

Pulses Variety Trials

Summary:

Eleven yellow and five green field pea varieties were grown at Consort and Oyen. In Oyen, seven lentil varieties were also evaluated. Pulse varieties were tested to determine their performance in the brown soil zone, as part of the Alberta Regional Variety Testing Program. Overall yield average responses were at least 10 bu/A below previous years.

Field peas yield responses were similar in both locations. Green pea yields were 57 and 60 bu/A while yellow pea yielded 60 and 62 bu/A for Consort and Oyen, respectively. Lentil variety yield average was 33 bu/A.

More information on varieties is available in the variety guide in the seed.ab.ca seed guide or website or on the Alberta Agriculture and Rural Development website at www.agric.gov.ab.ca. Feel free to call the CARA office with your questions.

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Project Description: Please see “Variety Trials”, page 1.

Table 1 **Soil Analysis**

Soil Analysis	Consort	Oyen
Nitrogen* (0-24")	67 lb/A (D)	18 lb/A (D)
Phosphorus* (0-6")	56 lb/A (D)	29 lb/A (D)
Potassium* (0-6")	1532 lb/A (O)	633 lb/A (O)
Sulfate* (0-24")	37 lb/A (O)	35 lb/A (O)
Soil Salinity* (E.C.)	0.19 (G)	0.22 (G)
pH	6 (Alkaline)	7.2 (N)
OM (%)	4.0 (normal)	2.7 (n)
Soil Texture**	Loam	Loam

* D = Deficient, M = Marginal, O = Optimum, E = Excess,

Table 2 **Precipitation 2018 (inches)**

Month	Consort	Oyen
May	1.1	0.9
June	4.7	2.5
July	1.0	1.8
August	0.9	0.4
Total	7.7	5.6

Table 3 **Agronomic Information**

	Consort	Oyen
Previous Crop	Canola	Canola
Seeding Date	May 15	May 14
Seeding Depth	1.5 inches	
Seedbed Condition	Excellent moisture conditions	
Seeding Rate	6 plants per square foot	
Fertilizer (11-52-0)	50 lb/A placed between the paired seed rows	
Seeder	Henderson 500 drill*	
Seedbed Preparation	Pre-seed glyphosate	
Herbicide	Odyssey	
Fungicide	None applied	
Harvest Dates:		
Peas	August 15	August 15
Lentil		August 29

* 5 paired rows on 11" spacing,

Results:

Table 4. **Green Peas – Consort 2018**

Variety	Yield (lb/A)	Yield (bu/A at 60 lb/bu)	Height (cm)	Bushel Weight (lb/bu)	TKW (g)
AAC Comfort	3117	52	84	66	220
CDC Forest	4038	67	86	67	220
CDC Limerick	3052	51	83	66	182
CDC Spruce	3481	58	89	67	231
LRP 1424	3277	55	84	68	212
Mean	3393	57	85	67	213
LSD (0.05)	NS				
C.V. %					

Comments: Green peas average yields ranged from 51 to 67 bu/A, with an average yield of 57 bu/A. The yield average during 2018 was similar to 2017.

Table 5. **Yellow Peas – Consort 2018**

Variety	Yield (lb/A)	Yield (bu/A at 60 lb/bu)	Height (cm)	Bushel Weight (lb/bu)	TKW (grams)
AAC Barrhead	2658	44	81	67	208
AAC Carver	3578	60	85	66	216
AAC Chrome	4519	75	76	67	198
AAC Lacombe	3246	54	81	69	236
CDC Amarillo	3814	64	83	68	214
CDC Athabasca	4245	71	73	68	152
CDC Canary	3217	54	89	68	226
CDC Inca	3307	55	81	67	207
CDC Lewochko	3693	62	87	67	208
CDC Meadow	3769	63	83	67	203
CDC Spectrum	3371	56	75	68	209
Mean	3583	60	81	67	207
LSD (0.05)	NS				
C.V. %					

Comments: Yellow peas average yields at Consort ranged from 44 to 75 bu/A, with an average yield of 60 bu/A. The average yield at Consort for yellow peas was 10 bu/A higher than 2017. The highest yield was for AAC Chrome.

Table 6. **Green Peas – Oyen 2018**

Variety	Yield (lb/A)	Yield (bu/A at 60 lb/bu)	Height (cm)	Bushel Weight (lb/bu)	TKW (g)
AAC Comfort	3786	63	71	65	234
CDC Forest	3831	64	74	66	223
CDC Limerick	2994	50	72	67	203
CDC Spruce	3651	61	77	66	235
LRP 1424	3714	62	75	67	208
Mean	3595	60	74	66	221
LSD (0.05)	NS				
C.V. %					

Comments: Green peas average yields ranged from 50 to 64 bu/A, with an average yield of 60 bu/A. There were no statistical differences between varieties. Green peas at Oyen behave similar than same varieties planted in Consort.

Table 7. **Yellow Peas – Oyen 2018**

Variety	Yield (lb/A)	Yield (bu/A at 60 lb/bu)	Height (cm)	Bushel Weight (lb/bu)	TKW (grams)
AAC Barrhead	3294	55	67	67	205
AAC Carver	4193	70	69	66	223
AAC Chrome	4014	67	63	66	217
AAC Lacombe	3994	67	67	66	227
CDC Amarillo	3562	59	70	66	214
CDC Athabasca	3615	60	68	65	255
CDC Canary	4112	69	78	68	224
CDC Inca	3490	58	78	67	223
CDC Lewochko	3607	60	79	66	228
CDC Meadow	3174	53	69	68	196
CDC Spectrum	3861	64	59	66	207
Mean	3720	62	70	67	220
LSD (0.05)	NS				
C.V. %					

Comments: Yellow pea yields at Oyen ranged from 53 to 70 bu/A, with an average yield of 62 bu/A. The highest yield was for AAC Carver. Yellow peas varieties at Oyen showed to have the same response as the same varieties planted in Consort.

Table 8. **Lentils – Oyen 2018**

Variety	Yield (lb/A)	Yield (bu/A at 60 lb/bu)	Height (cm)	Bushel Weight (lb/bu)	TKW (g)
CDC IBC-937 CL	1910	32	34	64	45
CDC IBC-978 CL	2096	35	33	66	31
CDC Impulse	2318	39	35	64	42
CDC Kermit	1781	30	35	66	35
CDC Maxim	1910	32	34	66	34
CDC Proclaim CL	1758	29	32	65	37
CDC Roxy	2223	37	32	67	29
Mean	1999	33	33	65	36
LSD (0.05)	NS				
C.V. %					

Comments: Lentil average yields at Oyen ranged from 29 to 39 bu/A, with an average yield of 33 bu/A. There was no statistically significant difference in yield between varieties.