Direct Seed Cropping Systems 2013 Conference

Mark your calendars. The Pacific Northwest Direct Seed Association (PNDSA) is hosting the 2013 Direct Seed Cropping Systems Conference Wednesday, Feb 6 and Thursday, Feb 7 at the Spokane Convention Center and DoubleTree in Spokane, Washington. This year’s conference theme is “Advancing the Future of Sustainable Farming” and the conference will feature the launch of the new Certified Sustainable Farm Certification program.

The certification will define standards for direct seeding and certify farming strategies that are improving water, soil, and air quality, conserving energy, and reducing carbon footprint. General sessions at the conference will provide an overview of the certification and showcase the value of certification programs. We’ll look at case studies and discuss potential markets with Dr Cliff Ohmart of Sureharvest. Sureharvest, a sustainability marketing consulting firm, has been involved with developing and implementing certification programs around the country. Two smaller break out sessions will look at the certification requirements and ratings.

Choose from a diverse range topics presented in nine different breakout sessions, all focused on helping improve your direct seeding operation. The breakout sessions will include training on:
- the benefits of variable rate chemical application and developing a variable rate map to precision-place fertilizer as efficiently as possible;
- disease, pest, and wheat breeding for direct seed systems;
- carbon initiatives and carbon sequestration in direct seed soils;
- soil conservation practices of PNW farmers over the last 30 years; and
- outside the box alternative crops and cover crops.

One of the true benefits of the PNDSA Direct Seed Cropping Systems conference is always the networking opportunities. This year we have several producer speakers supplementing research and strategies with real-life experiences from the field.

Keynote speakers at the dinner and breakfast banquets include a Finnish Direct Seeder, Eero Kovero, who will compare and contrast his direct seed farm to those in the PNW, and acclaimed speaker Ray Archuletta, Agronomist from NRCS in North Carolina, who will share his research and demonstrations of soil quality and health improvements that result from minimal disturbance and direct seed practices.

continued on Page 2
REACCH UPDATE: Looking to the Future

By: P. Troy White & Dr. Jodi Johnson-Maynard

Regional Approaches to Climate Change (REACCH) is a USDA-funded project focusing on sustaining agriculture in a changing future. Educational outreach for the REACCH project includes the development of a new high-school level curriculum for agriculture and science instructors. It focuses on 21st century production practices, adapting to climate changes, and the science behind the never ending process of keeping PNW agriculture competitive amidst these changes. The curriculum explores topics such as growing zones (agro-ecological zones), tillage practices, soils, water, agricultural economics and rural sociology, agricultural communications, insects, weeds, and beneficial organisms.

The focus of the curriculum is designed to provide a scientifically based foundation and relevant information to school teachers across the Columbia Plateau region. The curriculum will help teachers use current scientific information to guide students through relevant, hands-on learning experiences and activities. Students will be encouraged to formulate their own opinions on how specific concepts covered will impact agriculture, the planet, their communities, and their own lives. Many of the topics covered are in the news on a weekly basis, but students are not being provided the context they need to be able to properly evaluate the credibility or the applicability of the information. The goal of this curriculum is to provide unbiased learning activities focused on contemporary PNW agricultural issues that will result in students being better informed about the potential changes occurring in their region. Students will complete the curriculum by putting together an agricultural communications project that will provide leadership and public speaking opportunities.

It is the vision of the REACCH education program that this curriculum will be widely adopted by agriculture and science instructors across Idaho, Washington, and Oregon. We are also working on developing simplified, stand-alone activities and lessons to be implemented in elementary classrooms, similar to the current Ag in the Classroom curriculum many elementary teachers are currently using.

Conference, continued

The conference will begin Wednesday, February 6th with a lunch banquet and continue through Thursday afternoon. Last year, growers appreciated being able to attend two conference at the same time, for the price of one, so PNDSA arranged to hold the conference in conjunction with the Spokane AgExpo again this year. Direct Seed Cropping Systems Conference registration includes admission into AgExpo and Farm Forum classes. Conference registration is open and discounted registration rates are available for PNDSA members, early registration, and groups. Register by January 4th for the best rates.

More information and conference registration can be found at www.directseed.org/events.

Hold the Date!

WHAT: REACCH Annual Meeting
WHERE: The Courtyard by Marriott
Portland City Center
Portland, OR

Watch www.reaccpna.org for details. It will be a full meeting for stakeholders, students and researchers!

Make your hotel reservations by January 29, 2013
Call 1-800-606-3717 (ask for the REACCH group rate) or go online to www.myfavoritescourtyard.com, use Group Code: REAREAA or REAREAB

See you in the City of Roses!
Grower Spotlight: Tim Spratling

Tim Spratling is a PNDSA board member and farm manager for Cunningham Sheep Company, a family owned wheat, cattle, sheep and timber operation in Umatilla County, Oregon. He took time recently to share some of the details of his direct seed experience with The Direct Link.

What made Cunningham Sheep Company try direct seed?
“We farm in an area considered to be low rain fall (8-10”) and highly erodible and shallow soils. We looked at trying direct seed to increase yields and reduce erosion that was commonly occurring with our current tillage systems at that time. “

How did you prepare to make the shift to direct seed?
I attended conferences put on by the PNSDA and learned a wealth of ideas and knowledge. I also became a PNDSA board member and built relationships with other farmers who had years of knowledge and experience in the practice of direct seeding.

What changes have you seen in your direct seed fields?
“The environmental benefits were obvious from the beginning. So were lower labor and fuel costs with fewer field passes and less equipment maintenance. But what really made direct seed feasible for this farm was the drop in chemical costs a few years ago. Affordable Round-Up made it possible to expand the number of acres under direct seed. We haven’t seen an effect on yield one way or the other. And while our chemical costs did go up, they were more than offset by the decreased fuel and labor costs. So long as chemical prices stay low, Cunningham is interested in expanding the number of direct seed acres.”

What equipment do you use, and what are the pros and cons of your system?
We rented equipment from our local CO-OP to get started when our acres were low. As we grew our direct seeded acres, we purchased a 50ft Flexicoil hoe type drill using Stealth openers on twelve inch centers. We pull it with MT845 Cat Challenger that is set up with auto steer. We use a liquid fertilizer system and plan on installing a variable rate application system by this fall. So far, this equipment set up has worked well and we have no plans on changing at this time. The pros are the direct benefits to soil health and reduced costs. The only con is that it takes about 3- to 5 crop cycles to see the transitions in yield and a lot of patience. Yield can suffer in the short term, but will build back up as you continue down the path of direct seed.

What does your crop rotation look like?
“We are primarily a summer fallow / winter wheat producer using chemfallow on the acres we have dedicated to direct seed. If winter moisture permits, we will try an annual DNS crop.”

When did you join the PNDSA, and what benefits have you seen?
“I have been a member of the PNDSA since its inception, and a board member for six years. It has been a highly rewarding experience serving on the board. It is a great way to get right to the source of a wealth of knowledge of direct seeding plus have the experience of helping others to learn at the same time. “

How do you see the future of the PNDSA?
“I see the PNDSA continuing to be an education source for the new and experienced farmers. There has never been one year the same and always a new challenge, ie. weeds, disease, weather, and the PNDSA provides that link for farmers to come together and share their experiences. I call upon our existing financial supporters, partners, and growers to continually support the organization.”

Jennifer Wallace, Editor, Direct Link
Are you on Facebook? The PNDSA's new Facebook page gives members and others interested in direct seeding a place to post pictures and videos of direct seed operations, a forum for posting comments and questions, and a way to interact with others in the direct seed industry.

It’s quick and easy to set up a Facebook account.

1. Go to www.facebook.com and click the “Sign Up” button. The below box will pop up for you to enter your account information.

2. Create a strong password with a mix of letters, numbers and symbols. Use a valid email address.

3. Facebook will send a confirmation email. Click the confirmation link in the email to activate your account.

From your account, type “Pacific Northwest Direct Seed” in the search box at the top of your page. Click the icon to access discussion and information on the PNDSA page. You can click “share” to post PNDSA information on your page.

To learn more, visit:
about.com/facebook
Lynda.com/Facebook

Partner Profile:
Spokane Conservation District

Spokane Conservation District is proud of their history of support for the innovative growers of the Inland Northwest, providing loan assistance to help growers make the transition to no-till equipment. Thanks to memorandums of understanding, this opportunity is available in 17 conservation districts across Eastern Washington and five districts in Northern Idaho.

Now the SCD has a new program to help growers considering direct seed agriculture: Cross Slot no-till equipment available for lease. Ty Meyer, SCD Production Ag Manager, commented “The SCD is closing the conservation support loop, offering growers the means to try direct seeding, as well as provide loans and other support programs to help them make the change. Having equipment to rent is a natural complement to the services the Spokane Conservation District already provides, and a number of growers have taken advantage of this opportunity.”

In fact, nine growers from the Ritzville area, northern Whitman County and Spokane County participated in the program this fall. Ty noted “It’s been perfect for taking CRP ground out in the drier areas of eastern Washington. The low disturbance drill helps maintain soil moisture and can handle almost any residue challenge put in front of it.” Under the lease, SCD provides an operator for the equipment but in some cases is able to train the farmer to run the drill themselves. “We’ve found that this system is technologically advanced to the point that training different operators can be a very time consuming effort.” Ty shared. “It’s definitely made for a busy fall for me, but it’s been great to see the response.” The Cross Slot equipment is available for rent at a market rate of $25/acre plus fuel but some adjustments may be made next season for the type of fertilizer products being run through the system.

Growers who have tried the equipment program have been pleased. “Weather was a challenge this fall, but after the rains finally came and the wheat has come up, they can see the potential. Most of these growers were concerned about how to get their CRP ground ready for seeding. The SCD was able to work with them and show them all they had to do was control the grass and any weeds. The direct seed drill could handle the rest, so they could avoid potentially expensive operations like shredding, mowing and burning in their takeout.”

In addition to equipment lease and loan programs, the Spokane Conservation District offers a variety of programs to promote conservation around the Inland Northwest. The SCD’s Urban Shade Tree program helps area homeowners reduce their energy costs. Under the Firewise Program, SCD provides consultation to help homeowners identify and address wildfire threats. The new Livestock and Land program is a voluntary program which assists horse and livestock property owners and boarding facilities with technical and funding assistance for improving farm and ranch operations and protecting the environment. Soil testing is available, and a full time soil scientist is on staff to handle soil quality questions and requests for technical assistance.

To find out more about any of the programs offered by the SCD, visit their website at sccd.org, stop by their booth at the Spokane Ag Expo in February, or contact the office at 509-535-7274.
REGISTRATION

CONTACT NAME

<table>
<thead>
<tr>
<th>CONTACT NAME</th>
<th>ADDRESS</th>
<th>CITY</th>
<th>STATE</th>
<th>ZIP</th>
</tr>
</thead>
</table>

COMPANY

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>PHONE</th>
<th>EMAIL</th>
</tr>
</thead>
</table>

ADDITIONAL REGISTRATIONS (please check correct group box to right)

<table>
<thead>
<tr>
<th>NAMES</th>
<th></th>
</tr>
</thead>
</table>

You are considered registered upon payment.
A receipt will be issued at the conference.
Written notice of cancellation by January 25, 2013 is required. No refund. Partial refund may be granted after this date.

SEND REGISTRATION TO

Pacific Northwest Direct Seed Association
P.O. Box 5, Colton, WA 99113
PHONE (509) 995-6335
pndsa@directseed.org

THANK YOU 2013 CONFERENCE SPONSORS

Palouse-Rock Lake Conservation District

[Other sponsor logos and names]
Study: Critical Variables to Improve Precision Agriculture Management

by Erin Brooks, University of Idaho Soil Scientist

Over the past two years a large team of scientists led by David Brown, a Soil Scientist Professor at Washington State University, and other scientists from the University of Idaho and the USDA-Agricultural Research Service have conducted research on direct-seed and minimum tillage farming practices across the high precipitation zone of the Palouse region as a part of a USDA-NIFA grant, “Site-specific, Climate-friendly Farming.” The cooperators include John Aeschliman out of Colfax, Josh Jones south of Troy, Idaho, Eric Odberg south of Genesee, and Dale Wolff near Kendrick (Leland, ID)

The project has two main objectives: to improve our understanding of how soils, water, nitrogen use and crop growth vary spatially within fields and to use that understanding to develop precision agriculture management tools and strategies (e.g., variable rate fertilizer application, seed density). Improved precision management has the potential to both optimize profits for growers, and minimize nitrogen-related environmental impacts, such as the loss of nitrate to water systems and the emission of nitrous oxide (a potent greenhouse gas) from agricultural soils. The project relies heavily on both direct measurement of the spatial variability of soil and hydrologic properties within research fields and on the development and refinement of remote and field-based sensing technologies for the rapid and inexpensive spatial characterization of agricultural fields. Project team members rely on a variety of tools to develop the field’s spatial profile, including satellite image analysis, ground-based LiDAR (Light Detection and Ranging), soil optical probes, and electromagnetic soil sensors to map soil properties (for example clay layers), soil moisture dynamics, crop growth, water stress, nitrogen deficiency and yield.

Data collected over the last year, as well as research through recent USDA-ARS projects led by David Huggins (one of the principal investigators on the project), suggests that within a specific field there can be extreme spatial variability in soil moisture, soil properties and crop yield. However these spatial patterns appear to be relatively consistent from one year to the next. Scientists on this project see mapping these spatial patterns as an opportunity for farmers to improve the way they manage their fields. For example, growers can use remotely sensed images, such as 6 meter resolution Rapid Eye Imagery, to document the drying or “greenness” patterns within each field, and use relatively easily acquired soil electrical conductivity measurements to document the variations in specific characteristics of the soil and water within the field, these spatial patterns can be easily mapped (see the figures below; data generated from one field test site).

In many cases these patterns are highly correlated with crop yield and soil moisture. Once the spatial patterns are identified, the challenge remains to determine the optimal management scenario for different sections of a grower’s field. To accomplish this, researchers installed monitoring stations at 12 locations within each cooperator field to track hourly soil moisture and temperature at multiple depths, and monitor annual changes in nitrogen uptake, crop yield, and nitrogen uptake by crops. This information, along with on-site weather data, and measurements of surface run-off and nitrogen loading at the outlet of each field, will then be used to develop and assess spatially explicit cropping models. Once the models have been validated, scientists can explore various site-specific management strategies to optimize nitrogen-use efficiency for current climatic conditions as well as various future climate scenarios.
Partner Profile: Palouse-Rock Lake Conservation District

“...I can’t emphasize partnership enough” Dan Harwood shared recently about the Palouse-Rock Lake Conservation District’s programs that help growers analyze their individual operations and give them a variety of opportunities that help them improve management, reduce inputs, increase yields, and improve water and environmental quality. “Farmers are driving these changes, like the shift to direct seed. They see it makes sense for their bottom line and for the health of their land. It’s our job to provide the programs and partnerships to help them do it.” Interest in direct seeding was obviously strong when over 300 growers attended the Palouse-Rock Lake direct seed equipment demonstration day in 2009. A survey of area growers shows the number of direct seeders in the area has increased from less than 20% five years ago to over 50% today. “And the numbers are expanding” Dan added.

To help growers considering a direct seed system, Palouse-Rock Lake offers a cost-share program, available thanks to annual grants from the Washington Department of Ecology, to provide $25 per acre to landowners who commit to direct seeding up to 200 acres for three years. “The idea is to help offset the start up cost for growers, to give them a chance to test the equipment and the methods before they make the commitment to switch.” Dan pointed out “$25 per acre covers most of the cost of hiring a contract operator, which most growers prefer to do initially.” Fourteen growers have completed the program; 26 others are now enrolled. Partnership agreements make the program available to growers in the Adams and Pine Creek Conservation Districts. The 2014 grant application was written in collaboration with the PNDSA and the Spokane Conservation District, and included education and outreach to support the Direct Seed Certification program. “We’ve been lucky to receive these grants annually. We should find out sometime before next June if this grant will be funded.”

Dan says between four and five cooperators come into the Palouse-Rock Lake office each day. It helps that Palouse-Rock Lake offices are co-located with the NRCS and Washington Department of Fish and Wildlife. “Being in the same building is helpful. Riparian strips and direct seeded fields may also qualify for programs promoting habitat. We can work together to help the grower make the best use of all the programs available.” Over the past five years Palouse-Rock Lake has helped growers put in over 34 miles of riparian and forest buffer strips, and plant over 300,000 trees. The benefits of these program partnerships don’t end at the field. The groups used for conservation work, like AmeriCorps and the Airway Heights Correction Program, benefit as well. “Some of the AmeriCorps kids have never built fence or planted trees. By the end of their commitment, we’ve helped them build a good work ethic and taught some practical skills they wouldn’t have learned otherwise.”

To find out more about the programs and support Palouse-Rock Lake Conservation District can offer you and your operation, contact Dan Harwood at 509-648-3680 or palrock@stjohnscable.com.

Grower Breakfast Schedule
online at www.directseed.org/events/calendar

Recommended Reading

This year, use your down time to check out suggested reading from Jim Toomey, Director of the Agri-Business Incubator at the Idaho Food Technology Center. Reviews from Goodreads.com.

Innovation and Entrepreneurship by Peter Drucker

“The first book to present innovation and entrepreneurship as a purposeful and systematic discipline, this classic business title explains and analyzes the challenges and opportunities of America’s entrepreneurial economy.”

The Small-Mart Revolution: How Local Businesses are Beating the Global Competition by Michael Shuman

“Shuman makes a compelling case for the community benefit of ‘going local.’ He argues that local businesses give more to charity, adapt more easily to rising labor and environmental standards, produce more wealth for a community, and spend more locally, increasing community income and creating wealth and jobs. The Small-Mart Revolution presents a visionary yet practical roadmap for everyone concerned with mitigating the worst of globalization.”

From Kitchen to Market: Selling Your Gourmet Specialty Product by Stephen F. Hall

“Specialty and gourmet foods generate retail revenues approaching $30 billion per year. Want a slice of the pie? Here’s everything you need. From checklists, illustrations, guidelines for action, and flowcharts to all the key resources, names, and numbers, Stephen Hall has left no stone unturned to share with you the insiders’ secrets to building your successful niche in the specialty foods industry.”

The E-Myth Revisited: Why Most Small Businesses Don’t Work and What to Do About It by Michael Gerber

“A completely revised edition of the groundbreaking bestseller that identifies the flaws which cause so many small businesses to fail, and provides the key ingredients to developing a prosperous venture.”
Creating Value for our Members
from Kay Meyer, Executive Director

A new year always provides a time for reflection of the past years’ events and achievements as well as a chance to plan for future goals. PNDSA had an amazing 2012 and achieved many milestones. Here is a year in review:

• PNDSA hosted an annual conference, sponsored over 12 direct seed regional breakfast meetings, and published three newsletters, providing research and operational updates to support direct seed concerns, challenges, and successes.

• PNDSA is actively representing its members on conservation program issues and policy, including a large effort to get NRCS to accept the use of rollers/harrows within Practice Standard 329 Direct Seed.

• Developed alliances with NRCS and the Department of Ecology enabling all entities to work together to achieve common conservation practices and goals and to ensure direct seed producers are represented.

• Received Direct Seed Grant from the Washington Department of Ecology which enabled PNDSA to move forward with direct seed initiatives that would have been difficult to achieve without the grant including:
  o Development of certification program
  o Launch of updated PNDSA website that supports certification information, education and outreach, research dissemination, and Grower to Grower collaboration. (Make sure you take time to register on our website as a member, to take advantage of the information only available to members.)
  o TV ad campaign with over 2100 ads that raised awareness and promoted the benefits of direct seeding.

• Submitted grant for additional funding for implementation of the certification program and for additional direct seed outreach.

As we look to 2013, we are excited for our future. The environmental and economic benefits of direct seed have been proven. Direct seed cropping systems have been occurring in the PNW for over 20 years and are being implemented in low rainfall and other areas where opponents continue to say it can’t be done. This is due to the persistence and leadership of direct seed producers in many of these areas. Yes there are challenges that direct seeders face, but direct seeders are on the fore-front of the industry and paving the way for change.

Two major initiatives for 2013 will be supporting direct seed research and implementing our Certified Sustainable certification program.

We will be reengaging a research committee with the purpose of identifying and prioritizing research needed in the industry. The committee will also work to develop partnerships with private and public entities with the goal of establishing a funding model that will ensure direct seed systems are at the fore-front of the research being conducted in the PNW. We have several direct seed producers that are testing and seeing success with flexible seeding times, direct seeding in dry regions, using alternative crops not typical to regional dry land agriculture, and using cover crops that are providing natural nutrients and benefits to their direct seed systems. More research is needed to support our growers as direct seed soils have different characteristics such as increased moisture, increased organic matter, and much higher residue levels.

Our certification has been developed and we will focus on implementing the program first by developing training for the 3rd party certifiers, we will begin certifying direct seed producers, and by working toward the development of specialized markets that may ultimately add value to the products being produced using direct seed cropping systems. This certification has the potential to open doors for our producers to partners in the ag industry, the retail food industry, to manufacturers looking to source certified sustainable products, and to environmental agencies that are willing to recognize you as direct seed producers for the water and air quality benefits you are providing the public at large.

continued on Page 9
We need your help in advancing the future of PNDSA and direct seed sustainable farming! Here are a few ways you can get involved:

1) Become a member of PNDSA. Your membership directly supports PNDSA fulfilling their mission of information exchange, advocacy on conservation policy issues and research coordination that will assure adoption of economically viable and environmentally sustainable direct seed cropping systems.

2) Become a PNDSA board member. There are five Board positions currently open and additional openings on our Research, Certification, and Policy Committees.

3) Bring your neighbors and friends to our direct seed meetings, conferences, and crop tours. It will help them learn about direct seed strategies and programs that are available to help them successfully make the transition to a direct seed system.

4) Get involved with other ag-industry groups, commissions, associations, and research committees to increase the awareness of direct seed and to get the direct seed message out.

Thank you for your support of PNDSA and for being great direct seed leaders in your respective regions. You can be proud of the accomplishments you are achieving within your own operations and for what you are continually doing for the benefit of the environment too.

Here’s wishing you a prosperous new year!

Kay Meyer

PNDSA Partners --- Thank you for your support!

Palouse-Rock Lake Conservation District
2013 PNDSA Board
Officers
Rick Jones, President
Jason Huntley, Vice President
Dan Harwood, Secretary
Eric Odberg, Treasurer
Mark Richter, Past President

Idaho Members
Rich Baden
Lee Hawley
John McNabb
Darrel Uhlorn

Oregon Members
Lori Brogoitti
Tim Spratling

Washington Members
Pat McGourin
Chuck Schmidt
Rob Dewalt

Ex-officio Members
Dr. William Pan, WSU
Dr. Don Wysoki, OSU
Dr. Dave Huggins, ARS-WSU
Ty Meyer, Spokane Conservation District