REACCH
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Speed Science Presentations

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DIRECT SEED ADOPTION BY FARM SIZE AND ZONE

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Pictures shown, from top to bottom, are:
1) Soil erosion on winter wheat
2)Direct seed mentor presentation
3) DS drill planting into stubble

Why has direct seed (DS) tillage adoption lagged in this highly erodible, highly productive dryland grain growing region? In this presentation we discuss barriers as well as innovative methods to access and encourage DS adoption.

"Windshield Surveys" A roadside transect survey plus GPS guidance were used to conduct fall and spring surveys along a route through two counties in Idaho and four counties in Washington from fall 2007 through fall 2009. DS adoption ranged from 12% in Lincoln County to 75% in neighboring Spokane County. While crop residue levels varied considerably, depending on crop type, yields, soils, slope, and post-harvest soil disturbance, the correlation between crop residue levels above 30% and direct seed adoption was strong.

Direct Seed Mentoring Project In this innovative approach to encourage DS adoption, mentors provide seeding and expert advice for those wanting to try DS. Mentors typically had larger farms, averaging 4256 acres, double the size of those they mentored. Under DS, operating costs were typically lower, particularly labor and fuel, while fixed costs, such as capital recovery, were generally higher. By zone, the highest economic benefits from DS were yield increases for spring grains in the intermediate cropping zone. Spring grains are often uneconomical there due to limited precipitation.

Understanding DS Adoption Growers in this region were surveyed regarding their farming practices and barriers to DS adoption in 1976, 1990, and 2009. Most recently, growers used seeding on the contour (70 percent), leaving stubble over winter (55 percent) and minimum tillage (56 percent) to control soil erosion. Just over 40 percent of respondents across this study area reported direct seeding on their operation.

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