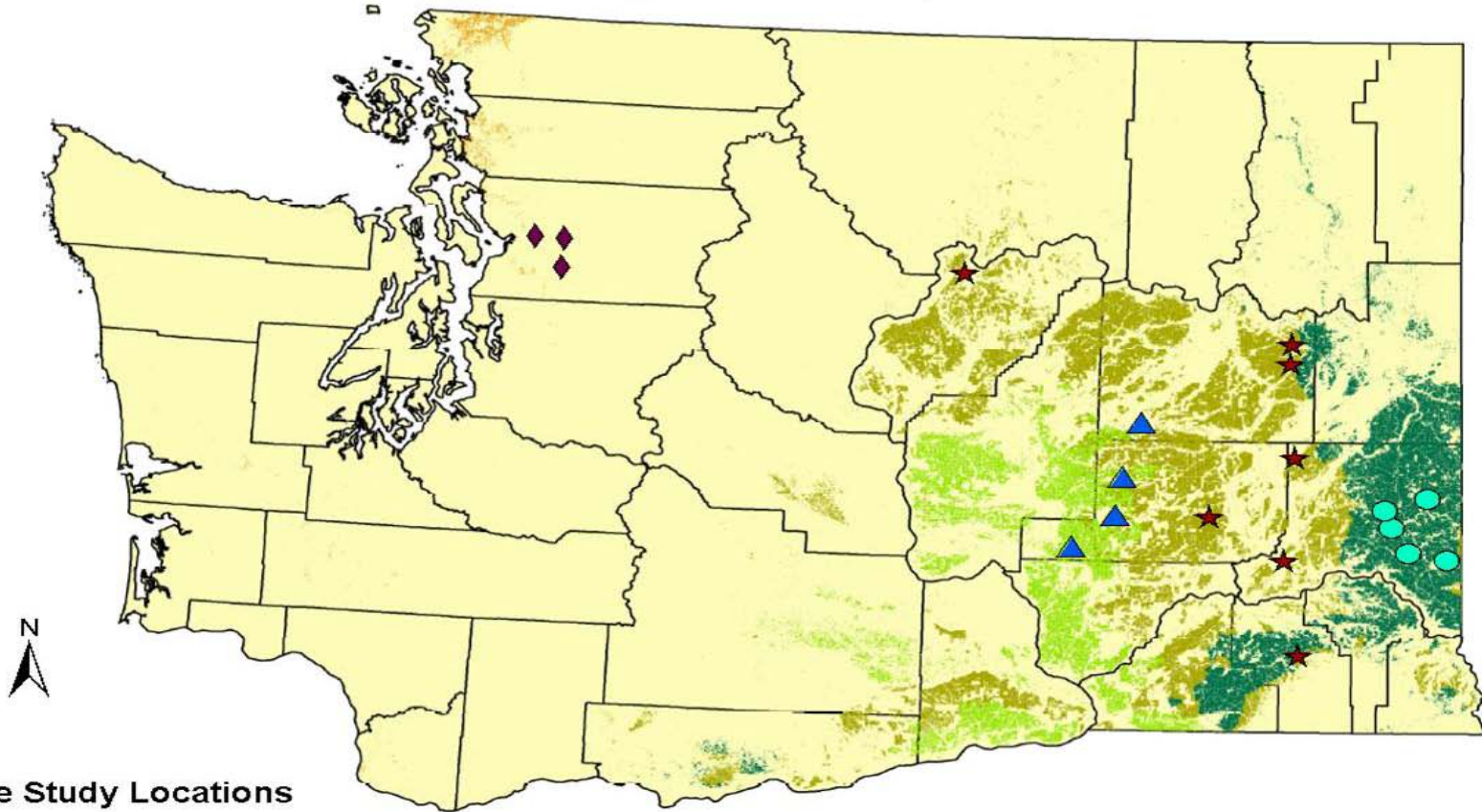


# Economic Returns to Canola Rotations in Eastern Washington

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# Figure 1: Washington State Crop



## Case Study Locations

- Region 1
- ★ Region 2
- ▲ Region 3
- ◆ Region 4

	<b>17" - 25" Rainfall Cropland</b>	<b>1325321 acres</b>
	<b>&lt; 17" Rainfall Cropland</b>	<b>2339258 acres</b>
	<b>Irrigated Cropland</b>	<b>996071 acres</b>
	<b>Western Washington Cropland</b>	<b>62453 acres</b>

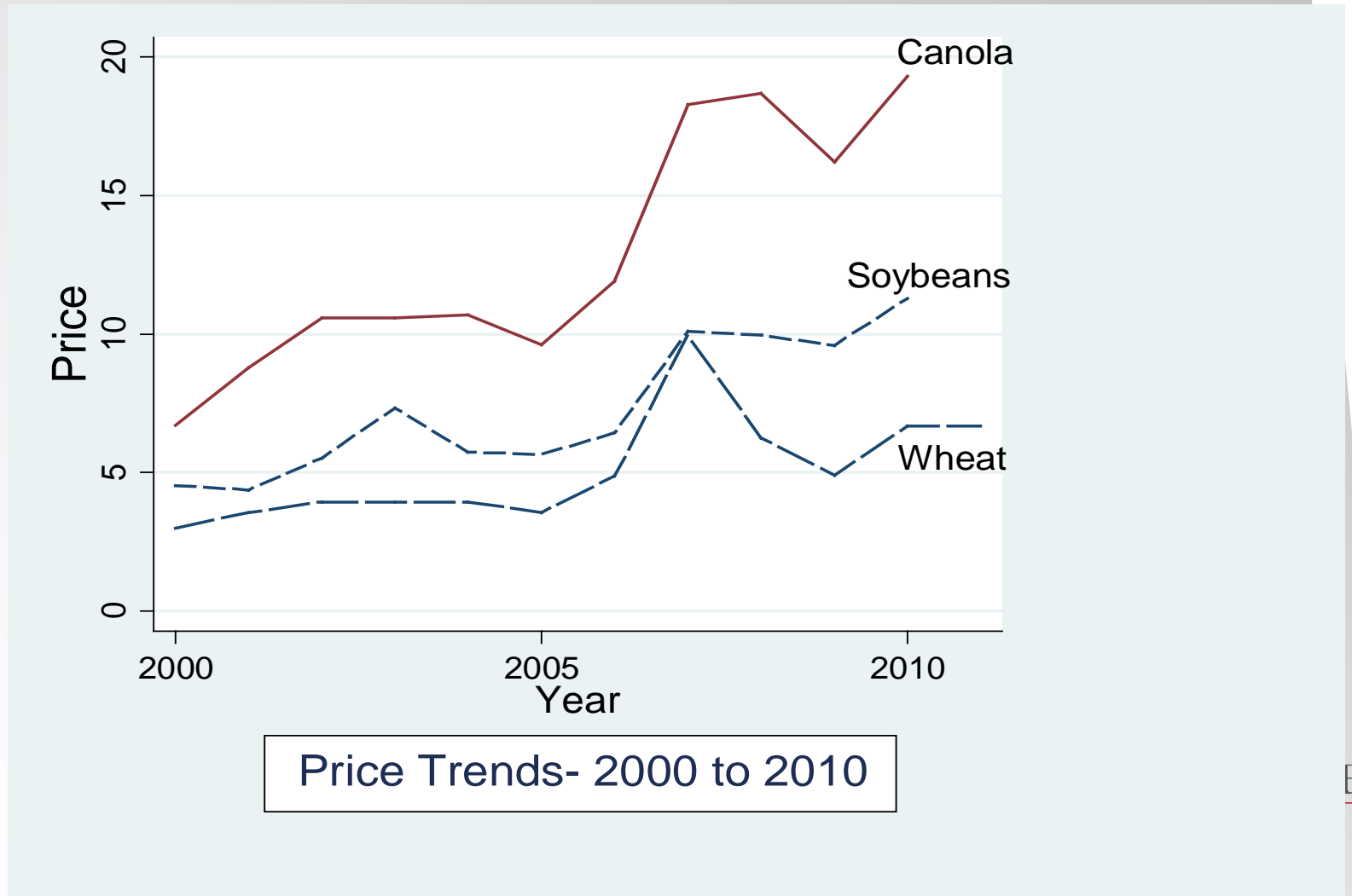
Crop data is from the 2009 Cropland Data Layer from the National Agricultural Statistical Service of the U.S. Department of Agriculture. Map projection is Universal Transverse Mercator, zone 11, WGS 1984. Map created by Richard Rupp, Department of Crop & Soil Sciences, Washington State University.

# Introduction

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- **Inclusion of canola into crop rotations may offer agronomic benefits to farms that translate into improved overall farm profitability over time.**
- **Our research – Compare economic returns of selected crop rotations that incorporate canola, with the returns of traditional crop rotations appropriate to each region.**

# National Price Trends for Canola, Soybeans and Wheat



Price Trends- 2000 to 2010

# Methodology

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- **Economic returns of rotations estimated using enterprise budgets created by Kate Painter**
- **Valuations used more current market prices and average yields for the crop region**
- **Rotational impacts on yield and inputs were incorporated when data was available based on grower input and expert opinion**
- **Used projected yields and inputs costs for non-traditional systems**
- **Rotation returns computed assuming equal acreage of each rotation**
- **Assumed all canola is Roundup Ready**

# **Selected Results – Regions 1 and 2**

## **Scenarios -**

- A. Three year rotation system in which spring canola replaces the usual chemical fallow year.**
- B. Three year winter wheat- spring canola- chemical fallow system as an alternative to conventional two year winter wheat— chemical fallow systems.**
- C. Four year rotation in area with weed problems, with beneficial impact of canola.**

# Scenario A – Replace Chemical Fallow with Spring Canola

	Returns	Returns
	over Total	over Variable
ROTATION	Costs	Costs
	(\$/ac/yr)	(\$/ac/yr)
WW, HRSW, Spring Canola	<b>\$87</b>	<b>\$178</b>
WW, HRSW, Chem. Fallow	\$41	\$159
WW, Spring Barley, Chem. Fallow	\$41	\$157

# Scenario B– Move from 2-year rotation to 3-year with Canola

	Returns	Returns
	over Total	over Variable
ROTATION	Costs	Costs
	(\$/ac/yr)	(\$/ac/yr)
<b>Conventional Tillage</b>		
SF-WW-SF-WW-SF-WW	\$28	\$120
SF-WW-Spring Canola, SF-WW-Spring Canola	<b>\$38</b>	<b>\$129</b>
<b>Reduced Tillage</b>		
CF-WW-CF-WW-CF-WW	\$8	\$95
CF-WW-Spring Canola, CF-WW-Spring Canola	<b>\$31</b>	<b>\$149</b>

DATE  
Y



# Scenarios C: Beneficial Impact of Canola

	Returns over TC (\$/ac/yr)	Returns over VC (\$/ac/yr)
Rotation/Scenario:		
<b>Baseline – Good Wheat Yields (50)</b>		
CF-WW-CF-WW	8.02	94.70
CF-WW-CF-WC	<b>12.07</b>	<b>100.68</b>
<b>Low Field Grade Wheat Yields (30) , no rotational Impact of Canola</b>		
CF-WW-CF-WW	-11.54	46.52
CF-WW-CF-WC	<b>2.29</b>	<b>76.59</b>
<b>Low Field Grade Wheat Yields (30) , AND rotational Impact of Canola</b>		
CF-WW-CF-WW	-11.54	46.52
CF-WW-CF-WC	<b>35.31</b>	<b>135.36</b>

# Conclusions

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- Inclusion of canola increased input costs of all rotation considered.
- Roundup ready canola can potentially decrease overall input costs through improved weed control.
- The impacts of RR canola were not included in the budgets.
- Future budgets should include rotational impacts such as decreased herbicide use.
- The winter canola offers high yield potential and high potential returns.
- Rotations with canola are more profitable under current canola relative to wheat price situations.

# **Current Activities**

- **Completing budget generator for easier (and interactive) use by others.**
- **Needing better information from growers about realistic impacts on yields and input usage.**
- **Related study – Wheat Variety Development – Breeding versus Management Impact on Yields.**

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**Any Questions?**