful that I am farming in a period of forward thinking when it comes to agriculture and its role in the greater global system. I often wonder what it was like for our direct seed pioneers as they set out on a mission of change when they were the source of many jokes at the local coffee shop. As I've mentioned before, I have the upmost respect for these pioneers as they had little or no support systems in place to work through their own transitions.

I don't believe that is the case today. There is a global soil health movement. As I write this today, we celebrate World Soils Day. We as direct seeders here and abroad have been leading this charge for decades. As other farmers, governmental agencies, consumer groups, food supplies and academia join the movement, our support system is in most cases just a click away. It is nothing now to make contact with someone from Australia to Africa to discuss this single most important resource we have, soil!

Your PNDSA continues to be a leader in this work. The annual conference is just around the corner and has become the premier regional soil health conference. This year's conference will be no exception. I guarantee you will be left wanting more time to take in all the sessions. I encourage everyone to invite just one person, a neighbor or young farmer new to soil health, to this conference. Please take advantage of all that this conference as well as your association has to offer. Your association offers an awesome support system by which we all learn and implement the strategies together insuring many generations to come will enjoy the farming lifestyle. See you in January!!

2017 PNDSA

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Partner Profile: [CHS PRIMELAND](#)

CHS is an ag retail, fuel, and grain handling cooperative with the mission of helping our member-owners grow. Grow better crops, grow their business, and grow their future. With business units and numerous locations in the Pacific Northwest, our services are close by and where you need us. From large agronomy hub plants, skill and professional agronomists, Cenex brand fuels and lubricants, risk management tools, etc., we have the expertise, scope and scale, and products to serve your farming needs and connect you with global markets and resources.

www.chsinc.com

Pest Control Through Plant Nutrition

By JW Lemons, CCA, CPAg,
Field Agronomy Manager, AgroLiquid

Mineral plant nutrition has a critical role in integrated pest management. Almost every primary, secondary and micro nutrient can play a major role in the plant's ability to develop primary pest resistance. Agriculture faces environmental pressure to find ways to reduce the amount of pesticides we use. Plant nutrition can provide a significant tool for farmers. Pests can develop resistance to important pest control chemicals. It is up to us as an industry to try to extend the life of such chemicals.

Potassium (K) is a primary nutrient, critical for plant health. Potassium's role is essential for the synthesis of proteins, starch, and cellulose in plants. Cellulose is a primary component of cell walls. Deficiency of this critical nutrient causes cell walls to become leaky, resulting in high sugar (starch precursor) and amino acid (protein building blocks) concentrations in the cell. When K is sufficient, there is an increase in the synthesis of high-molecular-weight compounds such as proteins, starches, and cellulose. This depresses the concentrations of low-molecular-weight compounds such as soluble sugars, organic acids, amino acids, and amides in the plant tissue. These concentrations of low-molecular-weight compounds sustain development of infections and insect infestations. The lower concentrations of those compounds brought about by sufficient levels of K leaves a plant LESS vulnerable to disease and pest attacks. Adequate K increases phenol concentrations, which play a role in plant resistance. The syntheses of other defensive compounds in K-sufficient plants have resulted in higher pest mortality, according to research findings.

The role of potassium has been extensively studied. One study¹ reviewed 2,449 references, and found that the use of K significantly decreased the incidence of fungal diseases by 70%, bacteria by 69%, insects and mites by 63%, viruses by 41% and nematodes by 33%. Meanwhile, K increased the yield of plants infested with fungal diseases by 41%, bacteria

by 57%, insects and mites by 36%, viruses by 78% and nematodes by 19%.

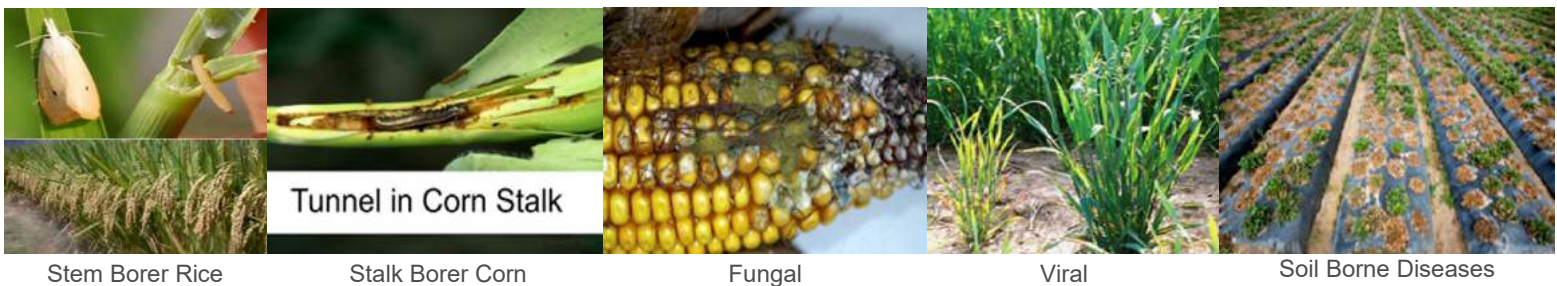
The statistics of the impact of fungal diseases on world food supply clearly paint a picture. Imagine what could be accomplished if the ability of potassium was utilized to aide in the control of pests such as Fungal, Viruses, Bacterial, Insect and Nematode.

- More than 600 million people could be fed each year by halting the spread of fungal diseases in the world's five most important crops (rice, wheat, maize, potatoes and soybeans).
- Fungal infections destroy at least 125 million tons of the top five food crops each year, which could otherwise be used to feed those who do not get enough to eat. These crops provide the majority of calories consumed by humans.
- The damage caused by fungi to rice, wheat and maize alone costs global agriculture \$60 billion per year.
- World scientists are calling for new solutions to prevent the spread of existing and emerging fungal infections in plants and animals. Limiting these infections would prevent further loss of biodiversity and food shortages, and plant nutrition is part of the solution.

While additional studies need to be conducted, we should understand the importance of potassium in pest management. All crops are at risk of reduced production from pest pressures. There are many studies done on potassium pest control on crops, and hopefully these examples stimulate a deeper look at how this one nutrient can affect Pest Management planning.

Integrated Management strategies should be used to select materials for pest control that have a minimum effect on human health. Imagine a tool that can help control multiple pests, improve the health of the plant, increase the productivity of the crop, and play the dual role of balanced plant nutrition and assist in your Integrated Pest Management plan. Potassium (K) could be that tool. While this is only one nutrient, it shows the enormous potential nutrient management has in the IPM arsenal.

¹ Perrenoud S. Potassium and Plant Health. 2nd ed. International Potash Institute; Bern, Switzerland: 1990. pp. 8-10



Stem Borer Rice

Stalk Borer Corn

Fungal

Viral

Soil Borne Diseases



Partner Profile: AG ENTERPRISE

Ag Enterprise Supply, Inc. continues to strive to meet the demands of their customer base. Their team of dedicated employees strives to stay on top of current technology as well as being aware of how emerging technology will benefit their customers.

They have a dedicated retail space designed to keep the focus on the customers. The addition to the fabrication section of the store continues to aid in the production of quality, customer focused projects. The fabrication team is focused on customization: their mission is to build what their customers want, not tell them what they need. The crew is happy to make suggestions based on experience, but ultimately every farm has site-specific needs and they're proud of their reputation for meeting those needs.

Part of their reputation is in keeping an eye out for products that will benefit grower's operations. The Raven product line has been a primary focus of Ag Enterprise Supply, Inc. since the beginning, and the Platinum Partner status reflects that. Raven's flexibility and additional control systems are a great fit in direct seeding systems.

Raven continues to add products to their lineup that show dedication to meeting customer needs. The recently patented Hawkeye Nozzle control system, which has incorporated a pulsating nozzle technology, allows significantly increased accuracy by maintaining a consistent droplet size. It also includes turn-compensation, which modifies the

spray rate of each nozzle individually as speed and conditions change, ensuring, for example, that the grower won't overspray in a turn. Hawkeye is built on the ISOBUS communication platform, so it works with the ISO Task Controllers like the Viper 4 and the all new CR7. It's extremely rugged and durable – passing tests for shock, vibration, impact and extreme temperatures.

Another new innovation from Raven is the RCM (Rate Control Module). This is an all new ISO product controller that has numerous features and abilities that allow customization for most any application need. This robust product controller is capable of controlling multiple products and more sections than ever before- making it a great fit for air-seeder applications.

The Viper 4 and all new CR7 field computers add an intuitive user interface for these new product control solutions.

To further meet the needs of their progressive customers, they have also recently added 2 product lines. Crop-Scan protein monitors and AquaSpy moisture probes. By adding a protein monitor to combines, growers will have the ability to monitor as well as map site specific protein levels throughout the field. Moisture probes are allowing growers to make fertility and crop decisions based on available moisture in the soil profile by accessing records and history on an online portal. This tool also allows available moisture to be monitored in a cover crop to help growers make additional management decisions.

Visit www.agenterprise.com or stop by one of their locations in Cheney or Wilbur to see what Ag Enterprise Supply, Inc. has to offer your direct seed operation.

Thank you to the 2017 PNDISA Partners:



Support the PNDISA, a non-profit with the mission to provide direct seed producers support, research, mentoring, demonstrations, programs, meetings, and conventions with the ultimate goal to increase the number of direct seed acres.

Click [here](#) to find out more about the PNDISA's partnership levels and benefits.

Partner Profile: EVERGREEN IMPLEMENT

Evergreen Implement is in a unique position to serve the direct seed community. As a John Deere dealer, we offer a complete suite of solutions for direct seeding, crop care and harvesting that have technology solutions from the same manufacturer integrated into them. In addition, the John Deere Operations Center offers a web based data management and collaborative solution that is constantly evolving to meet grower needs. Our Parts, Service, Integrated Solutions and Sales departments all work together to support our customers with solutions that provide Performance with Uptime at a Reduced Cost of Operation. Find us at www.evergreen-implement.com.

Executive Director Update: Be an Ag Advocate By Kay Meyer



Be an ag advocate within your community, helping educate the 98% of the population that no longer has a connection to farms that are feeding the world. Below are a few talking points and facts that you can use to help non-farmers understand the positive environmental and economical impact you are making to your communities.

Balancing Act: Farmers have a variety of factors that need to be managed in concert within their operation, not only are there many operational decisions to make, but many uncontrollable variables, such as weather and global events affecting market prices, that can cause either a boon or bankruptcy.

ONLY 3%
OF THE EARTH'S SURFACE IS
AVAILABLE FOR ARABLE FARMING.



INNOVATION

Farmers must deal with a complex set of factors, including weeds, insects, and diseases in addition to balancing concerns about weather, seed quality, water management, soil composition and nutrient requirements.

Weed and Disease Pressures: Consumers want food raised without pesticides, but they don't understand if farmers didn't have crop protection tools, crop yields would be substantially reduced, more land and fuel would need to be used for raising crops, and food would be much more expensive. In direct seed operations the diverse crop rotations and cover crops are building healthy soil that creates its own immune system and plants become naturally stronger and resistant to diseases. But sometimes, pesticides are still needed and are to be used responsibly and only to fix a certain weed or disease attacking the plants. Farmers are required by law to control noxious weeds. Each state has Noxious Weed Laws, and farmers can be fined if they aren't preventing the spread of Noxious Weeds.



CROP PLANTS MUST COMPETE WITH'...

10,000	SPECIES OF PLANT-EATING INSECTS
3,000	SPECIES OF NEMATODES
30,000	SPECIES OF WEEDS



FOOD SAFETY

GM-based foods are just as safe as those produced with conventional breeding methods. More than a thousand studies over the past 30 years show no safety of health issues from GMOs.

Innovation: All industries are using technology and new developments to advance and improve products and services. Think of the revolution of computers, phones, and medicine in the last 20 years. Advancements in science and engineering are also triggering changes in agriculture. Bio-tech or GMO seeds are producing pest resistant plants, so no pesticides are needed; they are enriched with vitamins and nutrients that help developing countries improve the health of their citizens, and they are producing higher yield crops, so the current amount of farm land can continue to meet the demand for a growing population.

Reducing Our Footprint: Direct seed farmers are reducing their greenhouse gas emissions by seeding and fertilizing in 1-2 passes, rather than 3-5. When the ground isn't tilled and has the roots and plants from last year's crop in place, the soil doesn't blow away to cause dust storms or wash away to end up in our waterways.

Family Commitment: Most farmers are the current generation of their families' farm started by their great grandparents or grandparents immigrating and settling here. There is a strong commitment to protect the biggest asset on the farm, their land and soil, and be able to pass they farm down to their children. The commitment, pride, and family values that are so strong among family farms is truly special and something that is hard for people outside of farms to comprehend.

In studies, farmers are ranked high in their level of trust they have from consumers. So take a fresh look at your farm operation and don't be afraid to tell your story.

Graphics and stats provided by Bayer as part of their AgVocate program and research.



Pounds of soil loss is prevented by conservation tillage in the United States each year.*

Source: ³FAO. 2011. Global food losses and food waste—Extent, causes and prevention.
Source: ⁴CropLife International, Feeding 9 Billion: The Issues Facing Global Agriculture

Why Attend the 2018 Cropping Systems Conference?

Learn From the Latest Research

This is a chance to take your no-till farming questions directly to world-class experts in the fields. You will have the research and resources at your fingertips at this conference to answer any questions you have. Learn about advances in soil health and nutrition, cover crops, pesticide management, and trends in Ag Business. Also, share your questions and concerns with them so they can focus on them in future research projects.



Trade Show

What a great opportunity to speak directly with experts from within industries that support ag! Shop around and learn about the latest in equipment, technology, and services. Discover how advances in equipment can lower your costs whilst increasing your ROI. Also, speak to exhibitors regarding financing, marketing, seed outlets and the latest chemistries.



There is still room for exhibitors and sponsors! Besides booth space there are a few limited spots to showcase equipment inside the convention center or complimentary space outside. **Sign up today!**

There Is Still Room For You!

Clear your calendar on January 9-10, 2018 and join us in Kennewick, WA for what promises to be a solid investment in the health of your farm and your future!

[Register Here!](#)



Partner Profile: [BASF](#)

The Chemical Company

Weed control is a continual battle and herbicide-resistant weeds have made the fight even more difficult. To maintain key herbicides and herbicide groups (Group 1 and 2 for example), it is critical to use alternate modes of action when possible. BASF has herbicide options that can provide effective weed control and introduce alternate modes of action.

- Sharpen Herbicide is a Group 14 herbicide that can be applied preplant in multiple crops to provide burndown of broadleaf weeds and early season residual broadleaf weed control.
- Zidua SC Herbicide is now registered for use in PNW wheat and allows for a higher active ingredient use rate than Zidua WG. Zidua is a Group 15 herbicide that provides effective residual control of Italian Ryegrass and suppression of Downy Brome.

For additional information on Sharpen®, Zidua® or other BASF crop protection solutions contact your local retailer, seed dealer, or Curtis Rainbolt, Tech Service Rep, at curtis.rainbolt@basf.com or call 55-430-4418. Zidua® and Sharpen® are registered trademarks of BASF Corporation.

Where to Stay

Hilton Garden Inn

701 N Young St
Kennewick, WA 99336
509-735-4600

SpringHill Suites

(Attached to the Convention Center)
7048 W Grandridge Blvd,
Kennewick, WA 99336
(509) 820-3026

Red Lion Hotel Columbia Center

1101 N Columbia Center Blvd,
Kennewick, WA 99336 -
509-783-0611.

Red Lion Hotel Inn & Suites

602 N Young St,
Kennewick, WA 99336
800-733-5466.

Tell them you are attending the "Pacific Northwest Direct Seed Cropping Systems Conference"

DON'T FORGET TO RE"MEMBER"!

This association is a farmer-based association that focuses on the tools and support that direct seeders need to be successful—we provide the latest technology, research, and operational strategies to build healthy soil and advance your farms; advocacy with consumer, environmental and governmental agencies on the benefits of direct seed farming practices; and helping connect you with other direct seeders, researchers and agribusiness that can provide support.

As a non-profit, your annual membership dues are needed to allow the PNDSA to continue these valuable services.

Please renew your membership today!

THANK YOU!

A Huge Thank You to Our Conference Sponsors and Exhibitors!

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AS A NON-PROFIT, THE PACIFIC NORTHWEST DIRECT SEED ASSOCIATION RELIES ON SPONSORS AND EXHIBITORS TO BRING IN HIGH CALIBER SPEAKERS TO MAKE OUR CONFERENCE A SUCCESS. IF YOUR ENTITY OR AG BUSINESS BENEFITS FROM OR SUPPORTS DIRECT SEEDERS, PLEASE CONSIDER SPONSORING OR EXHIBITING AT OUR CONFERENCE. THANK YOU!

To Become a Sponsor
Please Contact Us at:
(P) 509-585-5460
(F) 509-585-2671
or email

The PNDSA Is Accepting Nominations For Two Open Board of Director Positions.

Qualified candidates will be new or seasoned direct seed farmers (one in Idaho and one in Oregon) who can meet quarterly at locations in Kennewick, Pendleton, Spokane, and Lewiston. They will also be able to commit to a three year term, be a current member of PNDSA, participate in a committee (Policy/Advocacy, Conference Planning, Research, Benefit Development, Farmed Smart, Funding/Financial, Executive), and be willing to present on their direct seed practices at a regional meeting.

This is a wonderful opportunity to help farmers transition to direct seeding and to support current direct seeders with the latest research and management strategies.

If you would like more information, please contact one of our current board members or Kay Meyer. Past board members are available to serve again after a one year break. If interested, or you would like to nominate someone, please contact Kay at pndsas@directseed.org or 509-995-6335.



**From all of us in the
PNDSA family,**

*We wish you a joyous
holiday season and a happy
and prosperous 2018!*

Contact Us

Contact us for more information about our services and products

PNDSA
PO Box 5
Colton, WA 99113

Kay Meyer
PNDSA Executive Director
pndsas@directseed.org |
509-995-6335

Inquires about the Direct Seed Link Newsletter:
Editor: Bethany Jones
bjones@agmgmt.com

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ASSOCIATION
PO Box 5
Colton, WA 99113

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