PNDSA Major Initiatives

- Development of Farmed SMART Sustainable Ag certification program
Offers farmers a promotable consumer brand for their adherence to defined conservation standards, certifies that they are utilizing sustainable practices, and develops markets for certified sustainable product.
Farmed Smart Objectives

- Recognize & differentiate certified producers by adding value to their crops and farms.

- Transition more farmers to a direct seed cropping system.

- Using this program as a platform to educate stakeholders on the social, sustainable and environmental benefits of direct seeding.
## Certified Producer Benefits

<table>
<thead>
<tr>
<th>Regulatory</th>
<th>Environmental</th>
<th>Marketing</th>
</tr>
</thead>
</table>
| • Proactive approach to managing regulatory expectations | • Soil Erosion  
• Soil Health  
• Reduced Chemicals through Precision Placement & Cover/Rotations  
• Water Quality  
• Air Quality | • Financial Incentives  
• Market Premium and/or Access  
• Sought after by land-lords, retailers, certification partners |
Future Certification Benefits

• Tax Credit on Equipment (Washington)
• Pre-qualification or higher ranking applications for NRCS programs
• Region 10 EPA endorsement
• Access to Specialty and Niche Markets
  o Shepherd’s Grain Producer
• Financial Incentive through Farmed Smart Partners
  o Pepperidge Farms
  o Whole Foods
• Consumer Marketing Program
Farmed Smart Overview

38 Criteria Evaluated in 6 Categories

- Water Quality: 15, 39%
- Air Quality: 7, 18%
- Soil Quality: 4, 11%
- Wildlife Habitat: 4, 11%
- Energy Conservation: 5, 13%
- Economic Sustainability: 3, 8%
• Criteria ratings support a variety of direct seed equipment and cropping systems

• Points are awarded on rating scale.

• Cumulative score must be met with no disqualifying criteria

• Focus is dry-land commodity production ag and practices
1) Water quality criteria
   - Soil Tillage Index Rating Under 30
   - Keep residue on field
   - Use of precision technology:
     - GPS, auto shut-off, or prescription maps
   - Integrated pest and nutrient management plans
   - Implementing of buffer strips along water sources
     - Phased in approach
     - Size based on stream order and upland practices
STIR Rate: What is the cumulative STIR (Soil Tillage Intensity Rating) for the annual crop interval?

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;31</td>
<td>0 Points</td>
</tr>
<tr>
<td>≤ 30</td>
<td>3 points</td>
</tr>
<tr>
<td>≤ 20</td>
<td>6 points</td>
</tr>
<tr>
<td>≤ 15</td>
<td>9 points</td>
</tr>
<tr>
<td>≤ 10</td>
<td>12 points</td>
</tr>
</tbody>
</table>
## Buffer Requirements

<table>
<thead>
<tr>
<th>Stream Type</th>
<th>STIR</th>
<th>Farmed Smart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ephemeral/Short Term Intermittent (0-6 Months) Stream Order 1, 2</td>
<td></td>
<td>30 or Less + Farmed SMART Certified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No Setback</td>
</tr>
<tr>
<td>Intermittent (7-10 months) Stream Order 2, 3</td>
<td></td>
<td>15 Ft. Setback (Filter Strip Standard)</td>
</tr>
<tr>
<td>Perennial (11+ Months) Stream Order 3, 4, 5</td>
<td></td>
<td>35 Ft. Setback (Filter Strip allowing bank vegetation)</td>
</tr>
<tr>
<td>Perennial Major Fish-bearing Stream Order 6+</td>
<td></td>
<td>50 Ft. Setback (Filter Strip allowing bank vegetation)</td>
</tr>
</tbody>
</table>
# Buffer Requirement

<table>
<thead>
<tr>
<th>Stream Type</th>
<th>Farmed Smart</th>
<th>Enhanced Mulch Till</th>
<th>Mulch Till</th>
<th>High Disturbance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ephemeral/Short Term Intermittent (0-6 Months)</td>
<td>30 or Less + Farmed SMART Certified</td>
<td>40 or Less</td>
<td>31-80</td>
<td>81+</td>
</tr>
<tr>
<td>Ephemeral/Short Term Intermittent (0-6 Months)</td>
<td>No Setback</td>
<td>No Setback</td>
<td>20 Ft. Setback (Filter Strip Standard)</td>
<td>35 Ft. Setback (Filter Strip Standard)</td>
</tr>
<tr>
<td>Ephemeral/Short Term Intermittent (0-6 Months)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermittent (7-10 months) Stream Order 2, 3</td>
<td>15 Ft. Setback (Filter Strip Standard)</td>
<td>20 Ft. Setback (Filter Strip Standard)</td>
<td>35 Ft. Setback (Filter Strip Standard)</td>
<td>50 Ft. Setback (Filter Strip Standard)</td>
</tr>
<tr>
<td>Intermittent (7-10 months) Stream Order 2, 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perennial (11+ Months) Stream Order 3, 4, 5</td>
<td>35 Ft. Setback (Filter Strip allowing bank vegetation)</td>
<td>35 Ft. Setback (Filter Strip allowing bank vegetation)</td>
<td>50 Ft. Setback (Filter Strip allowing bank vegetation)</td>
<td>75 Ft. Setback (Filter Strip allowing bank vegetation)</td>
</tr>
<tr>
<td>Perennial Major Fish-bearing Stream Order 6+</td>
<td>50 Ft. Setback (Filter Strip allowing bank vegetation)</td>
<td>50 Ft. Setback (Filter Strip allowing bank vegetation)</td>
<td>60 Ft. Setback (Filter Strip allowing bank vegetation)</td>
<td>75 Ft. Setback (Filter Strip allowing bank vegetation)</td>
</tr>
</tbody>
</table>
Stream Order Tool

http://waecy.maps.arcgis.com/home/webmap/viewer.html?webmap=b4d32d949c9b46d0a6cfcf74c7b4a403
2) Air Quality Criteria

- Leaving crop residue on the field
- 1-2 passes
- No whole field burning to manage residue
3) Soil Quality Criteria

- Monitor organic matter
- Implement diverse crop rotations and/or cover crops
- Soil testing to determine nutrient needs
- Positive Soil Conditioning Index
4) Wildlife Habitat Criteria

- Implementation of wildlife practices: windbreaks, wetland preservation, bird houses, pollinators, riparian buffers, watering options, etc.
6) Economic Viability Criteria

- Monitoring and documenting
  - Fuel and chemical usage and costs
  - Yields
  - Operating budgets

- Attending training, meetings, and conferences to continue to improve operation
As Part of WIRA 34 – Palouse River shed 
RCPP

- Conservation Planning
- Funding of practice standards that allow you to achieve or maintain your certification
- EQIP Funds for practice standards
  - Nutrient Management Planning
  - Variable Rate/GPS Equipment
  - Riparian Buffer Implementation and Incentives
  - Cover Crops
- No certification fees
- RCPP Sign up period and process apply
RCPP Team

- RCPP/Grant Coordinator: Laura Heinse
- Conservation Agriculture & Farmed Smart Coordinator: Tami Stubbs
- Conservation Planner: Jason
- Monitoring Lead:

After ranking, conservation planning and Farmed Smart audits will begin in March 2016.
Regular Farmed Smart Certification Process

1. Complete one-page application
2. If pass, Farmed Smart Certification fee paid* and more information requested
3. Audit conducted
4. Decision Made

* First 20 certifications will be subsidized by grant funding to allow program to:
  o Ground Truth Stream Order Model
  o Ground Truth Rating Scale and Thresholds
  o Develop Nutrient and Integrated Pest Management Templates/Standards
  o Develop Auditor Field Inspection Manual
  o Begin to develop Farmed Smart Markets and Producer Benefits
  o Identify Certification Fee
Audit Expectations

• Documentation prior to audit
  o STIR
  o Conservation or Farm Plans
  o Nutrient Management Plan
  o IPM
  o Variable Rate Maps and Soil Tests

• About 3 hours in the office
  o Validate paperwork

• About 2 hours in the field
  o Validate equipment and practices
• PNDSA will contract with certified crop planner to complete certifications throughout PNW

• Position will be posted in the next couple weeks

• Audits will begin in March
Farmed Smart Recognition

- Rob Dewald, Dewald Farms
  - Ritzville & Davenport, WA

- Rick Jones, R&R Inc
  - Wilbur, WA
www.directseed.org/certification

www.palousecd.org/RCPP

Kay Meyer
Executive Director

PNDSA
PO Box 5,
Colton, WA 99113
pndsa@directseed.org
509-995-6335
What is Direct Seeding?

• Direct seed farming places seed and fertilizer in one – two passes directly into the crop residue and root structure from last year’s crop.
What is Direct Seeding?

- Spring wheat seeded with fertilizer into fall wheat stubble

Spring wheat growing through residue that provides a mulch and shade for crop
What is Direct Seeding

Seeding Garbanzos into Wheat Stubble

Garbanzo’s Growing Through Residue
Soil Erosion Benefits

Decreases Run Off and Soil Loss by 97%

- Crop Residue and root structure keep water in the field

Thunderstorm in central WA carved a 6 foot gully off high disturbance field, causing tons of top soil to be lost

Rill and sheet erosion on high disturbance fields are common around the Palouse & Prairie
Every drop of water is captured and kept in the soil.

Low disturbance soils have 40-50% higher water infiltration and holding capacity – which means more water available for the crop to grow.
Soil Health Benefits

Improves soil health & productivity

Minimizing disturbance of soil improves soil health, structure, and organic matter

Multi-species cover crop direct seeded near Nez Perce, ID
Soil Health Benefits

Improve soil health and productivity

- Increases micro-organisms and earthworm count and activity, and natural nutrient development.
Water Quality Benefits

Protects against drought and floods

Direct seed soil has higher water infiltration and holding capacity, storing water for crop growth and reducing impact of heavy rain storms.
Protect waterways while keeping working lands working

Direct Seed fields have high residue and water infiltration, so waterways are protected from sedimentation and chemical runoff.

Palouse Rock Lake CD riparian buffer project along Palouse River, Whitman County, WA
Precision placement of chemicals based on plant nutritional needs

- Precision placement reduces overlap through GPS and auto shut-off

- Variable rate application automatically adjusts amount of chemical in zones based on soil testing and determining what nutrients the plant needs.
Reduces dust storms and improves air quality

Residue and cover crops keep ground covered year-round and protected from wind storms

Dust Storm, Central WA 2014
Reduces impacts to climate change

Seeding cover crop into fall wheat stubble, near Pocatello, ID (10 inch rainfall zone)

One pass seeding and fertilizer into residue reduces emissions and use of fossil fuel
Direct Seed Benefits

Saves time, saves money, saves the family farm

- Seeding and fertilizing in 1-2 passes

Direct seeding is more economical because it saves time and money and ensures family farms can be passed down to the next generation. “Saving time, saving money, saving the farm.”
Direct Seed Benefits

Reduces operation costs for farmers

- Reduces fuel usage by 50%
- Reduces labor costs by 50%
- Reduces maintenance costs by 40%
- Better utilization of chemicals

Data based on direct seed mentoring program study conduct by Dr. Kate Painter, Ag Economist, 2010
Direct Seed Benefits

Improve wildlife habitat

• High residue fields provide food and cover for wildlife

• High residue fields decrease sedimentation into streams and waterways couples with buffer strips improve fish habitat
Direct Seed Benefits

Produces safe and sustainable food supply for the growing population.

Healthy soil is key to feeding 9 billion people by 2050.

Source: The United Nations

Want more soil secrets? Check out www.nrcs.usda.gov

USDA is an equal opportunity provider and employer.