

Project Title: Statewide Lentil Variety Trial - 2017

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

Results:

Significant difference was observed for lentil yield with a mean yield of 60.3 bu/A (Table 2) and ranged from 45.9 bu/A for CDC Imigreen to 70.9 bu/A for Avondale. Test weights averaged 62.8 lb/bu. Thousand kernel weights averaged 40.4 grams. Plant stand averaged 10.8 plants per square foot and ranged from 4.6 plnts/sqft for CDC Impala CL to 14.7 plnts/sqft for CDC Imigreen. Days to 50 percent flowering averaged 185 days (July 4). Plant height at flowering averaged 15.9 inches yet no significant difference was observed at physiological maturity.

Summary:

The nursery was planted under rainfed condition with adequate subsurface moisture on silt loam soil. Weed was well controlled this season due to the pre-plant incorporated herbicide.

Table 1. Materials and Methods.

Seeding Date:	5/11/2017	Harvest Date:	9/11/2017
Julian Date:	131	Julian Date:	254
Seeding rate:	12 plants/sqft	Soil Test:	120-13-160
Previous Crop:	Winter wheat	Fertilizer:	6-30-30
Tillage:	Conventional	Seed treatment:	Insecticide (Cruiser 5FS) and Fungicide (Apron Maxx RTA)
Irrigation:	None	Herbicide:	Triflurex (pre-plant incorporated)
Soil Type:	Creston silt loam	Insecticide:	Warrior II (June 6)

Table 2. Lentil agronomic data.

Cultivar	PLNT sqft	FLWR Julian	HT FLWR in	HT PF in	HT PM in	YLD lb/A	YLD bu/A	TWT lb/bu	TKW g
Avondale	12.4	182	15.0	21.8	20.8	4254.0	70.9	62.4	45.2
CDC Richlea	14.3	185	16.8	22.0	20.0	4169.6	69.5	61.0	47.8
CDC Maxim CL	11.5	185	14.0	21.0	22.0	3636.6	60.6	63.6	35.4
CDC Invincible CL	7.5	187	15.8	21.3	21.0	3628.8	60.5	63.5	31.7
CDC Impala CL	4.6	188	14.8	18.8	19.3	3610.0	60.2	64.9	30.2
CDC Viceroy	8.6	187	16.8	21.0	19.5	3582.0	59.7	64.2	32.1
CDC Impress CL	12.6	185	16.3	24.0	20.0	3326.1	55.4	61.7	48.6
CDC Imigreen	14.7	185	17.8	24.5	20.7	2754.4	45.9	61.2	52.5
Mean	10.8	185	15.9	21.8	20.4	3620.2	60.3	62.8	40.4
CV	24.4	0.2	9.7	8.1	6.7	11.2	11.2	0.6	3.1
LSD	3.9	0.6	2.3	2.6	ns	596.2	9.9	0.5	1.8
Pr>F	0.0002	0.0001	0.0434	0.0053	0.1639	0.0012	0.0012	0.0001	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, PRO: protein, ns: nonsignificant.