

Project Title: Statewide Lentil Variety Evaluation - 2012  
Project Leader: Brooke Bohannon  
Project Personnel: Chengci Chen  
Objective: To evaluate seed yield and agronomic performance of ten lentil cultivars in northwestern Montana.

#### Results:

Plots were seeded two weeks earlier than in 2011 yet the average days to maturity was seventeen days longer in 2012 than in 2011. The average time to flower was 76 days after planting (June 26) and plants reached grain maturity an average of 123 days after planting (August 12) (Table 2). Canopy height at physiological maturity ranged from 10.1 to 14.7 inches.

Grain yields ranged from 995 lb/A (16 bu/A) for Merrit to 1726 lb/A (27 bu/A) for LC01602300R. The top producing commercially available cultivar was CDC Richlea with 1565 lb/A (24 bu/A). Overall lentil yield across all varieties was 1293 lb/A (20.0 bu/A), which is a slight decrease from 2011 yields. CDC Richlea and Morena were the highest yielding commercially available varieties.

#### Summary:

The above average rain fall in June of 2012, most likely had an adverse impact on the lentil crop. Average grain yield and test weight (1293 lb/A and 60.8 lb/bu respectively) were slightly lower than in 2011 (1739 lb/A and 63.1 lb/bu respectively).

#### Future Plans:

Trials will continue to be conducted each year in order to identify cultivars suitable to the region.

Table 1. Statewide lentil evaluations - 2012

Seeding Date: 4/11/2012	Soil Type: Kalispell vf SL	Harvest Date: 8/16/2012
Seeding Rate: 51 lb/A (ave.)	Soil Test: 57-12-110-42	
Previous Crop: Alfalfa	Fertilizer: 138-0-75-14	
Tillage: Conventional	Herbicide: None	
Irrigation: None	Insecticide: None	

Table 2. Lentil agronomic analysis

Cultivar		Days to	Height at	Days to	Grain Yield		TWT	TKW
		Flower	Maturity	Maturity	lb/A	bu/A	lb/bu	grams
		<i>days</i>	<i>inches</i>	<i>days</i>				
Merrit	Large Green	74	13.2	122	995	16	59	62
Riveland	Large Green	75	14.7	126	1267	20	59	74
Brewer	Med. Green	74	12.8	123	1198	19	59	58
CDC Richlea	Med. Green	78	13.3	123	<b>1565</b>	24	60	55
LC01602300R	Med. Green	79	14.7	125	<b>1726</b>	27	61	54
Essex	Small Green	78	12.3	123	1362	21	63	48
Eston	Small Green	78	13.2	124	1250	20	60	35
Crimson	Small Red	77	10.1	117	1189	19	63	34
CDC Impact	Extra Small		10.3	122	968	15	61	36
	Red	78						
Morena	Pardina	76	13.2	124	<b>1411</b>	22	64	41
Mean		76	12.8	123	1293	20	61	50
CV		1.24	7.93	1.07	17.99	18.00	4.31	2.29
LSD		1.4	1.5	1.9	337.6	5.3	3.8	1.6
Pr>F		<.0001	<.0001	<.0001	0.0021	0.0022	0.1079	<.0001

TWT: Test weight, TKW: Thousand kernel weight

Grain yield adjusted to 13% moisture

**Underlined** highest yielding variety, **bolded** grain yields are equal to highest yielding cultivar.