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North Dakota Dry Pea

Variety Trial Results for 2021 and Selection Guide

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Introduction

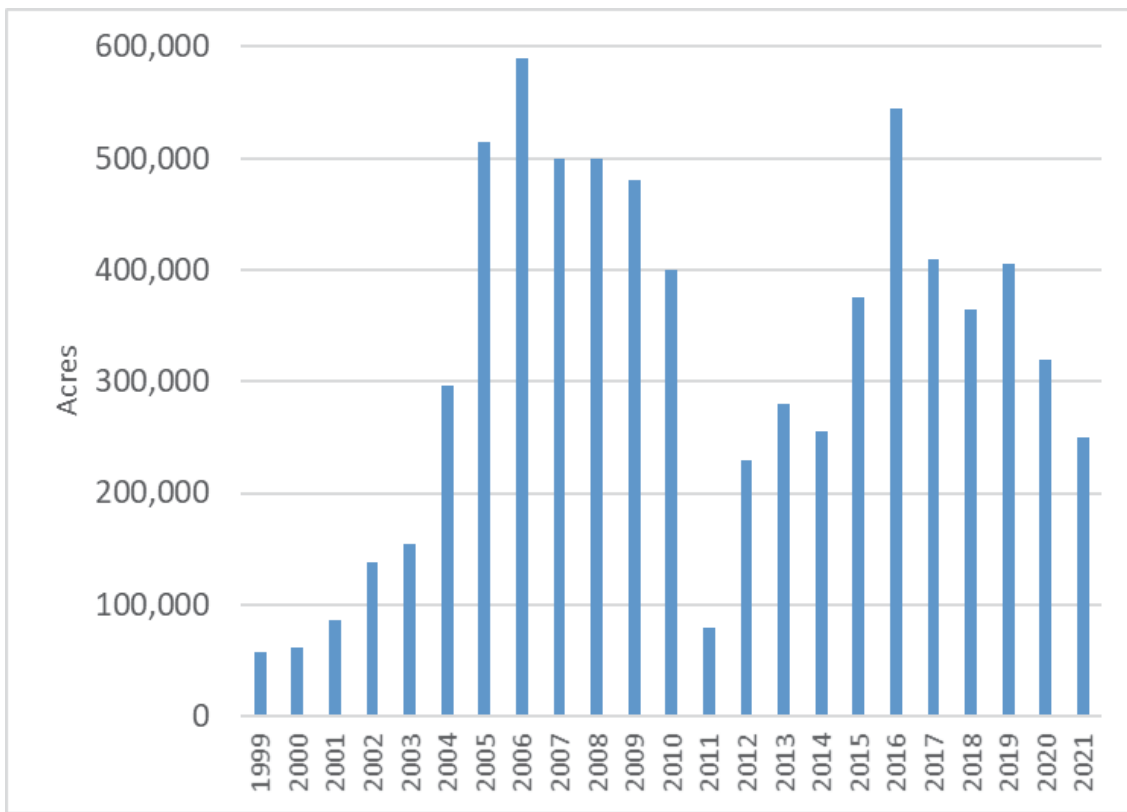
Field peas fit well into small-grain rotations. The green- and yellow-seeded varieties are used for human consumption as dry split peas. Field pea seeds are fractionated into components (protein, starch, minerals) and used in diverse food products such as wheat flour in pasta, plant protein meat substitutes (burger), extruded snacks, noodles, and livestock and pigeon feeds. Field peas also are becoming attractive for addressing Type 2 diabetes and obesity due to their moderate protein concentration, slowly digestible starch and insoluble fiber component.

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 F) is necessary for optimum pea yields. Hot weather during flowering may result in a reduced seed set.

In North Dakota, field peas require about 60 days from seeding until flowering and 90 to 100 days to maturity. The moisture requirement for field peas is similar to that for cereal grains.

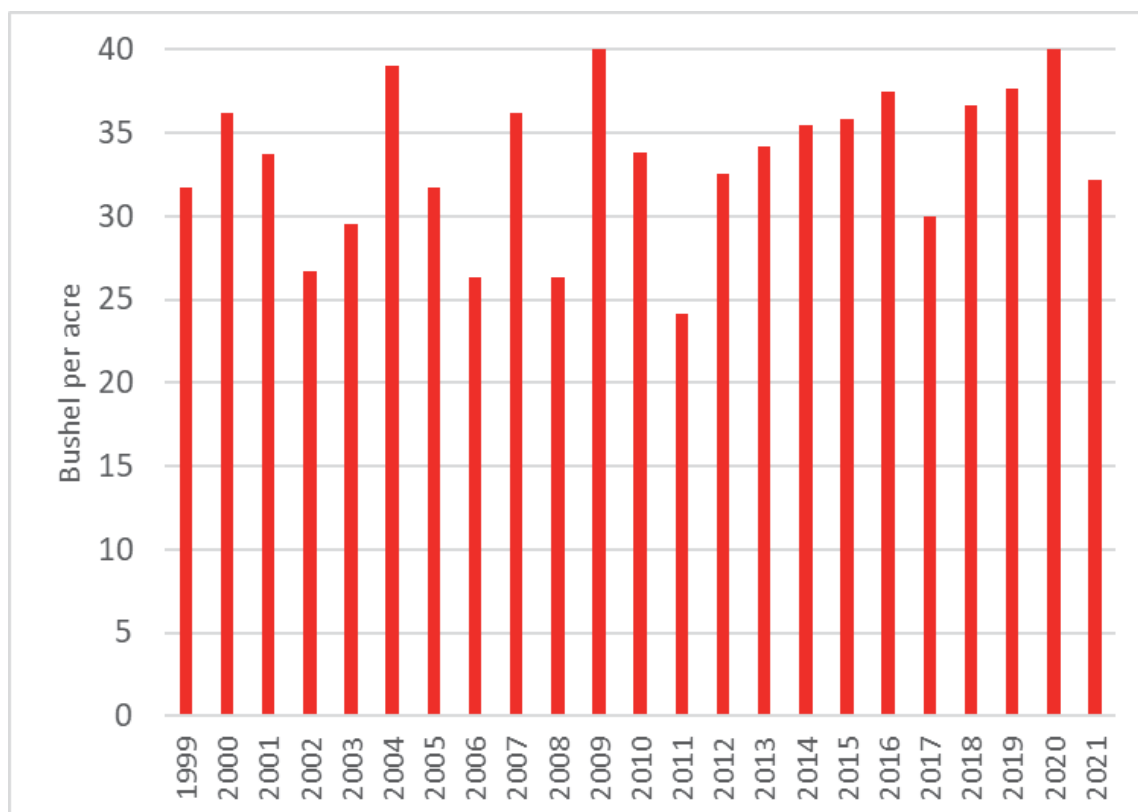
For production information, see publication A1166, "Field Pea Production" (www.ag.ndsu.edu/publications/crops/field-pea-production). Dry pea-planted acres and yield have fluctuated during the past 23 growing seasons, as shown in Figures 1 and 2.

Figure 1. North Dakota Dry Pea Harvested Acreage, 1999 to 2021.



Source: North Dakota Agricultural Statistics Service – U.S. Department of Agriculture.

Figure 2. North Dakota Dry Pea Yield in Bushels per Acre, 1999 to 2021.



Source: North Dakota Agricultural Statistics Service – USDA.

2021 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 2021 Average Temperature, Precipitation and Rankings for Selected North Dakota Locations.

Location	Average Temperature (Ranking)	Total Precipitation (Ranking)
Bowman	62.2 F (3rd warmest period since 1915)	8.8 inches (21st driest period since 1915)
Bismarck	64.8 F (The warmest period since 1875)	7.3 inches (6th driest period since 1875)
Cavalier	59.7 F (17th warmest period since 1934)	10.1 inches (17th driest period since 1927)
Fargo	63.7 F (5th warmest period since 1881)	12.3 inches (27th driest period since 1881)
Minot Exp. Station	60.9 F (9th warmest period since 1905)	9.1 inches (21st driest period since 1894)
Williston Exp. Station	62.4 F (6th warmest period since 1894)	7.3 inches (18th driest period since 1894)
North Dakota Average¹	61.2 F (5th warmest period since 1895)	10.4 inches (12th driest period since 1895)

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% 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. **The CVs for yield in 2021 tended to be higher than normal and data should be interpreted with caution.** 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 90 % of the pods are starting to turn brown

Yields are reported at 15% moisture content. The standard for reporting protein in field peas is at 0% moisture. The protein content data are not intended to be compared among locations. The harvest ease score is taken at the time the plants are dried 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.

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 where varieties were tested. 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.

Acknowledgments

Research specialists and technicians helped with the field work and data compilation. The assistance given by many secretaries in typing respective portions of this document is very much appreciated. A special thank you goes to Lisa Johnson, Extension Plant Sciences, for assisting in the compilation of this publication.

Table 2. 2021 Locations Where Pea Varieties Were Tested.

Pea Variety	Company	Carrington	Carrington Organic	Langdon	Minot	Dickinson	Williston	Williston Irrigated	Hettinger
Yellow Cotyledon Type									
AAC Asher	Premier Genetics LLC	X	X	X	X	--	X	--	X
AAC Carver	Meridian Seeds	X	--	X	X	X	X	--	X
AAC Chrome	Valesco Genetics	X	--	X	X	X	X	--	X
AAC Julius	Valesco Genetics	--	--	X	X	X	--	--	--
AAC Profit	Premier Genetics LLC	X	X	X	X	--	X	--	X
AC Agassiz	Meridian Seeds	X	X	X	X	X	X	X	X
CDC Amarillo	Meridian Seeds	X	X	X	X	X	X	X	X
CDC Inca	Meridian Seeds	X	--	X	X	X	X	--	X
CDC Spectrum	Meridian Seeds	X	--	X	X	X	X	--	X
Cronos	Valesco Genetics	X	--	X	X	X	X	--	X
DL Apollo	Pulse USA	X	--	X	X	--	X	--	X
DL GrowPro	Meridian Seeds	X	--	X	X	X	X	--	X
DS Admiral	Pulse USA	X	X	X	X	X	X	X	X
Durwood	Pulse USA	X	X	X	X	X	X	X	X
Goldenwood	ProGene	--	--	--	X	X	--	--	--
Hyline	Valesco Genetics	--	--	X	X	X	--	--	--
Jetset	Meridian Seeds	--	--	--	X	X	X	--	X
Kite	USDA/NDCIA	X	--	--	--	--	X	X	X
Korando	Pulse USA	X	--	--	--	--	--	--	X
LG Stunner	Pulse USA	X	--	X	X	--	X	--	X
LG Sunrise	Pulse USA	X	--	X	--	--	--	--	--
ND Dawn	NDSU/NDCIA	X	X	X	X	X	X	X	X
Nette 2010	Pulse USA	--	X	--	--	--	--	--	--
Orchestra	Premier Genetics LLC	X	--	X	X	--	X	--	X
Peregrine	USDA/NDCIA	X	--	--	X	--	X	X	X
PG Cash	Premier Genetics LLC	X	--	--	--	--	X	--	--
Pizzazz	ProGene	--	--	--	X	X	--	--	--
Protecta	Selgen	--	X	--	--	--	--	--	--
Salamanca	Valesco Genetics	X	--	X	X	X	X	--	X
Spider	Valesco Genetics	X	--	X	X	X	X	--	--
Green Cotyledon Type									
Aragorn	Great Northern Ag	X	X	X	X	X	X	X	X
Arcadia	Pulse USA	X	X	X	X	X	X	X	X
CDC Greenwater	Meridian Seeds	X	--	--	X	X	X	--	--
CDC Striker	Nodricks Norsask Seeds	X	X	X	X	X	X	X	X
Empire	Valesco genetics	X	--	X	X	X	X	--	X
Flute	Pulse USA	--	X	--	--	--	--	--	--
Ginny 2	ProGene	--	--	--	X	--	--	--	--
Greenwood	Great Northern Ag	X	X	X	X	X	X	X	X
Shamrock	Valesco Genetics	X	--	X	X	X	X	--	X

Table 3. 2021 Dry Pea - Carrington - Authors, B. Schatz and M. Ostlie.

Variety	Days to Flower	Flower	Days	Canopy	Plant	Harvest	1,000	Seed	Test	Seed Yield	
	Flower (DAP) ⁴	Duration (days)	to PM (DAP) ⁴	Height ¹ (inch)	Lodge ² (0-9)	Ease ³ (0-9)	Seed Wt. (gram)	Protein (%)	Weight (lb/bu)	2021	3-yr. Avg. ----- (bu/a) -----
Yellow Cotyledon Type											
AAC Asher	60	14	94	14	2	4	271	24.2	62.5	27.3	37.5
AAC Carver	60	15	92	18	2	2	242	22.8	62.3	34.1	39.8
AAC Chrome	62	11	95	14	3	3	242	23.6	62.8	21.6	33.1
AAC Profit	59	15	93	14	1	3	255	24.1	62.1	29.7	40.7
AC Agassiz	63	12	93	14	2	4	237	24.0	62.2	22.0	35.1
CDC Amarillo	62	12	95	18	2	2	242	24.8	62.2	28.3	40.3
CDC Inca	60	15	94	18	2	2	226	23.8	62.7	27.8	43.2
CDC Spectrum	60	15	95	15	2	2	249	24.8	62.4	26.5	38.8
Cronos	57	16	97	17	2	2	258	26.2	62.2	14.9	--
DL Apollo	59	15	95	16	2	2	223	25.7	63.2	18.6	29.3
DL GrowPro	62	13	95	19	1	2	279	25.1	61.5	26.4	--
DS Admiral	60	14	93	18	2	3	252	24.7	62.3	21.5	36.2
Durwood	59	15	96	17	2	2	242	25.6	62.2	20.4	36.8
Kite	57	16	93	14	4	6	257	24.6	62.4	16.1	--
Korando	55	18	96	17	2	3	273	25.6	61.9	21.5	30.3
LG Stunner	57	17	93	15	2	2	230	25.8	62.8	17.6	36.0
LG Sunrise	62	13	94	21	1	2	227	24.0	62.8	23.6	40.6
ND Dawn	59	14	93	15	3	3	245	24.0	62.3	21.9	34.8
Orchestra	60	15	95	16	2	3	255	26.6	62.0	20.9	--
Peregrine	57	16	92	15	3	6	247	24.9	62.5	14.1	--
PG Cash	60	14	94	17	2	3	242	25.0	62.1	20.6	--
Salamanca	61	13	94	16	1	2	254	25.9	61.6	24.5	30.5
Spider	59	16	96	17	2	2	255	25.6	62.4	20.6	--
Green Cotyledon Type											
Aragorn	58	16	93	17	2	4	215	24.7	61.8	21.4	--
Arcadia	57	16	92	15	4	5	212	23.6	62.4	22.4	33.9
CDC Greenwater	62	13	96	16	2	2	236	24.2	62.2	25.5	40.2
CDC Striker	58	15	93	15	3	5	213	23.9	63.0	21.5	32.6
Empire	60	15	95	20	2	2	220	24.7	63.5	19.7	36.0
Greenwood	57	14	91	14	3	5	225	24.2	62.6	21.6	--
Shamrock	60	15	94	17	2	2	231	24.0	62.6	22.1	37.5
Mean	59	14	94	16	2	3	242	24.7	62.4	22.5	36.3
CV %	1.9	10.7	1.4	21	32	27	2.8	2.6	0.8	30	16.2
LSD 0.05	1.6	2.1	1.8	NS	0.9	1.0	10	0.9	0.7	9.3	9.7
LSD 0.10	1.3	1.7	1.5	NS	0.8	0.9	8	0.7	0.6	7.8	8.1

Planted: April 21. Harvested: Aug. 2. Previous crop: forage barley.

¹Height to the top of the canopy at harvest.²Lodging: 0 = none, 9 = lying flat on the ground.³Harvest ease: 0 = all plants upright - very easy harvest, to 9 = all plants flat - very difficult to harvest directly.⁴DAP = Days after planting.

Table 4. 2021 Dry Pea - Organic - Carrington - Authors, S. Zwinger and S. Schaubert.

Variety	Days to Flower Flower (DAP) ³	Flower Duration Duration (days)	Days to PM to PM (DAP) ³	Canopy Height ¹ Height ¹ (inch)	Plant Lodge ² Lodge ² (0-9)	1,000 Seed Wt. Seed Wt. (gram)	Seeds/ Pound (seeds)	Seed Protein Protein (%)	Test Weight Weight (lb/bu)	Seed Yield	
										2021	3-yr. Avg.
										------(bu/a)-----	
Yellow Cotyledon Type											
AAC Asher	55	8	80	10	1	201	2,264	23.5	62.1	14.4	--
AAC Profit	55	9	79	14	1	179	2,551	23.8	62.1	14.6	33.9
AC Agassiz	54	11	79	12	1	168	2,741	23.4	60.8	12.5	32.3
CDC Amarillo	54	11	77	13	1	184	2,496	24.3	62.7	16.1	--
DS Admiral	51	13	75	12	1	170	2,672	23.7	61.6	11.6	27.5
Durwood	52	12	80	14	1	192	2,409	25.7	60.9	18.0	--
ND Dawn	54	9	77	13	1	178	2,561	22.9	61.3	14.1	--
Nette 2010	51	11	74	12	1	168	2,723	23.1	61.7	17.3	29.4
Protecta	53	10	80	15	0	205	2,231	24.9	62.3	21.1	34.5
Green Cotyledon Type											
Aragorn	51	11	75	11	1	154	2,977	23.6	60.6	15.9	--
Arcadia	52	9	76	12	1	153	3,009	23.3	60.6	20.0	31.7
CDC Striker	53	9	77	12	0	167	2,731	23.1	60.5	17.4	30.9
Flute	56	9	81	14	0	159	2,852	24.6	61.7	13.1	27.9
Greenwood	52	10	76	10	1	150	3,065	24.4	61.7	14.5	--
Mean	53	10	77	12	1	173	2,663	23.9	61.5	15.7	31.0
CV %	2.2	13.6	2.1	11.6	97	10.0	10.4	2.0	0.7	23.6	13.4
LSD 0.05	1.7	1.9	2.3	2.1	0.8	25	392	0.7	0.6	5.3	NS
LSD 0.10	1.4	1.6	2.0	1.8	0.7	21	327	0.6	0.5	4.4	6.0

Planted: April 28. Harvested: July 28. Previous crop: oats.

¹Height to the top of the canopy at harvest.²Lodging: 0 = none, 9 = lying flat on the ground.³DAP = Days after planting.**Table 5. 2021 Dry Pea - Irrigated - Williston - Authors, T. Tjelde, J. Jacobs and A. Turnquist.**

Variety	Days to Flower Flower (DAP) ³	Days to PM to PM (DAP) ³	Canopy Height ¹ Height ¹ (inch)	Plant Lodge ² Lodge ² (0-9)	Seed Protein Protein (%)	Test Weight Weight (lb/bu)	Seed Yield			
							2019	2020	2021	2-yr. Avg.
							------(bu/a)-----			
Yellow Cotyledon Type										
AC Agassiz	52	84	14	6	27.3	64.3	53.4	63.3	34.7	49.0
CDC Amarillo	53	85	15	5	27.7	64.5	--	67.8	41.1	54.4
DS Admiral	50	83	13	6	25.3	63.9	45.1	81.1	29.1	55.1
Durwood	52	87	15	5	26.1	64.6	--	--	36.1	--
Kite	52	87	8	8	26.8	64.3	--	--	25.8	--
ND Dawn	52	84	12	7	27.5	64.0	--	67.3	30.5	48.9
Peregrine	51	85	9	8	27.4	64.3	--	--	26.1	--
Green Cotyledon Type										
Aragorn	51	83	9	7	26.5	63.0	--	61.5	24.8	43.1
Arcadia	51	84	11	8	25.9	63.8	47.8	67.5	37.0	52.3
CDC Striker	51	83	12	6	25.3	64.2	50.5	54.5	31.9	43.2
Greenwood	45	81	10	7	26.4	64.8	--	--	26.6	--
Mean	51	84	12	7	26.6	64.2	49.2	66.1	31.2	49.4
CV %	7.7	2.4	22.4	15.3	6.9	0.7	13.6	12.4	19.3	13.8
LSD 0.05	5.6	3.0	3.8	1.8	NS	0.6	NS	12.2	8.7	NS
LSD 0.10	4.7	2.5	3.2	1.5	2.2	0.5	NS	10.0	7.2	NS

Planted: May 7. Harvested: Aug. 11. Previous crop: barley.

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

Table 6. 2021 Dry Pea - Langdon - Authors, B. Hanson, L. Henry and J. Faul.

Variety	Days to	Days to	Canopy	Harvest	1,000	Seed	Seeds/	Test	Seed Yield	
	Flower	PM	Height ¹	Ease ²	Seed Wt.	Protein	Pound	Weight	2021	2-yr. Avg.
	(DAP) ³	(DAP) ³	(inch)	(0-9)	(gram)	(%)	(seeds)	(lb/bu)	----- (bu/a) -----	
Yellow Cotyledon Type										
AAC Asher	55	84	17	0	288	26.2	1,571	64.0	42.9	53.6
AAC Carver	52	81	23	0	276	25.3	1,639	64.6	55.7	62.0
AAC Chrome	55	84	20	0	257	25.3	1,769	65.1	61.8	69.3
AAC Julius	54	82	23	0	232	27.2	1,957	64.8	53.3	--
AAC Profit	54	82	20	0	253	27.4	1,791	64.8	49.5	62.0
AC Agassiz	53	82	21	0	244	26.1	1,869	64.2	44.2	60.3
CDC Amarillo	55	84	24	0	243	26.8	1,868	64.2	53.1	61.8
CDC Inca	54	83	24	0	249	26.5	1,822	64.6	50.4	62.4
CDC Spectrum	54	83	18	0	253	27.0	1,797	64.0	45.4	50.7
Cronos	50	82	18	0	286	29.5	1,587	63.5	31.8	45.0
DL Apollo	53	82	21	0	242	27.6	1,881	64.6	41.5	52.8
DL GrowPro	53	83	26	0	295	28.5	1,539	64.1	52.9	--
DS Admiral	52	81	16	0	249	27.6	1,826	63.2	39.6	56.3
Durwood	53	82	23	0	245	26.8	1,853	64.7	45.7	60.7
Hyline	54	82	22	0	255	25.4	1,786	64.8	53.1	57.6
LG Stunner	50	82	22	0	220	29.0	2,071	64.4	45.2	--
LG Sunrise	50	82	20	0	261	25.8	1,750	64.6	40.1	56.3
ND Dawn	53	81	18	0	246	25.7	1,846	63.5	38.4	49.1
Orchestra	54	83	18	0	281	29.1	1,619	64.7	41.8	57.1
Salamanca	53	83	22	0	262	28.9	1,739	63.9	46.4	60.5
Spider	53	83	21	0	252	27.4	1,805	64.8	50.5	--
Green Cotyledon Type										
Aragorn	49	77	15	1	209	27.1	2,169	62.4	34.7	44.0
Arcadia	53	80	16	2	217	26.0	2,095	64.6	39.5	52.1
CDC Striker	52	81	16	2	211	26.0	2,141	64.4	44.6	52.1
Empire	54	84	26	0	217	26.1	2,087	65.1	46.5	59.9
Greenwood	51	80	18	0	216	25.0	2,111	64.7	45.5	47.1
Shamrock	54	83	23	0	244	26.0	1,859	65.1	48.0	53.5
Mean	53	82	20	0	248	26.9	1,846	64.3	46.0	55.9
CV %	1.7	1.1	12.7	322	3.2	1.8	3.0	0.7	13.3	10.7
LSD 0.05	1.4	1.4	4.2	0.7	13	0.8	90	0.7	10.0	12.4
LSD 0.10	1.2	1.2	3.5	0.6	11	0.7	76	0.6	8.3	10.3

Planted: May 12. Harvested: Aug. 16. Previous crop: wheat.

¹Height to the top of the canopy at harvest.²Harvest ease: 0 = all plants upright - very easy harvest, to 9 = all plants flat - very difficult to harvest directly.³DAP = Days after planting.

Table 7. 2021 Dry Pea - Minot - Authors, H. Worrall, N. Bandillo and S. Forster.

Variety	Days to	Days to	Seeds/	1,000	Seed	Seed Yield		
	Flower (DAP) ¹	PM (DAP) ¹	Pound (seeds)	Seed Wt. (gram)	Protein (%)	2019	2020	2021
						------(bu/a)-----		
Yellow Cotyledon Type								
AAC Asher	54	87	2,101	222	28.9	49.7	28.5	6.9
AAC Carver	55	86	2,127	212	28.9	46.0	27.6	7.0
AAC Chrome	56	86	2,122	212	29.0	50.9	27.5	6.1
AAC Julius	55	86	2,139	206	29.3	--	--	5.7
AAC Profit	54	86	2,110	214	29.0	52.5	26.4	6.4
AC Agassiz	54	86	2,185	200	28.9	48.5	25.5	6.5
CDC Amarillo	56	87	2,149	211	29.5	59.1	23.3	6.4
CDC Inca	55	87	2,174	201	29.3	53.7	23.3	6.0
CDC Spectrum	56	87	2,121	225	29.4	49.2	26.1	5.8
Cronos	52	86	2,063	235	29.5	--	21.0	5.7
DL Apollo	56	86	2,138	207	29.0	51.9	21.3	5.9
DL GrowPro	56	86	2,070	232	29.4	--	--	6.2
DS Admiral	53	86	2,136	214	29.2	45.6	26.1	5.7
Durwood	55	87	2,102	219	30.2	41.6	27.4	6.7
Goldenwood	59	87	2,246	191	29.0	--	--	7.8
Hyline	56	87	2,120	218	29.1	46.6	25.1	5.7
Jetset	53	86	2,138	210	29.6	47.8	25.6	5.7
LG Stunner	53	85	2,147	205	29.4	--	20.3	6.2
ND Dawn	54	85	2,141	206	28.8	48.9	19.6	5.5
Orchestra	54	86	2,099	224	29.5	--	22.0	5.8
Pizzaz	51	86	2,098	230	29.5	--	--	5.3
Salamanca	55	86	2,090	228	29.8	43.2	--	7.4
Spider	54	86	2,095	225	29.2	46.3	--	7.1
Green Cotyledon Type								
Aragorn	51	85	2,157	205	27.3	--	18.1	5.2
Arcadia	54	86	2,042	154	26.1	47.9	28.4	5.0
CDC Greenwater	56	87	2,160	204	29.4	48.3	26.3	5.4
CDC Striker	56	86	2,140	209	29.5	47.3	20.3	5.7
Empire	55	87	2,153	206	29.1	45.8	22.1	6.6
Ginny 2	52	86	2,145	211	29.7	--	--	5.2
Greenwood	52	85	2,193	196	28.6	--	18.8	5.2
Shamrock	55	87	2,117	213	28.8	--	24.6	4.6
Mean	54	86	2,131	211	29.1	48.5	24.0	6.0
CV %	3.0	0.9	2.0	7.7	2.5	15.0	16.2	11.6
LSD 0.05	1.2	2.2	288	23	3.7	8.1	4.5	1.9
LSD 0.10	1.1	2.1	276	22	3.5	6.3	3.5	1.8

Planted: May 1. Harvested: Aug. 16. Previous crop: small grain.

¹DAP = Days after planting.

Table 8. 2021 Dry Pea - Dickinson - Author, G. Martin.

Variety	Days to Flower (DAP) ²	Days to PM (DAP) ²	Canopy Height ¹ (inch)	Seeds/ Pound (seeds)	Test Weight (lb/bu)	Protein (%)	Seed Yield	
							2021	2-yr.Avg.
							------(bu/a)-----	
Yellow Cotyledon Type								
AAC Carver	60	92	16	1,890	63.6	27.6	18.6	21.4
AAC Chrome	63	93	14	1,701	65.0	27.4	13.8	20.0
AAC Julius	62	92	15	1,871	64.4	28.5	15.5	--
AC Agassiz	62	93	15	1,818	64.3	28.6	14.8	19.6
CDC Amarillo	63	93	17	2,088	63.5	29.0	14.0	24.2
CDC Inca	63	93	19	2,053	63.8	29.4	16.3	22.8
CDC Spectrum	62	93	13	1,794	63.6	29.1	15.1	22.3
Cronos	59	93	17	1,706	64.0	30.8	11.1	16.4
DL GrowPro	60	93	17	1,513	64.1	30.3	14.6	--
DS Admiral	60	92	17	1,849	63.1	30.1	16.3	23.4
Durwood	61	93	16	1,802	63.3	29.5	14.3	23.0
Goldenwood	68	93	12	2,230	65.0	29.1	11.4	--
Hyline	62	92	18	1,709	63.4	28.6	18.0	26.1
Jetset	61	92	19	1,842	63.2	29.8	17.2	24.1
ND Dawn	62	93	16	1,723	62.8	27.7	16.1	21.0
Pizzaz	58	90	14	1,658	63.5	28.5	12.9	--
Salamanca	61	92	14	1,757	62.9	29.2	15.1	20.4
Spider	62	93	15	1,830	63.7	29.4	11.1	--
Green Cotyledon Type								
Aragorn	59	88	14	2,116	60.8	29.1	11.4	17.4
Arcadia	61	90	13	2,207	63.1	27.9	14.8	24.2
CDC Greenwater	63	94	17	1,692	63.4	29.5	13.6	24.2
CDC Striker	61	91	14	1,981	63.0	27.4	14.8	19.0
Empire	63	93	19	1,954	64.9	29.1	9.9	--
Ginny 2	60	90	13	1,947	62.5	28.7	13.8	--
Greenwood	59	89	13	2,183	63.0	26.9	13.5	19.3
Shamrock	62	93	16	1,945	64.4	29.0	13.0	22.9
Mean	61	92	16	1,879	63.6	28.8	14.3	21.7
CV %	1.3	1.2	12.8	7.1	0.8	3.1	17.6	14.2
LSD 0.05	1.1	1.5	2.8	189	0.7	1.2	3.5	6.5
LSD 0.10	1.0	1.3	2.3	158	0.6	1.0	2.9	5.3

Planted: April 19. Harvested: July 26. Previous crop: cover crop forage.

¹Height to the top of the canopy at harvest.²DAP = Days after planting.

Table 9. 2021 Dry Pea - Williston - Authors, G. Pradhan, M. C. Wahlstrom and J. Bergman.

Variety	Days to Flower (DAP) ²	Days to PM (DAP) ²	Canopy Height ¹ (inch)	1,000 Seed Wt. (gram)	Seed Protein (%)	Test Weight (lb/bu)	Seed Yield	
							2020	2021
Yellow Cotyledon Type								
AAC Asher	54	80	12	216	28.4	61.9	26.9	11.5
AAC Carver	53	80	16	198	28.1	62.2	28.4	13.6
AAC Chrome	54	81	13	215	28.3	62.0	26.9	11.1
AAC Profit	54	79	14	210	29.2	61.3	22.9	10.5
AC Agassiz	53	79	15	214	30.6	61.8	26.0	12.9
CDC Amarillo	56	82	15	191	30.0	61.8	28.3	8.5
CDC Inca	54	82	16	200	29.7	62.6	26.8	8.5
CDC Spectrum	55	81	15	205	30.5	61.9	25.8	12.6
Cronos	51	81	15	228	31.0	61.8	13.4	7.7
DL Apollo	53	83	15	194	30.9	--	22.4	6.0
DL GrowPro	54	81	15	230	31.1	61.9	--	9.0
DS Admiral	52	78	14	213	27.9	61.8	23.7	11.5
Durwood	54	82	16	201	29.5	61.8	22.2	7.4
Jetset	52	79	15	202	28.5	61.5	26.1	11.5
Kite	51	78	12	219	28.7	62.0	17.1	16.0
LG Stunner	51	78	16	205	30.3	62.7	27.9	12.4
ND Dawn	53	79	15	207	27.9	60.9	17.8	10.6
Orchestra	54	80	13	214	31.5	61.9	20.2	12.3
Peregrine	50	77	12	219	27.9	63.2	21.4	12.9
PG Cash	53	79	14	195	30.3	62.5	--	10.2
Salamanca	53	79	13	217	30.8	62.0	22.2	11.5
Spider	53	80	14	209	29.9	62.2	--	10.8
Green Cotyledon Type								
Aragorn	50	76	14	206	27.3	61.6	15.7	12.1
Arcadia	52	77	12	184	27.0	63.0	25.2	12.2
CDC Greenwater	55	83	14	211	27.1	61.1	27.2	11.3
CDC Striker	52	77	13	188	27.5	62.7	22.9	13.1
Empire	54	84	18	191	30.3	62.1	24.5	6.5
Greenwood	50	77	12	193	26.6	62.4	16.1	10.6
Shamrock	54	83	15	213	29.8	63.2	18.4	11.3
Mean	53	80	14	206	29.2	62.1	22.9	10.9
CV %	1.9	1.4	9.8	3.5	2.0	0.8	16.2	24.7
LSD 0.05	1.4	1.5	2.0	10	0.8	0.7	5.2	3.7
LSD 0.10	1.2	1.3	1.7	9	0.7	0.6	4.4	3.1

Planted: May 6. Harvested: Aug. 3. Previous crop: wheat.

¹Height to the top of the canopy at harvest.²DAP = Days after planting.

Table 10. 2021 Dry Pea - Hettinger - Authors, J. Rickertsen and M. Wells.

Variety	Days to	Flower	Days to	Canopy	Lodge	Seed	1,000	Seeds/	Test	Seed Yield	
	Flower	Duration	PM	Height ¹		Protein	Seed Wt.	Pound	Weight	2021	2-yr. Avg.
	(DAP) ²	(days)	(DAP) ²	(inch)	(0-9)	(%)	(gram)	(seeds)	(lb/bu)	----- (bu/a) -----	
Yellow Cotyledon Type											
AAC Asher	51	13	82	16	0	26.9	230	1,978	63.8	28.2	32.4
AAC Carver	51	11	80	18	1	25.2	209	2,171	62.7	27.6	30.6
AAC Chrome	51	13	82	17	0	26.1	197	2,311	60.4	23.7	27.8
AAC Profit	50	13	81	17	2	28.3	192	2,372	61.0	24.6	30.2
AC Agassiz	51	12	81	18	2	26.8	199	2,285	61.9	24.1	28.0
CDC Amarillo	50	13	81	18	0	27.6	191	2,385	60.9	23.7	29.0
CDC Inca	52	12	81	19	1	27.5	195	2,332	62.3	26.2	30.8
CDC Spectrum	51	13	82	16	1	27.9	201	2,255	62.6	27.0	30.2
Cronos	51	14	82	19	2	28.2	240	1,890	60.1	20.6	19.9
DL Apollo	50	13	81	17	2	27.7	195	2,327	64.1	25.1	25.1
DL GrowPro	51	11	79	20	2	28.9	231	1,971	61.6	26.0	--
DS Admiral	51	12	83	18	1	27.6	212	2,146	61.2	23.0	24.6
Durwood	51	14	83	20	3	26.8	199	2,279	63.0	25.1	27.1
Jetset	52	12	81	18	1	27.3	201	2,260	59.3	23.3	23.9
Kite	52	12	82	15	3	26.2	221	2,056	60.3	22.7	22.1
Korando	51	12	81	18	3	28.7	237	1,918	61.7	24.2	24.1
LG Stunner	51	13	82	18	0	29.3	176	2,580	59.7	22.2	24.8
ND Dawn	51	13	82	19	2	26.4	206	2,202	61.2	25.3	26.2
Orchestra	50	12	82	17	2	29.4	229	1,985	61.6	24.3	25.2
Peregrine	51	11	81	17	1	26.7	207	2,199	62.0	21.6	26.5
Salamanca	50	11	79	18	2	27.7	224	2,026	63.4	25.7	26.4
Spider	52	11	80	19	2	28.1	196	2,332	61.1	23.5	--
Green Cotyledon Type											
Aragorn	51	11	81	16	1	28.1	198	2,300	60.4	19.9	21.2
Arcadia	51	12	81	17	0	27.0	182	2,493	62.8	23.4	27.5
CDC Striker	51	11	80	16	1	26.8	174	2,604	62.0	24.2	25.0
Empire	51	15	84	19	4	27.2	186	2,443	59.7	22.0	24.7
Greenwood	50	11	80	16	1	27.0	186	2,441	58.8	20.9	23.8
Shamrock	51	13	83	20	2	26.2	200	2,276	62.5	23.9	24.5
Mean	51	12	81	18	2	27.4	204	2,243	61.5	24.0	26.2
CV %	1.7	15.9	2.3	10.3	74	2.3	4.2	4.4	3.4	8.8	10.2
LSD 0.05	1.2	2.7	2.3	2.6	1.5	0.9	12	138	2.9	2.4	5.5
LSD 0.10	1.0	2.3	1.9	2.2	1.2	0.8	10	115	2.5	1.9	4.6

Planted: May 1. Harvested: July 28. Previous crop: corn.

¹Height to the top of the canopy at harvest.²Days after planting.

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