

Project Title: Statewide Lentil Variety Trial - 2015

Objective: To evaluate Lentil cultivars for yield and agronomic performance in Northwestern Montana.

Results:

No significant difference was observed for lentil yield. Yields averaged 15.2 bu/A (Table 2) that ranged from 12.9 bu/A for PSO7ND055E to 17.6 bu/A for CDC Impala CL. Statistical difference was observed for flowering, with an average occurrence at 173 Julian days (June 22): the earliest was PSO7ND055E at 169 days (June 16); the latest was CDC Redcoats at 177 days (June 26). Significant difference in height at flowering was observed and averaged 11.6 inches, ranging from 10.0 inches for PSO7ND055E to 12.5 inches for Viceroy. No significant differences were observed for heights at pod fill or physiological maturity. No statistical difference was observed for test weight, which averaged 59.9 lb/bu. Thousand kernel weight was significant and averaged 45.2 grams, and ranged from 32.6 grams for Viceroy to 62.3 grams for NDL08187L.

Summary:

Lentil yields on average were down from last year by more than 8 bu/A. The nursery was planted under rainfed condition and there was an extreme moisture stress (drought year) that influenced low yields.

Table 1. Material and Methods — Lentil Variety Trial — 2015

Seeding Date: 4/29/2015	Harvest Date: 8/17/2015
Julian Date: 119	Julian Date: 229
Seeding Rate: 12 plants/sqft	Soil Test: NA
Previous Crop: Barley	Fertilizer: 6-30-20
Tillage: Conventional	Herbicide: Prowl H2O 2 pt/A + Pursuit 3 oz/A (pre-plant)
Irrigation: None	Assure II 10-12 floz/A + NIS 1 qt/100 gal + AMS 2-4 lb/A
Soil Type: Creston Silt Loam	

Table 3. Lentil agronomic data — 2015

Cultivar	FLWR	HT	HT PF	HT PM	YLD	YLD	TWT	TKW
	Julian	FLWR in	in	in	lb/A	bu/A	lb/bu	g
CDC Impala CL	174	11.0	11.5	11.0	1056.6	17.6	66.2	32.8
Viceroy	173	12.5	13.8	13.3	985.7	16.5	64.1	32.6
CDC Richlea	173	12.3	13.3	12.5	971.7	16.2	59.5	53.3
Avondale	172	11.5	13.3	13.3	931.4	15.5	43.9	50.7
CDC Redcoats	177	12.3	12.3	12.5	849.4	14.2	61.5	42.8
NDL08187L	175	12.0	12.7	12.4	810.0	13.5	60.2	62.3
PSO7ND055E	169	10.0	13.7	11.4	776.1	12.9	63.5	41.6
Mean	173	11.6	12.9	12.3	911.5	15.2	59.9	45.2
CV	0.87	5.7	10.2	11.1	17.7	17.6	20.1	2.5
LSD	2.25	1.0	ns	ns	ns	ns	ns	1.7
Pr>F	0.0001	0.0007	0.2261	0.2148	0.2051	0.2004	0.2375	0.0001

FLWR: 50% flower, HT FLWR: height at flowering, HT PF: height at pod fill, HT PM: height at physiological maturity, YLD: yield, TWT: test weight, TKW: thousand kernel weight, ns: nonsignificant.