PROJECT TITLE: **WESTERN REGIONAL WINTER LENTIL YIELD TRIAL**

PROJECT LEADER: Fred Muehlbauer, WSU

COOPERATORS: Duane Johnson, NWARC
Louise Strang, NWARC

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

METHODS:

Ten lentil accessions from Washington State University were seeded into 60 ft^2 plots at 14 seeds/ft^2 on 9/15/05. Stand counts were taken 10/19/05 and 5/10/06. 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 direct combined when they reached maturity. The lentils from each plot were weighed to determine yield and 100-seed samples weighed to determine seed weight (# seed/lb).

RESULTS:

'WA8649041', 'LC9978057T', 'LC9979062T', 'LC9979065T', and 'Morton' survived the winter very well. 'LC02600449T', 'LC03600218T', and 'LC036002995T' had over 90% mortality. First blooms appeared between 5/29 and 6/2. The plants had matured by 7/19/06. Lentil yields ranged from 224 lbs/acre ('LC9440070r') to 1048 lbs/acre (LC9979062T). LC02600449T had the smallest seeds and 'LC9440070r' had the largest.

2005-2006 WESTERN REGIONAL WINTER LENTIL YIELD TRIAL

Kalispell

Entry	Cultivar	Fall Stand *pl/sqft*	Spring Stand *pl/sqft*	Survival *%*	Flower *date*	Ht *in*	Mat *date*	Yield *lbs/a*	Seed Size *#/lb*
1	WA8649041	**17.4**	**12.7**	**73**	6/2	**17.5**	7/19	663	16676
2	MORTON	15.3	8.8	**58**	5/31	14.5	7/16	324	15027
3	LC9440070r	**16.5**	5.0	30	6/1	12.5	7/19	224	**9201**
4	LC9978057T	**17.9**	**12.0**	**67**	5/29	**17.3**	7/15	**992**	15935
5	LC9979062T	15.9	10.7	**67**	5/30	**17.0**	7/16	**1048**	14905
6	LC9979065T	14.7	10.4	**71**	6/2	13.8	7/19	**751**	15842
7	LC02600449T	13.8	0.3	2	6/2		7/19	293	18160
8	LC03600218T	15.1	1.0	7	5/30	14.0	7/16	253	14419
9	LC03600232T	13.7	5.5	40	6/2	15.0	7/18	292	13529
10	LC03600295T	15.8	0.2	1	5/31		7/16	208	16214
	mean	15.6	6.7	42		15.2		505	15021
	Pr>F	0.0154	< 0.0001	< 0.0001		0.0135		0.0075	< 0.0001
	LSD(0.05)	1.8	2.0	16		2.1		356	1150
	CV(%mean)	10.8	28.7	35.8		12.8		69.5	7.4