Farmer to Farmer: Multi-media case studies
to build adaptive capacity among cereal-based farmers in the inland Pacific Northwest

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Abstract

Although producers are experienced in responding to a variety of risks – market related, weather-related, and environmental – climate change poses unprecedented risks. Adaptation will require collective innovation to develop and use new knowledge.

To support this process, we have developed multimedia producer case studies for cereal-based cropping systems in the Pacific Northwest. Case studies span both irrigated and dryland cropping areas, and highlight a range of innovative strategies that enhance resiliency, including:
- Precision nitrogen application
- Cover cropping with mustard
- Cropping intensification
- Flex cropping

The case studies provide details on how participants successfully adopted these practices, their perspectives on benefits and challenges, and their thoughts on risk and climate change. Final video and written case studies will be available at www.casesudies.reachpna.org.

Initial Case Studies

Precision Nitrogen Application, Eric Odberg, Genesee, ID

Eric Odberg is an early adopter of variable rate nitrogen application in the annual dryland production region of the Pacific Northwest. Eric sees variable rate applications as just one strategy in his ongoing efforts to keep his operation profitable and provide good stewardship for his land.

“’It’s a win as far as cost savings for me as a producer. And it’s a win for the planet and general population of less nitrogen going into our environment, whether it’s in the atmosphere or our waterways.’”

Mustard Cover Cropping, Dale Gies, Moses Lake, WA

Dale Gies has developed an intensive rotation of irrigated wheat followed by mustard cover crop in the first year, and potatoes in the second year. Despite its intensity, this rotation successfully suppresses soilborne diseases and nematodes, such that he doesn’t need to fumigate. Dale also grows vegetable and cover crop seed crops, and consults with farmers around the world about improving disease control through rotations and cover cropping.

“We’re able to produce good yields, good quality, and improve the soil while we’re doing it.”

Enhancing Crop Diversity

Steve & Becky Camp, LaCrosse, WA

Steve and Becky Camp are growing oilseeds and peas in an area that traditionally grows just winter and spring wheat and spring barley.

They also make their own biodiesel from camelina. Steve and Becky’s experimentation is guided by holistic thinking, with goals of building soil quality and reducing long-term risk.

“’If each of those rotations has a direct advantage to the soil health, then I’m going to leave this farm in much better shape.’”

Flex Cropping

Bill Jepsen, Lone, OR

Farmers in the part of northeastern Oregon where Bill Jepsen farms traditionally use a winter wheat - summer fallow rotation to cope with dry conditions and shallow soils. Bill has developed a flex cropping system that lets him replace fallow with a crop when moisture allows.

“Our goal is to make the most amounts of profit, over the long haul, ... and the flexible rotation allows us to sneak in an annual crop when we would have nothing growing. At the same time, we can control weeds and improve our soils.”

Flex Cropping

Case studies, which include both written and video components, rely on semi-structured interviews to tell farmers’ stories in their own words. Four case studies are in review (black dots on map), three are in progress (grey dots), and additional case studies are planned for 2015.

Background and Methods

While early climate impact assessment studies (Adam et al. 2012; Stockle et al. 2010) have prioritized agricultural concerns related to climate change, scientists have so far been able to provide only generalizable recommendations regarding adaptation strategies (e.g. develop new plant varieties, new crop protection tools, more farmer innovation).

With continuing climate uncertainty, farmers who are adopting innovative practices can provide insights into their resilient management practices, enabling others to join them.

Adapting to climate change will require the development and use of knowledge and a capacity for collective learning and innovation (Berkhourst et al. 2006). Farmer-to-farmer learning through case studies has been shown to develop personal and collective responses for adaptation and strengthen knowledge transfer through social networks (Röling & Wagemakers 1998; Hemstead et al. 2012; Mills-Novak 2011). Our case studies build on the established trust of peers, focusing on mitigation and adaptation strategies already being used by ground-breaking farmers in the inland Pacific Northwest.

Case studies locations.

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Literature Cited


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