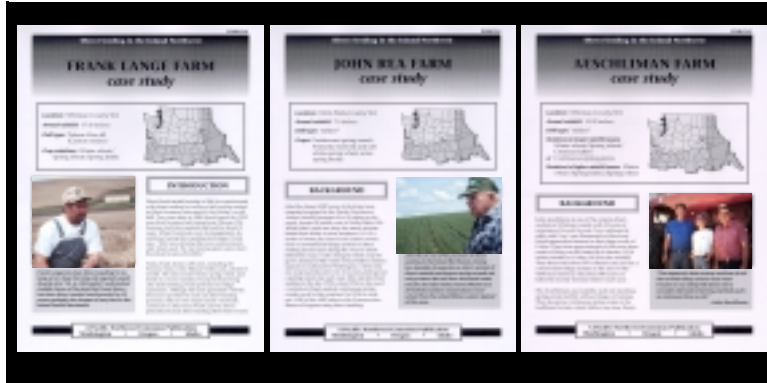


# DIRECT SEEDING CASE STUDY SERIES FOR THE INLAND NORTHWEST



*Veteran direct seed growers share their experiences and knowledge in a new series of 16 PNW Extension bulletins.*

## What is Direct Seeding?

Direct seeding refers to cropping systems that fertilize and seed directly through the stubble of the previous crop without using the traditional tillage for seedbed preparation. Only a narrow strip of soil is disturbed with each of the fertilizer and/or seed openers, and much of the crop residue is retained on the soil surface. Direct seeding can be one- or two-pass systems, which are further categorized into high- to low-disturbance, depending on opener design. Direct seeding systems can minimize soil erosion, improve water conservation and soil quality, and potentially increase production efficiency and profitability.

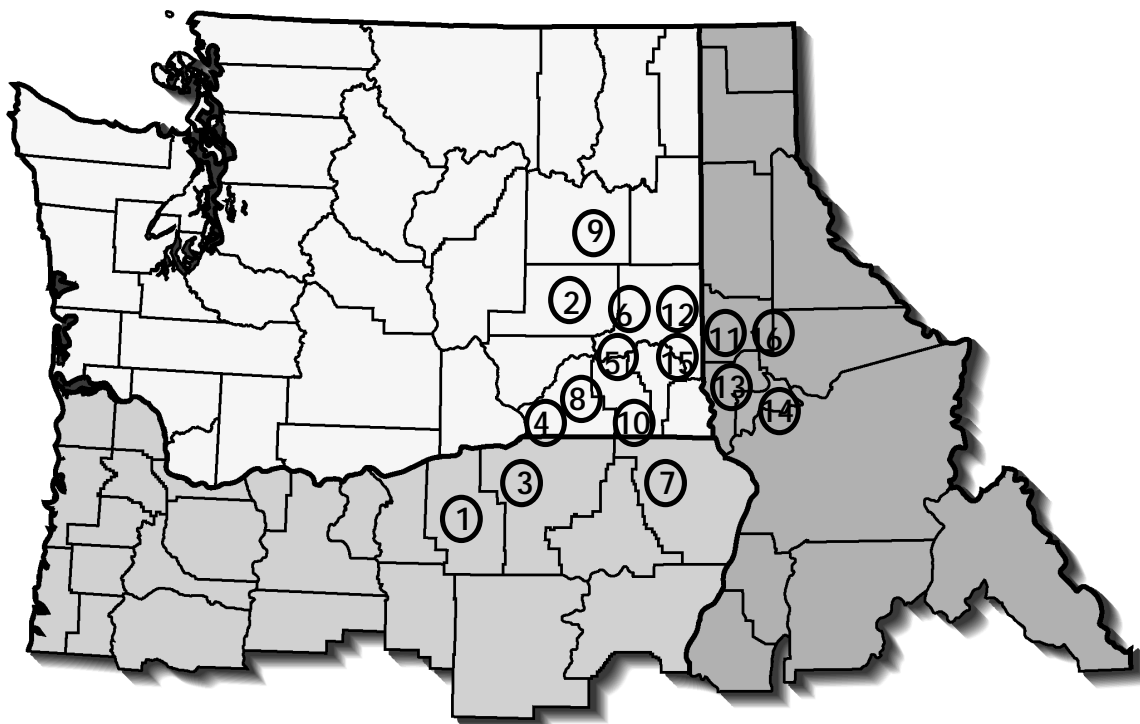
## Why a Direct Seed Case Study Series?

Many established direct seed growers say one of the keys to their success was having other direct seed growers share their experiences and knowledge. This series of 16 case studies allows you to learn from experienced direct seed growers throughout the Inland Northwest.

Each case study features a single farm operation and contains:

- How the grower(s) started direct seeding, and lessons they learned.
- Description of their current direct seed system including:
  - crops and rotation, residue management, weed, disease and insect control
  - fertility management and fertilizer application, seeding strategies
- Description and evaluation of the drills they are using.
- Primary benefits and challenges of direct seeding seen by the growers.
- Advice for growers new to direct seeding.
- Economic summaries (when available).

\* Authors: Roger Veseth, WSU / UI Extension Conservation Tillage Specialist; Ellen Mallory, former WSU Case Study Project Coordinator; Tim Fiez, former WSU Extension Soils Specialist; Dennis Roe, USDA-NRCS Resource Conservationist; Don Wysocki, OSU Extension Soils Specialist.



### Who Do the Case Studies Feature?

The farms featured in this case study series are located in the Inland Northwest across a range of rainfall zones in the wheat-producing areas of Washington, Idaho and Oregon. They use a variety of equipment options and cropping systems.

### Publication Numbers: Growers Principle Crops

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#### Low Rainfall (7-12 inches annual precipitation)

1	PNW540: Bill Jepsen	Continuous spring crops (wheat, barley, broadleaf).
2	PNW528: Ron Jirava	Continuous spring crops (wheat, barley, oilseed).
3	PNW531: Frank Mader & Tim Rust	W. wheat / chemical fallow.
4	PNW514: John Rea	Continuous spring cereals (wheat, barley).

#### Intermediate Rainfall (13-19 inches annual precipitation)

5	PNW515: John & Cory Aeschliman	W. wheat / sp. cereal / sp. cereal or chemical fallow.
6	PNW524: Jack & Mike Ensley	W. wheat / sp. cereal / legume or chemical fallow.
7	PNW526: Tim, Kevin, & Kurt Melville	Irrigated sp. wheat / sp. barley / broadleaf; 10-26" precip.
8	PNW523: Mike Sr. & Mike Jr. Thomas	W. wheat / sp. wheat / chemical fallow.
9	PNW521: Paul Williams	W. wheat, sp. cereals, chemical fallow, oilseeds.

#### High Rainfall (20-26 inches annual precipitation)

10	PNW527: Pat Barker & Steve Shoun	W. wheat / sp. cereal / legumes.
11	PNW529: Wayne Jensen	W. wheat, sp. cereals, legumes, oilseeds, grass.
12	PNW516: Frank Lange	W. wheat, sp. cereals, legumes.
13	PNW541: David Mosman	Grass seed, w. wheat, sp. cereals, legumes.
14	PNW522: Steve & Nathan Riggers	W. wheat, sp. cereals, legumes, oilseeds, grass seed.
15	PNW530: Art Schultheis	Grass seed, w. wheat, sp. cereals, legumes.
16	PNW542: Russ Zenner	W. wheat, sp. cereals, legumes, oilseeds, grass seed.

## What Kind of Advice is Offered in the Direct Seed Case Studies?

The case studies rely heavily on the growers' own words. Below is a sampling of their advice.

"Take a piece of land, what ever you think you can afford to try it on, say 50 or 100 acres, get it into a rotation in a direct seed system, and give it a try. But do things right. Make sure you have your green bridge taken care of. Manage your residue. Seed the correct depth. Tap into what other direct seeders have already learned. If someone in your area is successfully direct seeding, do what he does for awhile. Do all of those things and don't judge it after just one pass. Do it for five years on the same piece of ground and then you will start seeing some of the benefits." – Pat Barker



"The number one challenge is getting good seed-to-soil contact in heavy residue to get a good stand." – Tim Melville

"Pay attention to the 'green bridge.' Get the green volunteer crop and weeds dead 2 to 3 weeks prior to planting. Don't be fooled, the pathogens are there waiting for the new plant to start so they can hop on and ride for another year."

– John Aeschliman



"The timing is more critical with no-till than it is with conventional. You've got a smaller hammer [with herbicides vs. tillage] and you've got to hit it just perfect. Those guys [conventional-tillage farmers] have a big hammer and they've got two weeks either side of ideal to hit it." – Frank Lange

"Talk with neighbors who are direct-seeding, go to the Direct Seed Conference and field days, and tap into university information." – Paul Williams

“When you’re seeding you’ve got to be down there, you’ve got to be looking at that stuff. Every day, every time you move to a new piece, it’s a new thing, you’ve got to change your drill so it works.”

– John Rea



“One thing about this kind of farming, it’s hard to impress the neighbors because it’s not what they are used to seeing. A lot of times when they drive by a field and it looks kind of rugged, they form adverse opinions of how that field is being managed. But you have to wait until all of the scorecards come in to really pass judgment.” – Mike Ensley



“Don’t cut short on your rotation when you start out—that will provide you with a big safety margin against having something go wrong as far as diseases or weeds.” – Nathan Riggers

“Find someone who is direct seeding in your area and start asking questions. As Yogi Berra said, ‘You can observe a lot just by watching.’ – Steve Riggers

## How Do I Get Copies of the Case Studies?

The Direct Seed Case Studies in this series can be ordered through your local Cooperative Extension office or directly from the extension publication offices in Idaho (208) 885-7982, Oregon (541) 737-2513 and Washington (800) 723-1763. They are free but a small handling and shipping fee may be required. The cases studies are also available on-line at <http://pnwsteeep.wsu.edu> (click on Direct Seed Case Studies).

To find out more about the Case Studies, or for other information on direct seed systems, see the above Web site or contact Cooperative Extension, Department of Crop and Soil Sciences, Washington State University at (509) 335-2915.