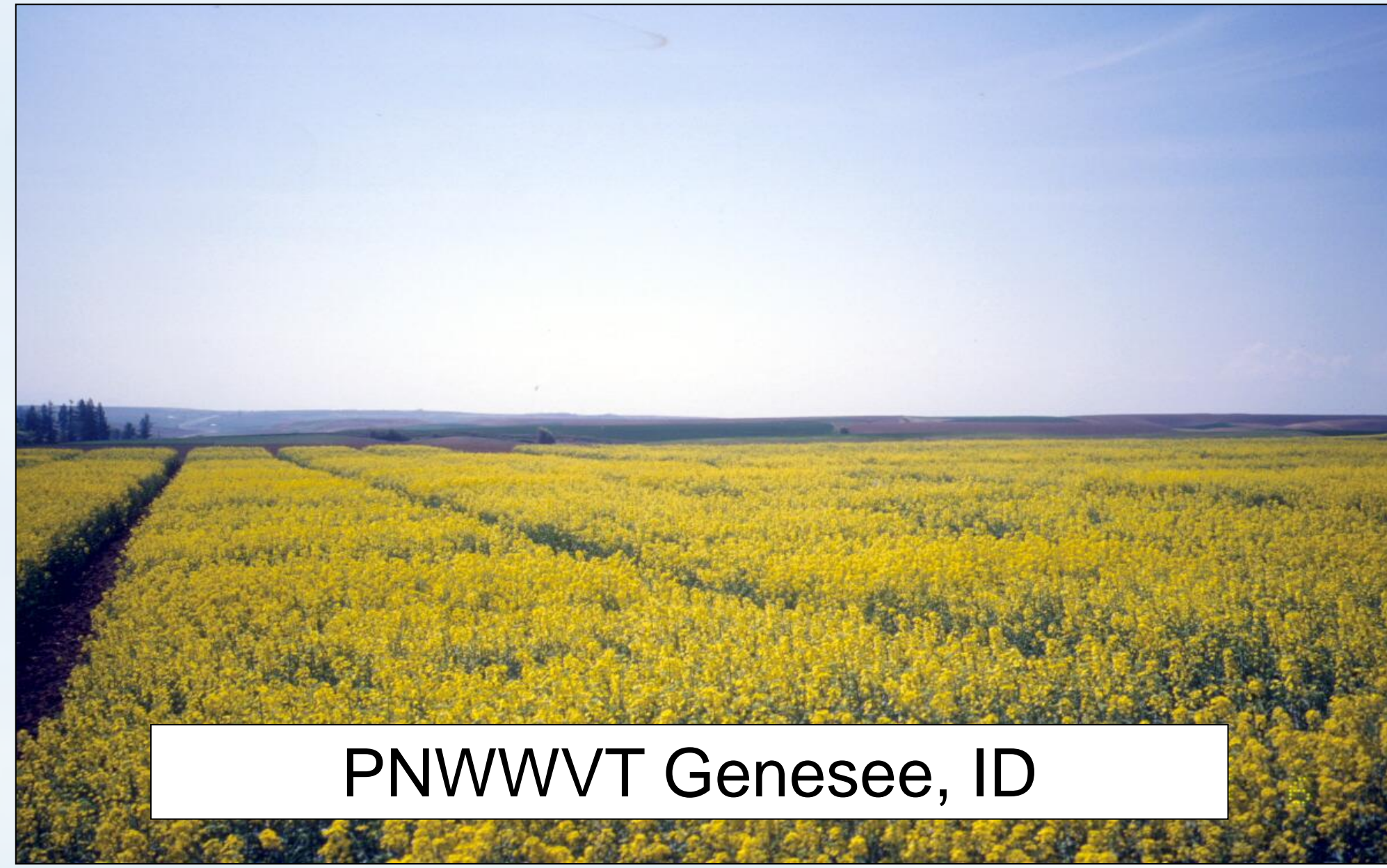


# Results of the 2014 Pacific Northwest Canola & Mustard Trials

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PNWWVT Genesee, ID

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 Oilseed Commission, the University of Idaho, and by fees paid by the commercial companies that submit their cultivars for testing.



PNWMVT Genesee, ID

## 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 Odessa (irrigated), LaCrosse, St. John, and Reardan, 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 (PNWCVT)

Of the 30 entries in the 2014 trial, all were *Brassica napus* (Argentine) types except 'Goldrush' (*B. rapa*), and 'VT X121' (*B. juncea*). All entries tested were canola-quality except for 'Gem' industrial rapeseed and '07.SI.8.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 'Tilney,' 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 BJIMI.3.3 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.

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

Varieties Tested	Mean Yield	Yield by location							
		Odessa WA	Reardan WA	St John WA	Moscow ID	Genesee ID	Grangeville ID	Pendleton OR	
		lbs per acre				rank			
Controls									
Athena	3,350	11	3,011	1,492	3,979	2,583	4,876	4,517	2,994
Amanda	3,546	5	3,979	2,238	3,683	2,915	4,996	3,572	3,441
Durolo Rapeseed	3,498	7	3,669	1,478	4,082	2,927	4,913	4,095	3,322
DL Seeds									
Edimax CL	4,118	2	3,454	2,033	5,458	3,338	6,147	5,210	3,186
Mercedes	4,260	1	4,601	2,425	4,637	3,159	6,585	5,275	3,139
Visby	4,067	3	3,575	2,001	4,868	3,593	6,897	4,530	3,003
Kansas State University									
Griffin	2,912	18	2,298	2,307	3,371	2,188	4,918	3,043	2,261
DKW 45-25 RR (KSR.07352S)	3,363	10	4,072	2,113	4,089	2,524	4,441	3,478	2,826
KSR.07363	3,443	8	3,242	2,328	3,731	3,589	5,348	2,901	2,965
Winfield									
HyCLASS 115W RR	3,158	14	2,121	2,247	3,449	2,461	5,131	3,673	3,025
HyCLASS 125W RR	2,881	19	2,112	2,016	2,660	2,748	5,104	3,079	2,449
University of Idaho									
06.WC.1	3,543	6	4,759	1,606	3,742	2,883	4,771	4,076	2,966
U1.05.6.33	3,222	13	3,772	1,541	3,489	2,340	5,057	3,457	2,898
04.WL.4.404	3,391	9	3,817	1,776	3,934	2,977	4,909	3,426	2,901
05.WC.6.4.3 IMI	3,031	16	3,198	1,700	3,859	2,969	3,961	2,787	2,745
05.WC.9.7.5.6 IMI	2,498	22	2,438	1,308	2,831	1,876	3,905	2,220	2,906
05.WC.9.7.5.7 IMI	2,461	23	2,485	1,188	2,920	1,983	3,870	2,112	2,669
05.WC.15.7.5 IMI	3,345	12	3,810	2,071	3,544	2,816	4,943	3,458	2,775
05.WI.42.4 IMI Rapeseed	3,086	15	4,396	1,345	3,394	2,457	3,822	3,670	2,516
05.WI.45.2.2 IMI Rapeseed	3,648	4	5,085	1,530	3,990	2,724	4,648	4,454	3,108
10.WN.85.RR	2,946	17	2,989	1,740	2,275	2,498	4,708	3,653	2,761
10.WN.86.RR	2,765	20	1,909	2,217	1,966	2,829	4,926	3,216	2,291
10.WN.89.RR	2,719	21	2,238	1,372	2,285	2,164	4,926	3,262	2,783
Mean	3,272		3,349	1,829	3,575	2,719	4,948	3,616	2,867
LSD (p = 0.05)	288		1,166	515	641	714	799	913	596

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

Varieties Tested	Mean Yield	Yield by location							
		Bonners Ferry ID	Moscow ID	Davenport WA	LaCrosse WA	Dayton WA	Pendleton OR	Hermiston OR	
		lbs per acre				rank			
Bayer CropScience									
InVigor S440 LL	2,241	4	3,845	2,371	540	1,698	2,616	1,001	3,614
InVigor L130 LL	2,072	10	3,685	2,237	580	1,532	1,960	1,265	3,244
InVigor L140 LL	2,110	9	4,035	2,227	467	1,259	2,312	991	3,481
InVigor L252 LL	2,198	6	3,956	2,279	621	1,569	1,983	1,282	3,696
Brett Young Canola									
BY 5525 CL	*	*	3,154	2,374	547	*	2,461	*	*
BY 6044 RR	1,851	15	3,355	2,218	577	943	2,286	815	2,762
BY 6070 RR	*	*	3,463	1,968	484	*	2,729	*	*
Cargill Specialty Oils									
V12-1 RR	1,997	12	3,168	1,985	497	1,383	2,347	1,034	3,566
7757 RR	1,720	18	3,038	2,025	486	964	1,795	761	2,973
08H0004 RR	1,774	17	3,217	1,973	367	1,168	2,032	593	3,070
Winfield									
HyCLASS 930 RR	2,195	7	3,868	2,485	644	1,418	2,627	1,475	2,850
HyCLASS 955 RR	2,420	1	3,717	2,351	888	1,942	2,854	1,329	3,857
HyCLASS 969 RR	2,049	11	3,640	2,169	727	1,340	2,274	1,075	3,121
VT X121 CL	1,553	22	1,981	1,797	555	1,015	1,688	1,051	2,786
DeKalb									
DKL 30-03 RR	2,235	5	3,634	2,260	733	1,827	2,238	1,487	3,466
DKL 30-42 RR	2,283	2	3,663	2,505	807	1,732	2,748	1,427	3,097
DKL 38-48 RR	1,880	13	3,030	2,254	622	1,176	2,053	1,096	2,926
DKL 55-55 RR	2,259	3	3,669	2,624	697	1,532	2,490	1,479	3,324
Star Seed									
Star 402 RR	2,148	8	3,728	2,409	567	1,317	2,370	1,322	3,322
University of Idaho									
Gem CL	1,639	21	2,519	1,764	488	1,193	1,630	1,159	2,718
07.SI.8.A10	1,792	16	2,882	1,714	761	1,494	1,729	1,331	2,635
Arriba	1,670	20	2,374	1,865	475	1,145	1,619	1,226	2,988
Cara CL	1,695	19	2,517	1,974	448	1,271	2,090	1,152	2,413
Empire	1,855	14	3,047	1,930	629	1,200	1,446	1,281	3,454
Mean	1,984		3,299	2,157	592	1,369	2,182	1,165	3,153
LSD (p = 0.05)	157		392	346	623	380	215	188	767
C.V.	16.8		8.8	12.1	20.6	20.3	26.6	11.6	17.5

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

Variety	Mean Yield	Rank	Yield by Site							
			Bonners Ferry ID	Moscow ID	Genesee ID	Lewiston ID	Davenport WA	LaCrosse WA	Dayton WA	Pendleton OR
			lbs/acre				rank			
Yellow Mustards										
Tilney	1,544	1	3,194	1,720	1,620	788	637	1,189	2,201	1,000
IdaGold	1,505	2	2,757	2,052	1,638	896	600	897	2,183	1,018
Goldfield	1,491	3	2,909	1,912	1,703	549	634	1,057	2,134	1,030
WhiteGold	1,307	4	2,763	1,623	1,431	684	466	688	1,916	883
Mean	1,462		2,906	1,827	1,598	729	584	958	2,109	983
Oriental and Brown Mustards										
Pacific Gold	1,740	5	3,338	2,147	2,398	672	761	1,271	2,353	979
Cutlass	1,560	9	2,705	2,020	2,222	416	639	1,528	2,063	885
IndiGold	1,824	1	3,029	2,715	2,781	713	811	1,245	2,181	1,113
03.BJIMI.3.3	1,791	4	2,936	2,166	2,804	739	710	1,583	2,406	985
ISH.7.6.5.7	1,736	6	3,212	2,235	2,416	670	740	1,446	2,104	1,064
ISH.7.6.5.9	1,798	2	3,080	2,419	2,456	679	616	1,674	2,353	1,106
ISH.7.6.8.2	1,792	3	3,358	2,132	2,523	907	630	1,601	2,167	1,014
ISH.7.6.8.7	1,647	7	3,293	2,004	2,441	812	598	1,053	2,052	925
Kodiak Brown Mustard	1,425	10	2,266	1,948	2,051	416	574	1,084	2,120	937
Duchess Brown Mustard	1,581	8	2,765	2,127	2,061	681	615	1,513	2,062	820
Mean	1,689		2,998	2,191	2,415	671	669	1,400	2,186	983
Overall Mean	1,624		2,972	2,087	2,182	687	645	1,274	2,164	983
LSD (p=0.05)	112		420	360	312	NS	NS	365	NS	123
CV (%)	16.6		9.9	12.0	10.0	38.8	20.9	20.1	12.3	8.7