

Project Title: Pea Variety Evaluation – 2014

Objective: To evaluate pea cultivars for yield and agronomic performance.

Results:

Yellow pea yields averaged 83.8 bu/A (Table 2), ranging from 74.0 bu /A for CDC Leroy to 92.8 bu/A for Salamanca. Despite the range in yields there were no statistical differences among cultivars evaluated. Average calendar day to 50% flower was 179 days (June 28) with Navarro being the earliest at 174 days (June 23) to 182 days (August 1) for Spider. Height at pod-fill averaged 47.3 inches and ranged from 43.6 inches for Bridger to 51.1 inches for Earlystar. Universal was the first to reach physiological maturity at 213 days (August 1). Vine length and canopy height at physiological maturity averaged 43.5 inches and 20.5 inches respectively. Test weight averaged 64.3 lb/bu.

Green pea yield averaged 74.9 bu/A. The highest yielding cultivar was Daytona at 90.2 bu/A (Table 3). Average Julian calendar day to 50% flower was 179 (June 28) and ranged 175 to 181 Julian calendar days. Physiological maturity was observed at an average of 214 Julian days (August 2) and ranged from 212 to 216 days. Height at pod-fill averaged 43.9 inches and ranged from 40.0 inches for Arcadia to 48.4 inches for Daytona. Test weight averaged 62.7 lb/bu and ranged from 61.3 lb/bu for Aragorn to 64.2lb/bu Greenwood. No significant difference was observed in vine length and height at physiological maturity.

Summary:

Pea yields were slightly higher than in 2013 most likely due to the favorable growing season; timely spring rains, low insect, disease and weed pressures, and no hail during pod and seed development.

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

Seeding Date:	4/23/2014	Harvest Date:	8/13/2014
Julian Date:	113	Julian Date:	225
Seeding Rate:	8-10 plants/sqft	Soil Test:	259-16-172
Previous Crop:	Peas	Fertilizer:	9-40-10
Tillage:	Conventional	Herbicide:	Prowl H2O 3pt/A (pre-plant), Raptor 3 floz/A , Basagran 12 floz/A,
Irrigation:	None		
Soil Type:	Creston SiL		0.25% NIS

Table 2. Yellow pea agronomic data - 2014

	FLR	HT PF	HT PM	VINE LGTH	PM	YLD	YLD	TWT
Cultivar	Julian	in	in	@ PM	Julian	lb/A	bu/A	lb/bu
Salamanca	179	50.9	16.0	47.8	214	5569.4	92.8	63.9
CDC Treasure	179	50.6	15.5	47.8	214	5488.3	91.5	65.0
Earlstar	178	51.1	19.8	43.8	214	5306.4	88.4	64.4
Navarro	174	45.0	30.0	42.8	215	5230.0	87.2	64.3
Jet Set	181	44.5	22.8	43.5	217	5208.9	86.8	63.2
Pro 127-2	179	48.8	14.0	45.9	215	5133.1	85.6	64.1
DS Admiral	179	50.1	16.5	48.3	216	5017.9	83.6	63.8
Montech 4152	179	49.0	22.0	44.3	217	5008.7	83.5	65.6
Spider	182	47.6	12.5	44.3	218	4890.5	81.5	64.1
SW Midas	181	45.5	17.8	38.4	215	4887.5	81.5	64.5
Agassiz	181	45.6	25.3	39.3	218	4868.6	81.1	63.3
Universal	175	44.1	24.5	41.0	213	4726.5	78.8	62.8
Bridger	177	43.6	31.8	39.0	215	4632.3	77.2	65.9
CDC Leroy	181	45.9	18.8	42.5	217	4440.3	74.0	65.8
Mean	179	47.3	20.5	43.5	215	5029.2	83.8	64.3
CV	0.4	4.2	26.5	9.5	0.8	10.1	10.1	1.1
LSD	1.1	2.8	7.8	5.9	2.4	ns	ns	1.0
Pr>F	0.0001	0.0001	0.0001	0.0143	0.0017	0.1365	0.1365	0.0001

Table 3. Green pea agronomic data - 2014

	FLR	HT PF	HT PM	VINE LGTH	PM	YLD	YLD	TWT
Cultivar	Julian	in	IN	@ PM	Julian	lb/A	bu/A	lb/bu
Daytona	181	48.4	23.8	42.5	216	5413.3	90.2	63.9
Greenwood	177	42.4	18.5	39.5	214	4787.1	79.8	64.2
Crusier	177	46.3	13.5	44.4	214	4605.1	76.8	62.0
Majoret	181	43.6	15.8	39.4	215	4430.3	73.8	63.3
Ginny	179	42.1	14.0	38.8	212	4323.9	72.1	62.3
Arcadia	181	40.0	11.8	36.4	212	4283.3	71.4	62.2
Aragorn	175	43.9	11.5	43.3	213	4157.9	69.3	61.3
CDC Striker	181	44.8	13.3	43.5	214	3934.2	65.6	62.7
Mean	179	43.9	15.3	41.0	214	4491.9	74.9	62.7
CV	0.6	4.5	35.7	10.5	0.6	11.6	11.6	1.4
LSD	1.5	2.9	ns	ns	1.9	767.8	12.8	1.3
Pr>F	0.0001	0.0002	0.0683	0.1568	0.0108	0.0235	0.0235	0.0021

FLR: 50% flower, HT PF: height at pod fill, HT PM: height at physiological maturity, VINE LGTH @ PM: vine length at physiological maturity in inches, PM: physiological maturity, YLD: yield, TWT: test weight, ns: nonsignificant.