The agricultural community in the Pacific Northwest continues to show a strong interest in winter and spring canola or rapeseed (Brassica napus and B. rapa) and in condiment mustard (Sinapis alba and B. juncea). Canola and mustard offer growers an alternate crop for rotation in an agricultural system predominated by small cereal grains. Comprehensive yield trials are needed to evaluate new cultivars and to determine which areas of the Pacific Northwest are best suited to the available cultivars. With this objective in mind, researchers at the University of Idaho established the Pacific Northwest Canola Variety Trial during 1994 to test spring canola. In 1996, a winter canola trial and a mustard trial were added. The trials are funded in part by the PNW Canola Research Program, the Idaho Olived Oil Commission, the University of Idaho, and by fees paid by the commercial companies that submit their cultivars for testing.

Winter Canola/Rapeseed Trial (PNWWVT)

Twenty Argentine (Brassica napus) canola cultivars and breeding lines plus three industrial rapeseed cultivars or breeding lines were tested during the 2013-2014 crop year. Trials were planted during late August and early September near Pendleton and Hermiston (irrigated), OR; near Moscow, Genesee, and Grangeville, ID; and near Othello (irrigated), LaCrosse, St. John, and Reedarn, WA. All of the trials were planted on summer fallow except the irrigated sites and were fertilized according to local practice.

At each location, the trial design used was a randomized, complete block with four replications. Plot size was 3.5 feet by 15 feet at tilled sites, and 4 feet by 15 feet at direct seed sites.

Of the nine winter locations planted, seven were harvested, because the sites at Hermiston, OR and LaCrosse, WA were lost due to winter kill.

Spring Canola/Rapeseed Trial (PNVCVT)

Of the 30 entries in the 2014, all were Brassica napus (Argentine) types except ‘Goldrush’ (B. rapa), and “VT X121” (B. juncea). All entries tested were canola-quality except for ‘Germ’ industrial rapeseed and ‘07 SB1 A10’ industrial rapeseed breeding line from the University of Idaho. Entries ending in “RR” are Roundup Ready® types, while “CL” denotes Clearfield® Canola or other imidazolinone resistant cultivars, and “LL” indicates Liberty Link® varieties that are tolerant to Liberty® herbicide.

The 2014 trials were planted at 8 locations; Bonners Ferry, Moscow, Genesee and Craigmont, ID; Davenport, LaCrosse, and Dayton, WA; and Hermiston, OR. The trial at Craigmont was lost to hail damage. At each location, the trial design used was a randomized, complete block with four replications. Plot size was 3.5 feet by 16 feet at tilled sites, and 4 feet by 16 feet at direct seed sites. All trials were grown on recrop ground and were fertilized according to local practice.

Condiment Mustard Trial (PNWMVT)

Three types of mustard were tested in the 2014 trials; yellow mustard (Sinapis alba), oriental mustard (B. juncea), and brown mustard (B. juncea).

The yellow mustard variety ‘Tlinney’ was developed in the United Kingdom and was included as a control. ‘Cutlass’ and ‘Lethbridge 22A’ are oriental mustards, and ‘Duchess’ is a brown mustard cultivar; all three were developed in Canada. ‘IdaGold’, ‘Pacific Gold’, ‘Kodiak’, ‘White Gold’, ‘IndiGold’, and all numbered lines were developed at the University of Idaho. IndiGold and SJMM3.3 are IMI herbicide resistant oriental mustard cultivars.

The trial was planted at 9 locations; Bonners Ferry, Moscow, Genesee, Lewiston, and Craigmont, ID; Davenport, LaCrosse, and Dayton, WA; and Pendleton, OR. The trial at Craigmont was lost to hail damage. At each location, the trial design was a randomized, complete block with four replications.

PNWVT 2014. Plot yields (lbs per acre) of 23 winter canola or rapeseed cultivars tested in the Pacific Northwest.

PNVCVT 2014. Plot yields (lbs per acre) of spring canola or rapeseed cultivars.

PNWMVT 2014. Plot yields (lbs per acre) of 14 mustard cultivars.

Additional data is available on handouts.