

professional meetings are utilized to disseminate information. Oilseed crop production workshops were held in 2011 and 2012 with almost 250 people attending each year. Oilseed acreage is increasing in some areas of WA as results from WSU and USDA-ARS on-farm research, along with testimonies from experienced oilseed producers, are convincing more producers to try oilseeds in their crop rotations.

Outreach and extension efforts directly reached over 1845 people at 25 events in 2011. We are working closely with the Washington Canola and Rapeseed Commission to increase awareness of their role in furthering oilseed production in the state. A website for the WBCS was created in 2008, and usage has increased dramatically since then. There were 2000 hits last year, two-thirds of which came from 47 cities in WA. The first set of case studies about oilseed producers in the four production regions of Washington was published as an Extension manual last year and the remaining three sets are being edited for publication in 2012. The WBCS research team published a fact sheet about canola growth, development and fertility last year, and several refereed journal articles and Extension fact sheets and bulletins about canola, camelina, and switchgrass production in the PNW will be published in 2012.



### A Decade of Direct-seed Canola in Rotation at the WSU Cook Agronomy Farm

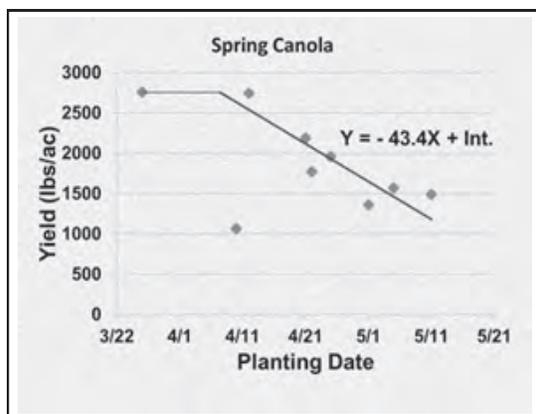
DAVID HUGGINS, USDA-ARS, PULLMAN; KATE PAINTER, U OF I

Spring canola production can diversify cropping systems within dryland cropping zones of the Pacific Northwest. No-tillage systems may be particularly well-suited to spring canola as crop residues promote seed-zone moisture conservation near the soil surface that could benefit the establishment of the small, shallow-seeded crop. Spring canola varieties that are resistant to herbicides (e.g. Roundup) can also provide useful alternatives for managing weeds such as annual grasses that are problematic in other rotational crops.

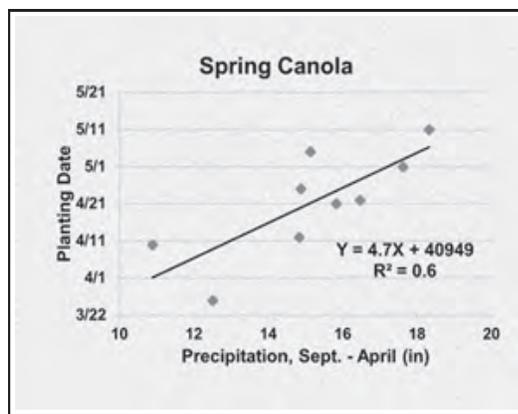
In 2001, three-year rotations including a crop rotation with spring canola were initiated at the WSU Cook Agronomy Farm. Roundup Ready spring canola was no-till planted using a Great Plains double-disk drill into spring barley (first year only) or hard red winter wheat residue (8 years). Seeded and harvested strips were approximately five acres. Planting dates ranged from as early as March 26 to as late as May 12 and were dependent on spring weather and soil conditions. Seeding rates were initially high (8-10 lbs/acre) but were reduced after the first three years to 6 lbs/acre.

The average yield of spring canola from 2001-2009 was 1880 lbs/acre. Yield of broadcast spring canola was similar to no-till, indicating the potential of early spring seeding into winter wheat residue. With the exception of one year (2005), spring canola

yield decreased 43 lbs/acre for every day seeding was delayed after April 12<sup>th</sup>. Economic analyses show that while spring canola had negative net returns, other rotational crops were also unprofitable. Given current market prices for canola, the economic analyses would change dramatically, as it is at more than double the average price of \$12.80 per 100 lbs during the study period.



Spring canola planting date effects on seed yield at the WSU Cook Agronomy Farm.



Relationship between spring canola planting date and September through April precipitation at the WSU Cook Agronomy Farm.

### Is Spring Canola Viable in North Central Washington?

FRANK YOUNG<sup>1</sup>, DENNIS ROE<sup>2</sup>, LARRY MCGREW<sup>1</sup>, DALE WHALEY<sup>2</sup>, CHASITY WATT<sup>3</sup>;  
<sup>1</sup>USDA-ARS PULLMAN; <sup>2</sup>WSU; <sup>3</sup>COLVILLE CONFEDERATED TRIBES

Very little spring canola research has been conducted in the wheat/fallow region with the exception of irrigated systems and one year when spring canola was planted in lieu of a failed winter canola crop with this research team. There has been sporadic canola production in north central WA during the last several years. We initiated this study in 2011 to determine the optimum row spacing for spring canola, and if there were any particular varieties that performed well in this environment.

In the spring of 2011, two glyphosate tolerant spring canola varieties (early and late maturity) and one glufosinate tolerant variety were planted in 7- and 14-inch row spacing at the same plants/A population. Data collected include crop population, yield, and oil quality. When averaged over row spacing, Invigor (glufosinate tolerant) canola yielded 935 lbs/A compared to the glyphosate tolerant DKL late maturing (1,120 lbs/A) and early maturing (1045 lbs/A) varieties. Yields were slightly higher in the 7-inch spacing for both the Invigor and late maturing DKL variety compared to the 14-inch spacing. Both glufosinate and glyphosate controlled all annual grass weeds and broadleaves such as Russian thistle, kochia, mustards, and prickly lettuce. Oil quality analysis is pending.

We have seeded spring canola again this year with the same methodology described above. We believe spring canola is an 'opportunity' crop for both irrigated and dryland production in this region. If soil moisture is sufficient in the spring for germination a grower may opt to seed spring canola, or it can be seeded in the event of a failed winter canola crop the previous fall. After data collection this year we would like to begin the process to procure crop insurance for spring canola in Okanogan and Douglas counties as we did for winter canola several years ago.



Spring canola row spacing study.