

Project Title: Lentil Variety Evaluation – 2013

Project Leader: Brooke Bohannon

Project Personnel: Chengci Chen

Objective: To evaluate the agronomic performance of lentil cultivars in northwestern Montana.

Results:

Eight cultivars were seeded on May 17 as a randomized complete block design using four replications.

Significant differences were observed among varieties for each of the agronomic traits (Table 2). Yields averaged 22.5 bu/A, ranging from 30.3 bu/A for CDC Redberry to 16.5 bu/A for Imi-Green. Test weights averaged 55.7 lb/bu, and ranged from 58.4 lb/bu for Viceroy to 53.1 lb/bu for CDC Greenland. CDC Redberry had a height of 22.1 inches, which was significantly taller than all other varieties, which averaged 17.7 inches.

Overall, CDC Redberry, a red-Turkish seed variety, performed better than the other varieties in regards to yield. It took 74 days to flower compared to 75 days for Viceroy, the next highest yielding variety. Viceroy is a small green seed variety that is shorter in height than average, but with the highest test weight of all the varieties. CDC Greenland is a large green seed variety with an average yield, the lowest test weight, but with the highest thousand kernel weight.

Table 1. Materials and Methods - Lentil variety trial - 2013

Seeding Date:	4/17/13	Soil Type:	Creston Sil
Julian Date:	107	Soil Test:	301-16-288
Seeding Rate:	NA	Fertilizer:	0-20-35
Previous Crop:	Winter Wheat	Pesticide:	NA
Tillage:	Conventional	Harvest Date:	9/11/13
Irrigation:	None	Julian Date:	254

Table 2. Lentil agronomic analysis – 2013

Cultivar		FLWR	HT PF	HT PM	YLD	YLD	TWT	TKW
		Julian	7/15	7/29	lb/A	bu/A	lb/bu	g
CDC Redberry	Red-Turkish	181	22.1	8.0	1816.0	30.3	57.3	41.0
Viceroy	Small Green	182	15.9	7.0	1496.2	24.9	58.4	34.2
CDC Greenland	Large Green	182	16.5	8.0	1379.2	23.0	53.1	56.1
Impress CL	Med. Green	182	15.4	9.5	1309.8	21.8	54.9	45.2
CDC Richlea	Med. Green	183	18.3	8.0	1303.2	21.7	54.1	48.3
Avondale (2300R)	Med. Green	181	19.3	9.0	1244.9	20.7	56.1	44.3
Crimson	Small Red	181	16.6	7.5	1238.2	20.6	58.2	33.4
Imi-Green	Med. Green	181	17.4	11.0	990.2	16.5	53.9	49.3
Mean		181.6	17.7	8.5	1347.2	22.5	55.7	44.0
CV		0.5	10.7	12.4	14.1	14.1	1.7	5.3
LSD		1.2	2.8	1.6	279.7	4.7	1.4	3.4
Pr>F		0.0374	0.0011	0.0007	0.0005	0.0005	0.0001	0.0001

Footnotes: FLWR: 50% flowering, HT PF: height at pod fill, HT PM: height at physiological maturity, YLD: Yield, TWT: test weight, TKW: thousand kernel weight