

**PROJECT TITLE: Western Regional Winter Lentil Yield Trial**

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**OBJECTIVE:** Compare winter survival and yield potential of experimental lentil breeding lines in a northwest Montana environment.

**METHODS:** Eight lentil accessions from Washington State University were seeded into 60 ft<sup>2</sup> plots at 14 seeds/ft<sup>2</sup> on 10/5/04. Stand counts were taken 5/2/05. Weed control was done by hand. Dates were recorded when 50% of each plot had bloomed and when 50% had reached maturity (yellow leaves, hard seed). The plants were uprooted when they reached maturity, and the seeds thrashed out when the plants were dry. The lentils from each plot were weighed to determine yield and 100-seed samples weighed to determine seed weight (# seed/lb).

**RESULTS:** All the entries survived the winter very well. First blooms appeared between 5/28 and 6/2. The plants had matured by 8/3. Deer had moved into the plot area before harvest and damaged some of the plants. Lentil yields ranged from 214 lbs/acre ('LC9979062') to 502 lbs/acre ('LC9979120'), averaging only 38% of the 2003-04 yields. LC9979120 had the smallest seeds and 'LC9976079' had the largest.

**WESTERN REGIONAL WINTER LENTIL YIELD TRIAL**

Kalispell, 2004-2005

<u>Cultivar</u>	Spring <u>Stand</u> %	<u>Flower</u> <i>date</i>	<u>Maturity</u> <i>date</i>	<u>Height</u> <i>inches</i>	<u>Yield</u> <i>lbs/a</i>	<u>Seed Size</u> <i>#/lb</i>
WA8649041	77	6/2	8/3	18.0	278	16089
LC9976079	<b>83</b>	5/30	8/1	16.0	300	14246
LC9978057	<b>83</b>	5/28	7/19	14.5	258	15306
LC9978094	<b>79</b>	5/31	7/27	18.5	<b>449</b>	14345
Morton	<b>83</b>	5/29	7/22	15.0	347	15404
LC9979062	<b>81</b>	5/30	8/3	15.0	214	15000
LC9979065	<b>80</b>	6/1	8/3	14.0	<b>435</b>	15282
LC9979120	75	5/31	7/27	16.0	<b>502</b>	<b>17940</b>
mean	80			15.9	347.7	15452
LSD(0.05)	5			3.6	149	839
Pr>F	0.039			0.099	0.006	< 0.0001

Seeded 10/5/04.

Stands: 5/2/05

Harvested: 8/17/05

Fertilizer: 13 lbs N + 62 lbs P<sub>2</sub>O<sub>5</sub> /a - Fall, 2004

Herbicide: Assure II (6oz/a) - 5/17/05