

Project Title: Lentil Variety Evaluation – 2014

Objective: To evaluate lentil cultivars for yield and agronomic performance in northwestern Montana.

Results:

Sixteen cultivars were seeded on April 23 as a randomized complete block design with four replicates.

Significant differences were observed among varieties for each agronomic trait (Table 2). Yields averaged 23.4 bu/A, ranging from 11.4 bu/A for Riverland to 41.6 bu/A for Viceroy. Height at pod-fill averaged 19.4 inches and ranged from 16.0 inches for Pardina to 22.8 inches for Imi-Green. Height at physiological maturity averaged 10.2 inches and ranged from 8.0 inches for Pardina to 14.6 inches for CDC Redberry. Days to physiological maturity averaged 218 and ranged from 214 for Crimson to 222 Julian days for Imi-Green. Test weights averaged 58.9 lb/bu and ranged from 53.8 lb/bu for Riverland to 60.9 lb/bu for Morena. Thousand kernel weights averaged 48.7 grams and ranged from 37.4 grams for Viceroy to 73.2 grams for Riverland.

Summary:

Average lentil yields for 2014 were slightly increased compared to 2013, 23.4 bu/A and 22.5 bu/A respectively.

Table 1. Materials and Methods - Lentil Variety Trial - 2014

Seeding Date:	4/23/2014	Harvest Date:	9/4/2014
Julian Date:	113	Julian Date:	252
Seed density:	12-15 seeds/sqft	Soil Type:	Creston SiL
Previous Crop:	Peas	Soil Test:	259-16-172
Tillage:	Conventional	Fertilizer:	9-40-10
Irrigation:	None	Herbicide:	Prowl H2O 3pt/A (pre-plant)

Table 2. Lentil agronomic data – 2014

Cultivar	Type	FLWR Julian	HT PF 7/9 in	HT PM 8/5 in	VIN	PM Julian	YLD lb/A	YLD bu/A	TWT lb/bu	TKW g
					LNGTH @PM in					
Viceroy	Small Green	182	18.8	10.6	24.3	219	2498.6	41.6	60.5	37.4
CDC Redberry	Red-Turkish	179	20.9	14.6	21.5	219	1860.2	31.0	60.1	42.5
CDC Impact	Red	180	19.2	10.4	20.5	216	1732.3	28.9	60.8	38.8
Eston	Small Green	177	18.8	9.4	21.0	217	1670.9	27.8	59.4	38.2
CDC Richlea	Med. Green	179	19.7	9.6	23.1	217	1663.2	27.7	57.5	53.5
Avondale (2300R)	Med. Green	176	21.5	10.4	23.3	217	1626.5	27.1	59.1	51.2
CDC Greenland	Large Green	179	19.0	10.9	22.5	219	1551.0	25.9	57.1	67.2
Impress CL	Med. Green	178	20.6	9.5	21.5	217	1428.2	23.8	59.4	53.2
Imi-Green	Med. Green	178	22.8	11.8	26.3	222	1334.6	22.2	58.4	58.2
Essex	Small Green	180	18.7	10.1	21.8	221	1182.6	19.7	59.1	49.4
Merrit	Large Green	174	17.7	9.9	21.3	220	1095.0	18.3	57.3	54.3
Morena	Pardina	175	19.9	10.0	24.0	220	1089.1	18.2	60.9	41.5
Pardina	Pardina	175	16.0	8.0	20.8	215	1080.5	18.0	60.7	41.5
Crimson	Small Red	178	18.6	8.3	19.0	214	1021.9	17.0	60.0	38.1
Red coats	Small Red	182	20.1	10.8	22.5	217	928.0	15.5	58.5	41.0
Riverland	Large Green	175	17.9	9.8	25.3	218	682.1	11.4	53.8	73.2
Mean		178	19.4	10.2	22.4	218	1402.8	23.4	58.9	48.7
CV		0.6	6.0	11.4	7.9	0.9	28.9	28.9	1.14	3.1
LSD		1.6	1.7	1.7	2.5	2.9	579.3	9.65	0.96	2.1
Pr>F		0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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