REACCH
Regional Approaches
to Climate Change –
PACIFIC NORTHWEST AGRICULTURE

2014 Annual Meeting
Speed Science

http://reacchpna.org

Adaptation of oilseeds and legumes
William Pan, Washington State University

B. Schillinger
June 26
June 10

F. Young

A. Hammac, T. Maaz
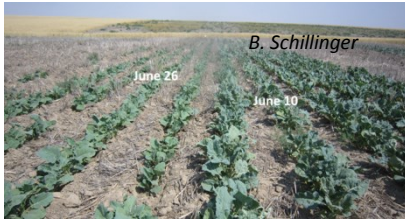
Climate change mitigation and adaptation cropping system strategies include improvements in N management, recycling of organic amendments, reducing tillage, and intensification/diversification of crop rotations. Oilseed and legume field experiments at 10 locations throughout the REACCH region are generating crop and soil data that are leading to agronomic recommendations for optimizing seeding and grain productivity , nutrient and soil water management, and soil quality.   High residue farming systems, utilizing tall straw crops and stripper header combining, conserves soil moisture for seedling establishment. Early seeding of spring and winter canola varieties shows promise for seedling establishment, and for changing soil water use and freeze dynamics. Canola yield-precipitation and yield-N supply relationships are being defined for making N management recommendations. Spring oilseeds and legumes in rotation with winter wheat can reduce fallow use and intensify grain production in transition zones.

S. Machado
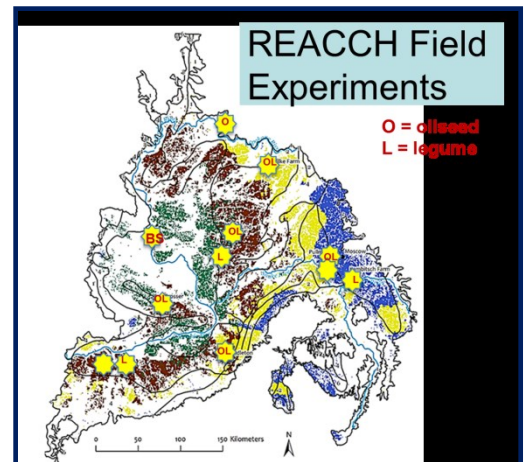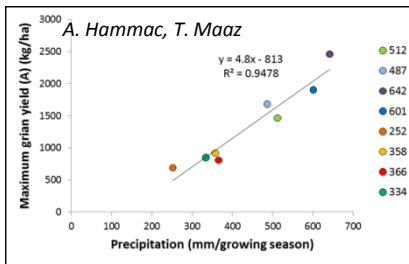
Pictures shown, from top to bottom, are:
1) Early seeded winter canola near Ritzville, WA draws deep soil moisture.
2) High residue farming with triticale and stripper header combining near Ralston, WA improves seedling conditions.
3) Spring canola grain yield vs annual precipitation and N needs at Davenport and Pullman, WA redefine N recommendations.
4) Wheat-pea rotation replacing fallow at Pendleton, OR does not reduce winter wheat yields.

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