

North Dakota Dry Pea Variety Trial Results for 2015 and Selection Guide

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Introduction

Field pea fits well into small-grain rotations. The green- and yellow-seeded varieties are used for human consumption as dry split peas. Field peas also are used as protein concentrates for livestock and pigeon feeds. Field pea stems grow to a length of 33 to 36 inches, and the plant reaches its maximum height at the early pod-fill stage. A cool growing season (a mean temperature of 55 to 65 degrees) is necessary for optimum pea yields. Hot weather during flowering may result in a reduced seed set.

In North Dakota, field pea takes about 60 days from seeding until flowering and 90 to 100 days to maturity. The moisture requirement for field pea is similar to that for cereal grains. Field pea can be grown on a wide range of soil types,

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but drainage must be adequate because field pea does not tolerate saturated or soggy conditions. Field pea can be grown in a no-tillage or conventional-tillage cropping system. Field pea grows best when seeded into a weed-free seedbed and fertile soils. Land preparation for seeding is similar to that of wheat.

To obtain good soil-to-seed contact, seedbeds should be firm. Avoid seedbeds with large clods. Do not work the soil too finely because subsequent soil crusting following rains may cause poor emergence. Drill the seeds 2 to 3 inches deep in narrow rows (less than 10 inch apart) as early in the spring as possible. The soil should not be excessively wet at seeding.

Seeding can be done with an air seeder or grain drill. Adjust the seeder to prevent cracking of the seed, especially with the large-seeded varieties, because cracked seed will not germinate. Do not pack or roll immediately after seeding if the soil moisture is high because excess compaction or crusting can occur.

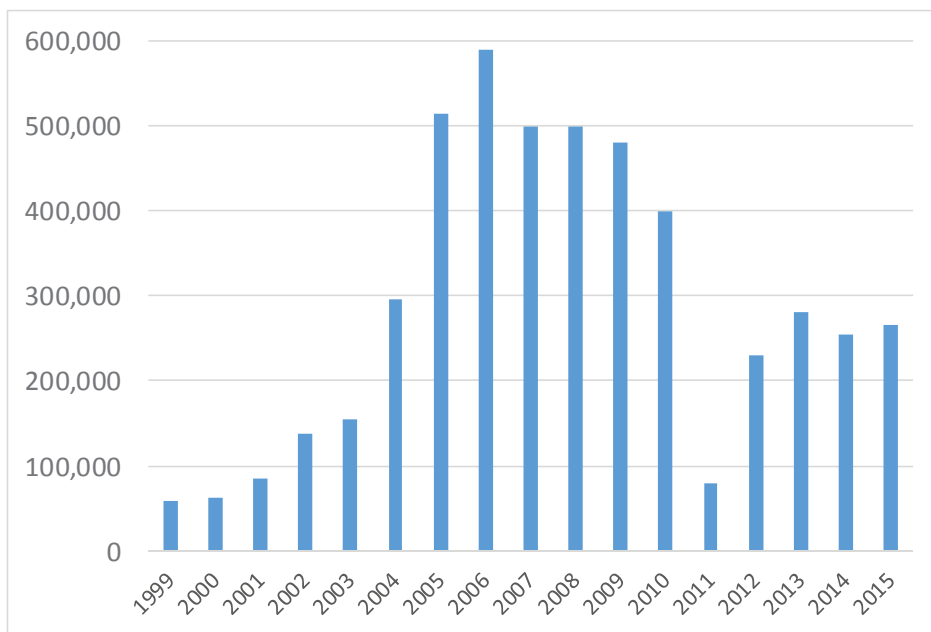
Pea seedlings can withstand considerable frost. Even if the frost is severe enough to kill the main shoot, the pea plant will regrow from buds at one of the nodes at or below the soil surface. However, this will delay plant maturity. The pea seed germination rate increases with increasing temperatures, but at temperatures greater than 64 degrees, the percentage of seed germination decreases.

Field peas are capable of utilizing bacterially fixed atmospheric nitrogen. The specific bacterial association for nitrogen fixation in field peas and lentils is with the bacterium *Rhizobium leguminosarum*, which is a different bacteria species than is used for soybean inoculation. If field peas are to be grown in a field for the first time or no peas were grown there recently, inoculating the seed with the proper *Rhizobium* bacteria prior to planting may be needed to ensure nodulation.

Treating the seed with a fungicide can improve emergence and plant establishment significantly. Fungicide labels should be checked to see if a particular fungicide can be used on field pea.

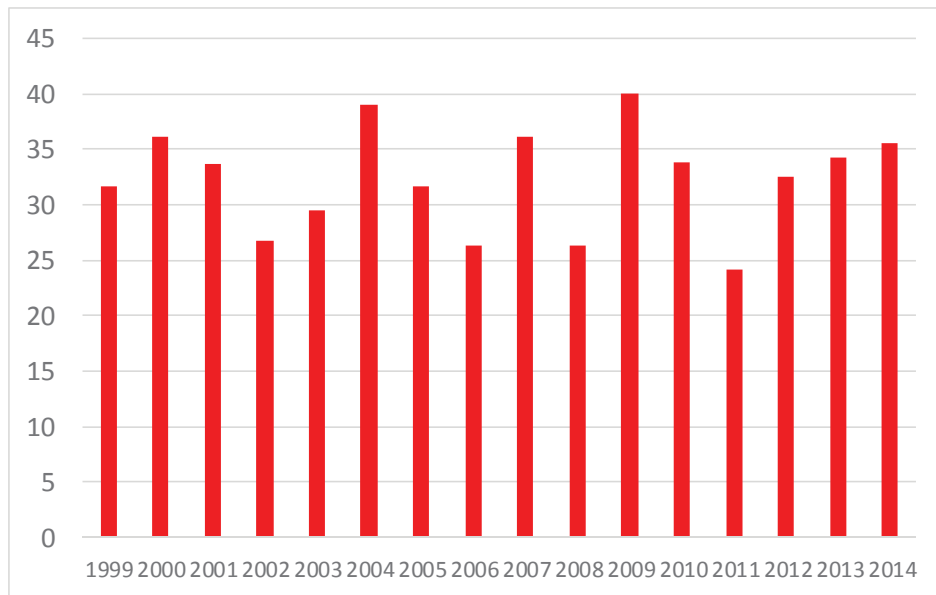
Having level ground is critical for easy harvesting. Stony fields should be avoided or rolled after seeding to bury loose stones that might be picked up during swathing and harvesting. For more production information, see publication A1166, "Field Pea Production," (www.ag.ndsu.edu/pubs/plantsci/rowcrops/a1166.pdf). Dry pea planted acres and yield have fluctuated during the past 17 growing seasons as shown in Figure 1 and 2.

Figure 1. North Dakota Dry Pea Harvested Acreage, 1999 to 2015.



Source: North Dakota Agricultural Statistics Service – USDA.

Figure 2. North Dakota Dry Pea Yield in Bushels per Acre, 1999 to 2014.



Source: North Dakota Agricultural Statistics Service – USDA.

2015 Dry Pea Performance Trials

Variety trial data from all NDSU Research Extension Centers for all crops can be found at www.ag.ndsu.edu/varietytrials/. Weather data are provided in Table 1.

Table 1. April-September 2015 Average Temperature and Precipitation Rankings for Selected North Dakota Locations.

City	Temperature Ranking	Precipitation Ranking
Bowman	59.7 F (40th Warmest Period Since 1915)	12.6 inches (44th Wettest Period Since 1915)
Bismarck	62.0 F (23rd Warmest Period Since 1875)	14.0 inches (45th Wettest Period Since 1875)
Cavalier	59.3 F (23rd Warmest Period Since 1934)	20.9 inches (6th Wettest Period Since 1927)
Fargo	62.8 F (10th Warmest Period Since 1881)	16.9 inches (57th Wettest Period Since 1881)
Minot Exp. Station	59.9 F (22nd Warmest Period Since 1905)	14.8 inches (31st Wettest Period Since 1905)
Williston Exp. Station	61.3 F (14th Warmest Period Since 1894)	8.7 inches (27th Driest Period Since 1894)
North Dakota Average	60.4 F (15th Warmest Period Since 1895)¹	14.1 in. (46th Wettest Period Since 1894)¹

Source: Adnan Akyüz, NDSU, North Dakota state climatologist.

¹Statewide values are calculated based on all available locations in North Dakota rather than the mathematical average of the list above.

The agronomic data presented in this publication are from replicated research plots using experimental designs that enable the use of statistical analysis. The LSD (least significant difference) numbers beneath the columns in the tables are derived from the statistical analyses and only apply to the numbers in the column in which they appear. If the difference between two varieties exceeds the LSD value, it means that with 95 or 90 percent probability (LSD 0.05 or 0.10), the higher-yielding variety has a significant yield advantage. If the difference between two varieties is less than the LSD value, then the variety yields are considered similar.

The abbreviation NS is used to indicate no significant difference for that trait among any of the varieties. The CV is a measure of variability in the trial. The CV stands for coefficient of variation and is expressed as a percentage. Large CVs mean a large amount of variation that could not be attributed to differences in the varieties. In the tables, the “mean” indicates the average of the observations in the column. The abbreviation PM stands for physiologically mature. Physiological maturity is reached when the bottom 75 percent of the pods have turned yellow to brown. At this time, the upper 25 percent of the pods will be a dull green, with the pod surface no longer succulent.

Yields are reported at 15 percent moisture content. The standard for reporting protein in field pea is at 0 percent moisture. The harvest index reflects the plant height at the time of harvest relative to plant height at the end of bloom (maximum plant height). The harvest ease score is taken at the time the plants are dried down sufficiently to allow threshing or harvesting to occur. Harvest ease is an assessment of combining efficiency. The lower the score, the easier the operator will be able to get the cutter bar underneath the lowest pods and make decent travel speed through the field.

Only compare values within the table and look for trends for the desired trait among different experimental sites and years. In the tables, the dry pea varieties are arranged in alphabetical order within market class (yellow and green cotyledon types). Footnotes provide more details for the table under which they appear. Characteristics to evaluate for selecting a dry pea variety include market class, yield potential in your area, test weight, reaction to problematic diseases and maturity date.

When selecting a high-yielding and good-quality variety, use data that summarize several years and locations. Table 2 provides information on a core group of varieties that were included in most locations. Choose the variety that, on average, performs the best at multiple locations near your farm during several years. Presentation of data for the varieties tested does not imply approval or endorsement by the authors or agencies conducting the test. North Dakota State University approves the reproduction of any table in this publication only if no portion is deleted, appropriate footnotes are given, the order of the data is not rearranged and NDSU is given credit for conducting the trial.

Table 2. 2015 Dry Pea Description and Yield of Selected Yellow and Green Cotyledon Varieties.

Variety	Vine Length	Harvest Ease	Powdery Mildew Tolerance		Seed Size	2012 Avg. Yield	2013 Avg. Yield	2014 Avg. Yield	2015 Avg. Yield
			Maturity	15 locations ¹		7 locations ²	10 locations ³	10 locations ⁴	
						(bu/a)	(bu/a)	(bu/a)	(bu/a)
Yellow Cotyledon Type									
Agassiz	Tall	Good	Good	Medium	Medium	50.3	56.3	54.0	56.2
CDC Golden	Medium	Good	Good	Medium	Medium	49.6	--	--	--
CDC Meadow	Medium	Good	NA ⁵	Medium	Med. Small	--	51.6	54.2	58.5
DS Admiral	Medium	Good	Good	Early/Med.	Medium	49.3	47.6	51.1	55.8
Green Cotyledon Type									
CDC Striker	Medium	Good	Poor	Medium	Medium	51.4	46.1	48.4	57.7
Cruiser	Medium	Fair	Poor	Medium	Small	44.3	45.4	46.6	49.7
Majoret	Medium	Fair	Poor	Medium	Medium	44.3	48.4	48.1	50.6
Mean						48.2	49.2	50.6	54.8
CV %						7.9	9.1	9.6	7.1
LSD 0.05						--	--	--	3.5
LSD 0.10						2.3	4.1	3.6	2.9

¹These varieties appeared in all the locations reported in the 2012 publication except for Carrington Forage/Cover Crop.

²These varieties appeared in all the locations reported in the 2013 publication except Tables 10, 11 and 14.

³These varieties appeared in all the locations reported in the 2014 publication except Table 9.

⁴These varieties appeared in all the locations reported in the 2015 publication except Table 6.

⁵NA is not available.

Table 3. 2015 Locations Where Pea Varieties Were Tested.

Pea Variety	Fargo	Carrington	Carrington Organic	Langdon	Minot	Dickinson	Williston	Williston Irrigated	McKenzie	Golden Valley	Hettinger
Yellow Cotyledon Type											
AAC Carver	--	X	--	--	X	--	--	--	--	--	X
Abarth	--	X	--	--	--	--	X	--	--	--	--
Agassiz	X	X	X	X	X	X	X	X	X	X	X
Bridger	--	X	--	X	--	--	X	--	--	--	X
CDC Amarillo	X	X	--	X	X	X	X	--	--	--	X
CDC Meadow	X	X	X	X	X	X	X	X	X	X	X
CDC Saffron	X	X	--	X	X	X	X	--	--	--	X
DS Admiral	X	X	X	X	X	X	X	X	X	X	X
Durwood	--	X	--	X	--	--	X	--	--	--	--
Earlystar	--	X	--	--	X	--	--	--	--	--	X
Gambit	--	X	--	--	--	--	--	--	--	--	--
Gunner	--	X	--	--	X	--	X	--	--	--	X
Hyline	--	X	--	--	X	--	X	--	--	--	X
Jetset	--	X	--	--	X	--	--	--	--	--	X
Korando	--	X	--	--	--	--	X	--	--	--	--
Mystique	--	X	--	X	--	--	X	--	X	X	--
Navarro	--	X	--	--	X	--	--	--	--	--	--
Nette	--	X	X	X	--	--	X	--	X	X	X
Salamanca	--	X	--	--	X	--	--	--	--	--	X
Spider	--	X	--	--	X	--	--	--	--	--	X
SW Midas	--	X	--	--	--	--	--	--	--	--	X
Torch	--	--	--	--	X	--	--	--	--	--	--
Trapeze	--	--	--	--	--	--	X	--	--	--	--
Vegas	--	X	--	--	X	--	--	--	--	--	X
Green Cotyledon Type											
Aragorn	--	X	--	--	X	--	X	X	X	X	--
Arcadia	--	X	--	--	--	--	X	--	--	--	--
Bluemoon	--	X	--	--	X	--	--	--	--	--	X
CDC Striker	X	X	X	X	X	X	X	X	X	X	X
Cruiser	X	X	X	X	X	X	X	X	X	X	X
Daytona	--	X	--	--	X	--	--	--	--	--	X
Ginny	--	--	--	--	X	--	X	X	X	X	--
Greenwood	--	--	--	--	X	--	X	--	--	--	--
Majoret	X	X	X	X	X	X	X	X	X	X	X
Matrix	--	X	--	--	--	--	--	--	--	--	--
Viper	--	X	--	--	--	--	--	--	--	--	--

Table 4. 2015 Dry Pea - Fargo - Authors, K. McPhee and S. Gilles.

Variety	Days to	Days to	Vine	Canopy	Height	Number of	Seed	Seeds/	1,000	Test	Yield
	Flower	PM	Length ¹	Height ²	Index ³	Reprod.	Protein	Pound	Seed	Weight	2015
	(DAP) ⁴	(DAP) ⁴	(inches)	(inches)	(%)	Nodes	(%)		(gram)	(lb/bu)	(bu/a)
Yellow Cotyledon Type											
Agassiz	42	85	48	19	39	9	26.5	2,062	220	62.2	52.3
CDC Amarillo	45	88	46	24	55	8	25.7	2,022	225	62.7	57.2
CDC Meadow	42	82	49	17	34	10	25.8	2,279	199	63.0	51.2
CDC Saffron	44	87	39	23	59	8	26.1	1,897	240	63.4	58.3
DS Admiral	43	81	43	20	46	9	26.1	1,957	232	62.7	54.9
Green Cotyledon Type											
CDC Striker	43	82	35	14	39	7	25.5	2,256	201	62.8	53.2
Cruiser	43	88	52	18	34	11	25.3	2,289	199	62.6	44.2
Majoret	43	86	41	12	31	8	27.5	2,117	215	63.0	48.8
Mean	43	85	44	18	42	9	26.1	2,110	216	62.8	52.5
CV %	1.7	2.0	9.5	20.8	28.2	16.0	3.2	3.4	3.2	0.5	8.1
LSD 0.05	0.9	2.0	5.1	4.6	14.5	2.0	1.0	86.8	8.5	0.4	5.2
LSD 0.10	0.7	1.6	3.9	3.5	11.1	1.0	0.8	67	6.5	0.3	4.0

Planted: May 22. Harvested: Sept. 11. Previous crop: spring wheat.

¹Plant height at end of flowering.

²Height of canopy at harvest.

³Calculated as the ratio of canopy height/plant height.

⁴DAP = Days after planting.

Table 5. 2015 Dry Pea - Carrington - Authors, M. Ostlie, B. Schatz, J. Nielsen and M. Halverson.

Variety	Days to Flower (DAP) ⁵	Days to PM (DAP) ⁵	Vine Length ¹ (inch)	Canopy Height ² (inch)	Height Index ³ (%)	Harvest Ease ⁴ (0-9)	Seed Protein (%)	Seeds/ Pound	1,000	Test Weight (lb/bu)	Seed Yield	
									Seed Weight (gram)		2015	3-yr. Avg.
Yellow Cotyledon Type												
AAC Carver	63	96	35	19	55	4	23.7	1,767	257	62.5	83.9	--
Abarth	59	95	30	19	64	5	23.9	1,660	274	61.7	82.9	75.8
Agassiz	63	99	33	15	46	5	24.8	1,865	244	62.2	80.6	75.0
Bridger	59	95	32	25	78	3	26.0	1,853	245	63.2	76.5	70.0
CDC Amarillo	65	100	36	23	64	3	24.6	1,762	258	61.9	88.6	--
CDC Meadow	61	96	32	17	53	5	24.4	2,029	224	62.6	83.2	70.9
CDC Saffron	64	98	31	24	78	3	25.2	1,780	255	62.7	75.0	--
DS Admiral	62	96	32	19	58	4	24.8	1,754	259	62.6	85.2	67.2
Durwood	61	97	33	23	70	2	25.7	1,751	259	62.8	72.4	--
Earlstar	61	95	32	18	55	5	23.5	1,966	231	62.5	78.2	--
Gambit	65	98	33	17	50	6	25.6	1,522	298	62.0	71.1	--
Gunner	62	99	34	16	45	5	25.3	1,841	247	62.4	76.5	69.9
Hyline	63	98	30	14	47	6	24.3	1,760	258	62.5	73.2	--
Jetset	63	100	31	13	41	7	25.3	1,813	250	62.1	78.7	--
Korando	56	96	28	15	53	6	27.6	1,572	289	61.7	62.2	64.5
Mystique	63	99	37	20	54	3	24.8	1,675	271	62.4	74.9	68.3
Navarro	56	93	27	15	57	6	26.6	1,562	291	61.9	69.7	66.2
Nette	59	92	27	18	68	3	24.4	1,833	248	62.6	73.0	68.1
Salamanca	64	96	34	20	60	4	27.2	1,681	270	62.5	77.4	70.4
Spider	62	99	31	17	56	5	25.7	1,684	270	62.8	70.5	68.1
SW Midas	62	96	29	15	51	6	24.6	2,033	223	62.2	72.9	69.1
Vegas	62	96	33	22	66	3	26.2	1,806	251	62.5	72.4	68.6
Green Cotyledon Type												
Aragorn	58	91	26	10	37	8	26.4	2,007	226	60.9	66.0	59.2
Arcadia	62	97	26	10	40	8	24.9	1,940	235	62.2	74.5	71.5
Bluemoon	60	95	29	16	57	6	24.4	1,700	267	62.2	79.4	72.4
CDC Striker	60	97	29	12	39	7	24.6	1,999	227	62.1	77.7	70.0
Cruiser	60	94	32	11	36	7	25.8	2,057	221	62.0	71.4	63.9
Daytona	62	99	29	17	58	5	26.3	1,645	276	62.3	55.5	--
Ginny	62	100	30	13	43	7	25.5	2,000	227	62.9	66.1	--
Greenwood	60	94	29	12	41	7	23.8	1,976	230	62.8	77.7	64.7
Majoret	63	98	31	17	56	5	26.9	1,801	252	62.7	76.2	68.6
Matrix	66	100	27	16	61	6	24.2	1,457	312	62.5	83.8	73.3
Viper	59	93	30	17	58	5	26.4	1,756	259	61.8	72.7	--
Mean	61	96	31	17	54	5	25.3	1,797	255	62.3	75.1	68.9
CV %	1.6	1.5	8.0	18.0	19.0	23.2	2.5	3.1	3.2	0.7	6.2	--
LSD 0.05	1.3	2.0	3.5	4.5	15.1	1.5	0.7	76	11.4	0.6	6.4	--
LSD 0.10	1.1	1.7	2.9	3.7	12.7	1	0.9	63	9.6	0.5	5.4	--

Planted: April 17. Harvested: July 29. Previous crop: durum.

¹Plant height at end of flowering.

²Height to the top of the canopy at harvest.

³Height Index: Calculated as the ratio of canopy height/plant height.

⁴Harvest Ease: 0 = all plants upright (very easy harvest) to 9 = all plants flat (very difficult to direct harvest).

⁵DAP = Days after planting.

Table 6. 2015 Dry Pea - Organic - Carrington - Authors, S. Zwinger and S. Schaubert.

Variety	Days to Flower Flower (DAP) ⁴	Flower Duration (days)	Days to PM (DAP) ⁴	Canopy Height ¹ (inch)	Seeds/ Pound	Plant Lodge ² (0-9)	Seed Protein (%)	Test Weight (lb/bu)	Seed Yield	
									2015 ³	3-yr. Avg.
Yellow Cotyledon Type										
Agassiz	58	19	93	21	1,967	3	26.3	63.2	36.7	52.3
CDC Meadow	56	21	89	24	2,124	3	25.4	63.6	35.8	50.5
DS Admiral	58	14	87	19	1,970	2	25.4	63.1	36.5	45.6
Nette	56	16	87	19	1,885	2	25.9	63.5	40.9	--
Green Cotyledon Type										
CDC Striker	58	15	91	17	2,101	3	25.8	63.1	33.8	43.4
Cruiser	58	17	93	16	2,199	3	27.5	61.8	20.7	42.5
Majoret	60	15	93	17	1,982	3	28.7	62.6	20.9	43.9
Mean	58	17	90	19	2,032	3	26.4	63.0	32.2	46.4
CV %	1.7	10.1	2.1	8.6	3.0	48.7	2.1	0.8	11.0	--
LSD 0.05	1.6	2.8	3.2	2.8	93	NS	0.9	0.9	6.7	--
LSD 0.10	1.3	2.3	2.7	2.4	77	NS	0.8	0.7	5.5	--

Planted: April 22. Harvested: July 30. Previous crop: barley.

¹Height to the top of the canopy at harvest.²Lodging: 0 = none, 9 = lying flat on the ground.³The experiment had some hail damage.⁴DAP = Days after planting.**Table 7. 2015 Dry Pea - Langdon - Authors, B. Hanson, T. Hakanson and L. Henry.**

Variety	Days to Flower Flower (DAP) ⁵	Days to PM (DAP) ⁵	Vine Length ¹ (inch)	Canopy Height ² (inch)	Height Index ³ (%)	Harvest Ease ⁴ (0-9)	1,000 Seed Weight (gram)	Seed Protein (%)	Test Weight (lb/bu)	Seed Yield	
										2015	3-yr. Avg.
Yellow Cotyledon Type											
Agassiz	57	92	39	16	41	7	217	24.6	64.2	77.3	82.7
Bridger	55	91	36	17	48	5	226	24.1	65.1	76.5	--
CDC Amarillo	58	94	41	16	41	5	234	24.1	64.3	82.4	--
CDC Meadow	55	89	35	14	40	8	204	23.4	64.8	80.5	78.4
CDC Saffron	57	92	37	14	39	7	229	24.6	65.0	78.6	--
DS Admiral	54	90	36	13	37	7	227	23.8	64.3	81.1	74.3
Durwood	56	93	43	21	49	4	241	24.7	64.7	76.6	--
Mystique	56	95	43	18	41	5	237	24.7	64.3	83.6	77.6
Nette	55	91	35	15	44	8	231	23.8	65.3	79.4	74.7
Green Cotyledon Type											
CDC Striker	55	92	33	10	32	8	217	24.0	64.7	83.2	74.2
Cruiser	55	92	39	15	40	7	205	25.4	64.2	70.4	71.8
Majoret	56	92	35	13	38	8	235	25.9	64.5	76.3	73.1
Mean	56	92	38	15	41	6	225	24.4	64.6	78.8	74.9
CV %	1.2	1.2	9.1	14.3	1.4	18	4.4	1.6	0.7	4.9	--
LSD 0.05	0.9	1.6	4.9	3.1	8.2	1.6	22.0	0.6	0.7	5.5	--
LSD 0.10	0.8	1.3	4.1	2.6	6.8	1.3	17.9	0.5	0.5	4.6	--

Planted: May 5. Harvested: Aug. 18.

¹Plant height at end of flowering.²Height to the top of the canopy at harvest.³Height Index: Calculated as the ratio of canopy height/plant height.⁴Harvest Ease: 0 = all plants upright (very easy harvest) to 9 = all plants flat (very difficult to direct harvest).⁵DAP = Days after planting.

Table 8. 2015 Dry Pea - Minot - Authors, K. McPhee and T. Stefaniak.

Variety	Days to Flower	Days to PM	Vine Length ¹	Canopy Height ²	Height Index ³	Seed Protein	Seeds/Pound	1,000	Test Weight	Seed Yield	
								Seed Weight		2015	3-yr. Avg.
Yellow Cotyledon Type	(DAP) ⁴	(DAP) ⁴	(inches)	(inches)	(%)	(%)		(gram)	(lb/bu)	---	(bu/a)---
AAC Carver	51	92	43	16	38	25.3	2,006	227	63.6	58.2	--
Agassiz	50	91	34	18	53	27.4	2,041	223	62.2	51.9	43.0
CDC Amarillo	53	91	37	18	49	26.8	1,916	237	62.9	54.7	--
CDC Meadow	50	92	39	15	37	27.0	2,336	195	63.7	55.5	41.1
CDC Saffron	52	91	34	15	45	27.4	1,818	250	63.8	59.4	--
DS Admiral	50	91	35	13	36	25.6	1,993	228	62.8	48.0	36.6
Earlstar	50	91	39	14	35	25.0	2,226	204	63.1	53.0	--
Gunner	51	93	43	16	38	27.2	2,028	224	62.6	60.1	43.9
Hyline	52	90	38	14	38	26.1	1,911	238	62.7	58.0	--
Jetset	50	92	40	33	87	27.1	1,969	231	61.9	52.3	--
Navarro	47	93	34	12	37	28.7	1,583	287	62.3	51.0	38.0
Salamanca	51	91	44	17	39	28.9	1,766	257	62.3	44.5	35.7
Spider	52	91	41	12	29	28.0	1,894	240	62.6	60.5	42.6
Torch	53	92	35	15	42	27.4	1,776	256	63.1	54.1	34.2
Vegas	51	91	38	15	41	27.7	1,954	233	62.5	50.2	36.0
Green Cotyledon Type											
Aragorn	50	91	37	13	35	27.8	2,084	218	62.3	53.3	34.1
Blumoon	50	92	36	15	40	26.4	1,871	243	62.9	58.7	39.2
CDC Striker	50	91	32	8	26	26.4	2,295	198	62.9	52.2	34.5
Cruiser	50	93	41	14	35	27.6	2,340	194	63.0	52.4	36.4
Daytona	51	91	33	11	31	26.7	1,866	243	62.5	48.9	--
Ginny	50	92	31	12	39	26.5	2,260	201	63.6	46.3	--
Greenwood	50	91	37	9	25	25.8	2,307	197	63.7	49.6	40.0
Majoret	52	91	30	12	38	26.9	2,000	227	63.5	48.5	39.3
Mean	51	91	37	15	40	26.9	2,010	228	62.9	53.1	38.3
CV %	0.9	1.0	8.9	48.4	49.2	3.0	3.9	3.9	1.0	10.5	--
LSD 0.05	0.6	1.1	3.9	8.3	20.0	0.9	94.0	10.4	0.7	7.0	--
LSD 0.10	0.4	0.8	3.0	6.5	18.0	0.7	73.0	8.1	0.6	5.0	--

Planted: May 10. Harvested: Aug. 25. Previous crop: spring wheat.

¹Plant height at end of flowering.²Height of canopy at harvest.³Calculated as the ratio of canopy height/plant height.⁴DAP = Days after planting.

Table 9. 2015 Dry Pea - Recrop - Dickinson - Authors, G. Martin and P. Carr.

Variety	Days		Vine Length (inch)	Canopy Height ¹ (inch)	Lodging (0-9) ³	Seeds/ Pound	1,000 Seed Weight (gram)	Seed Protein (%)	Test Weight (lb/bu)	Seed Yield	
	Days to Flower (DAP) ²	to PM (DAP) ²								2015	3-yr. Avg.
Yellow Cotyledon Type											
Agassiz	60	97	33	29	1	1,879	242	26.2	63.9	59.9	51.2
CDC Amarillo	61	96	34	32	1	1,643	276	25.8	64.8	58.8	--
CDC Meadow	60	95	33	40	2	2,070	219	25.7	65.1	62.3	49.8
CDC Saffron	60	95	31	30	2	1,578	289	26.4	64.9	62.2	--
DS Admiral	60	95	32	24	4	1,689	269	25.8	64.6	57.0	49.3
Green Cotyledon Type											
CDC Striker	60	95	27	22	5	1,880	241	25.3	64.5	56.4	43.9
Cruiser	60	97	35	28	3	1,969	231	26.2	63.8	54.2	43.2
Majoret	60	97	31	26	3	1,818	250	27.2	64.4	53.9	44.4
Mean	60	96	32	29	3	1,816	252	26.1	64.5	58.1	47.0
CV %	0.5	0.8	6.1	10.6	45	4.1	4.3	2.1	0.5	7.5	--
LSD 0.05	NS	1.0	3.0	4.0	2.0	111	16.0	0.8	0.5	6.4	--
LSD 0.10	NS	1.0	2.0	4.0	1.0	92	13.0	0.7	0.4	5.3	--

Planted: April 24. Harvested: Aug. 4. Previous crop: wheat.

Table 10. 2015 Dry Pea - Williston - Authors, J. Bergman, G. Pradhan, D. Amiot and A. Link.

Variety	Days to	Days to	Canopy Height ¹ (inch)	1000 seed weight (gram)	Seed Protein (%)	Test Weight (lb/bu)	Seed Yield		
	Flower (DAP) ²	PM (days)					2015	2-yr. Avg.	3-yr. Avg.
Yellow Cotyledon Type									
Abarth	52	87	24	295	26.7	60.6	28.8	37.8	43.2
Agassiz	54	84	19	242	26.3	60.1	36.7	43.8	47.0
Bridger	52	87	21	239	27.3	62.0	30.6	38.1	44.4
CDC Amarillo	58	87	23	252	26.7	60.5	30.9	--	--
CDC Meadow	52	84	22	226	26.0	61.5	39.9	46.1	50.8
CDC Saffron	55	85	20	268	26.9	61.5	30.2	--	--
DS Admiral	53	83	23	252	26.5	60.9	32.9	42.1	46.3
Durwood	52	86	24	262	26.1	61.1	34.9	40.6	--
Gunner	54	87	26	272	26.6	61.1	31.4	38.8	41.4
Hylene	54	82	23	248	25.6	60.9	36.2	41.0	--
Korando	51	86	22	317	28.4	61.4	29.4	38.6	42.0
Mystique	55	87	20	318	28.2	60.9	28.2	35.6	43.6
Nette	52	87	24	294	27.3	62.2	25.7	38.5	44.0
Trapeze	52	86	21	271	27.7	59.7	32.2	38.1	44.2
Green Cotyledon Type									
Aragorn	52	85	20	231	27.5	59.6	29.3	35.4	39.2
Arcadia	53	85	18	231	25.3	60.4	34.1	42.2	46.5
CDC Striker	52	85	17	218	24.5	61.0	38.0	41.5	46.7
Cruiser	53	87	23	221	26.6	60.6	28.6	37.0	40.8
Ginny	52	87	22	223	24.7	61.2	31.9	43.6	--
Greenwood	52	86	21	225	23.4	61.2	33.7	39.1	44.0
Majoret	54	87	21	251	28.1	61.3	27.7	35.5	41.1
Mean	53	86	22	255	26.5	60.9	32.0	39.6	44.1
CV %	2.1	2.4	12.9	5.0	3.2	1.0	11.8	--	--
LSD 0.05	1.5	2.8	3.9	18.4	1.2	0.9	5.3	--	--
LSD 0.10	1.3	2.4	3.3	15.4	1.0	0.7	4.4	--	--

Planted: May 1. Harvested: Aug. 3. Previous crop: spring wheat.

¹Height to the top of the canopy at harvest.²DAP = Days after planting.³Lodging: 0 = none, 9 = lying flat on ground.

Table 11. 2015 Dry Pea - Irrigated (Williston REC) - Authors, T. Tjelde and J. Jacobs.

Variety	Seed Protein	Test Weight	Seed Yield	
			2015	3-yr. Avg.
Yellow Cotyledon Type	(%)	(lb/bu)	----- (bu/a) -----	
Agassiz	25.4	64.8	73.5	57.0
CDC Meadow	23.9	65.8	77.3	61.1
DS Admiral	25.3	65.7	75.8	58.6
Nette	24.6	65.9	71.5	--
Green Cotyledon Type				
Aragorn	25.0	63.8	67.9	--
CDC Striker	23.2	65.7	83.7	61.5
Cruiser	23.3	64.9	64.8	54.2
Ginny	23.9	65.1	67.5	--
Majoret	25.9	64.9	77.5	56.0
Mean	24.5	65.2	73.3	58.1
CV %	4.2	0.5	11.1	--
LSD 0.05	1.3	1.5	11.9	--
LSD 0.10	1.1	1.2	9.8	--

Planted: April 22. Harvested: July 27. Previous crop: barley.

Table 12. 2015 Dry Pea - McKenzie County (Williston REC) - Authors, G. Pradhan, C. Wahlstrom, D. Amiot and A. Link

Variety	Seed Protein	1000 seed weight	Test Weight	Seed Yield	
				2015	3-yr. Avg.
Yellow Cotyledon Type	(%)	(gram)	(lb/bu)	(bu/a)	
Agassiz	26.8	225	56.9	35.8	34.3
CDC Meadow	25.5	203	59.2	33.3	--
DS Admiral	24.8	248	58.0	30.9	38.1
Mystique	26.9	257	56.8	33.1	--
Nette	25.4	239	60.3	29.4	--
Green Cotyledon Type					
Aragorn	26.7	218	58.2	30.0	--
CDC Striker	24.4	193	59.5	37.0	37.6
Cruiser	27.9	217	58.4	27.4	31.9
Ginny	24.8	212	59.2	30.5	--
Majoret	27.4	226	58.3	25.1	31.9
Mean	26.0	224	58.5	31.3	34.8
CV %	7.6	3.1	1.0	12.9	--
LSD 0.05	3.4	11.8	1.0	6.9	--
LSD 0.10	2.8	9.7	0.8	5.7	--

Planted: April 30. Harvested: Aug. 13. Previous crop: spring wheat.

Table 13. 2015 Dry Pea - Golden Valley County (Williston REC) - Authors, G. Pradhan, C. Wahlstrom, D. Amiot and A. Link

Variety	Seed Protein	1000 seed weight	Test Weight	Seed Yield	
				2015	3-yr. Avg.
Yellow Cotyledon Type	(%)	(gram)	(lb/bu)	(bu/a)	
Agassiz	21.7	222	57.0	43.3	46.2
CDC Meadow	21.6	204	59.4	50.8	44.3
DS Admiral	21.0	223	57.4	34.5	36.6
Mystique	22.7	234	56.9	27.5	--
Nette	21.7	221	59.9	38.3	--
Green Cotyledon Type					
Aragorn	22.8	191	57.8	30.5	--
CDC Striker	22.6	194	58.0	44.5	40.2
Cruiser	22.4	195	58.2	36.0	35.9
Ginny	21.3	196	58.9	41.0	--
Majoret	23.7	221	58.4	22.6	29.9
Mean	22.2	210	58.2	36.9	38.9
CV %	2.9	3.7	1.0	11.5	--
LSD 0.05	1.1	13.4	1.0	7.3	--
LSD 0.10	0.9	11.1	0.9	6.0	--

Planted: May 1. Harvested: Aug. 3. Previous crop: durum.

Table 14. 2015 Dry Pea - Hettinger - Authors, J. Rickertsen and Rick Olson.

Variety	Days to Flower Flower (DAP) ⁵	Flower Duration (days)	Days to PM (DAP) ⁵	Vine Length ¹ (inch)	Canopy Height ² (inch)	Height Index ³ (%)	Lodge ⁴ (0-9)	Seed Protein (%)	Seed Weight 1,000 (gram)	Seeds/ Pound	Test Weight (lb/bu)	Seed Yield	
												2015	3-Yr. Avg.
Yellow Cotyledon Type													
AAC Carver	70	17	100	41	21	52	6	23.9	236	1,922	62.5	61.6	--
Agassiz	70	22	106	36	20	55	6	25.7	219	2,068	60.5	50.9	52.1
Bridger	68	18	100	38	22	59	7	25.9	217	2,097	61.6	49.2	54.0
CDC Amarillo	71	20	105	40	22	56	6	25.5	237	1,917	62.1	57.7	--
CDC Meadow	69	20	104	39	16	41	7	25.1	213	2,139	62.3	51.5	52.1
CDC Saffron	70	16	100	37	17	47	7	25.9	254	1,785	61.7	58.1	--
DS Admiral	68	19	100	41	19	48	7	25.6	229	1,985	60.1	57.9	55.8
Earlstar	68	21	102	40	18	45	7	24.0	210	2,159	60.2	57.0	--
Gunner	70	19	103	41	20	48	7	25.8	215	2,116	60.8	45.5	50.0
Hyline	69	20	103	38	15	39	7	24.7	243	1,871	62.6	49.3	--
Jetset	70	21	105	37	18	49	7	25.7	224	2,025	59.8	52.8	--
Nette	68	18	100	37	22	60	6	24.9	241	1,886	61.8	57.9	54.4
Salamanca	69	18	101	42	20	46	6	26.8	241	1,884	62.5	49.0	--
Spider	68	22	104	40	16	39	8	26.2	251	1,808	60.0	53.9	--
SW Midas	70	18	102	34	16	46	7	25.3	199	2,282	60.1	55.0	52.3
Vegas	70	17	100	39	20	52	7	27.4	224	2,027	61.7	50.6	--
Green Cotyledon Type													
Bluemoon	67	19	99	40	17	43	7	26.3	230	1,971	59.7	56.4	--
CDC Striker	68	18	100	30	14	47	8	25.2	209	2,175	60.9	51.4	52.5
Cruiser	70	20	104	37	17	45	7	25.7	202	2,242	60.5	47.9	46.4
Daytona	69	16	100	37	17	45	7	25.3	247	1,837	59.8	49.3	--
Majoret	69	17	100	37	17	44	8	26.7	221	2,052	61.5	49.2	49.3
Mean	69	19	102	38	18	48	7	25.6	227	2,012	61.1	53.0	51.9
CV %	0.7	5.2	0.8	4.5	15.2	15.7	9.4	1.7	3.3	3.3	1.6	8.2	--
LSD 0.05	0.7	1.4	1.2	2.4	3.9	10.6	0.9	0.6	10.9	92.4	1.4	6.1	--
LSD 0.10	0.6	1.1	1.0	2.0	3.3	8.9	0.8	0.5	9.1	77.3	1.1	5.1	--

Planted: April 15. Harvested: Aug. 3. Previous crop: durum.

¹Plant height at end of flowering.

²Height to the top of the canopy at harvest.

³Height Index: Calculated as the ratio of canopy height/plant height.

⁴Lodging: 0 = none, 9 = lying flat on ground.

⁵Days after planting.

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