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North Dakota Dry Pea

Variety Trial Results for 2020 and Selection Guide

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Introduction

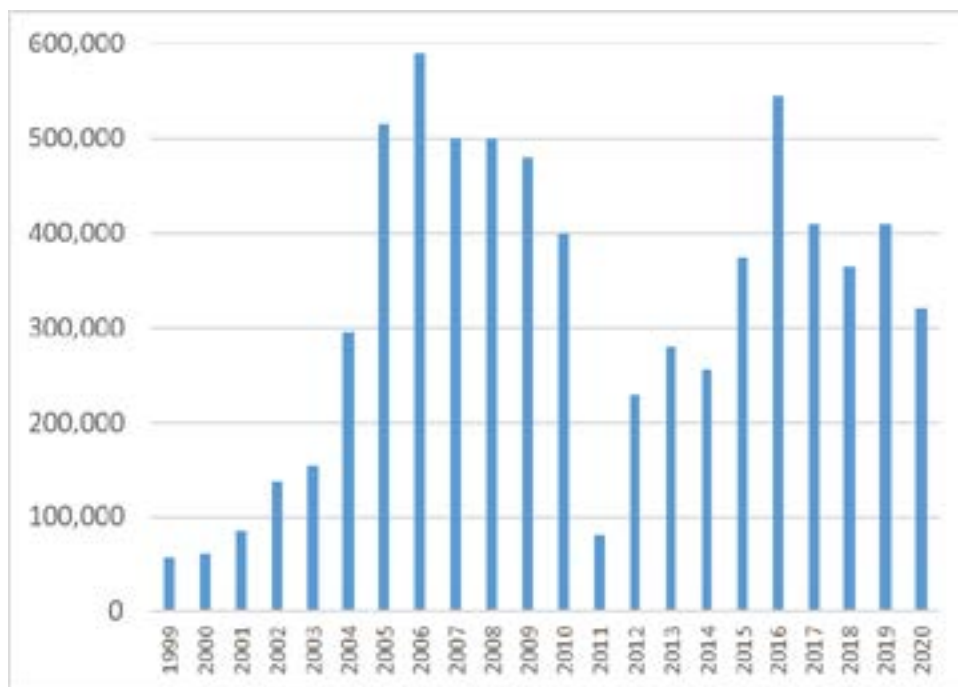
Field peas fit well into small-grain rotations. The green- and yellow-seeded varieties are used for human consumption as dry split peas. Field pea seeds are fractionated into components (protein, starch, minerals) and used in diverse food products such as wheat flour in pasta, plant protein meat substitutes (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.

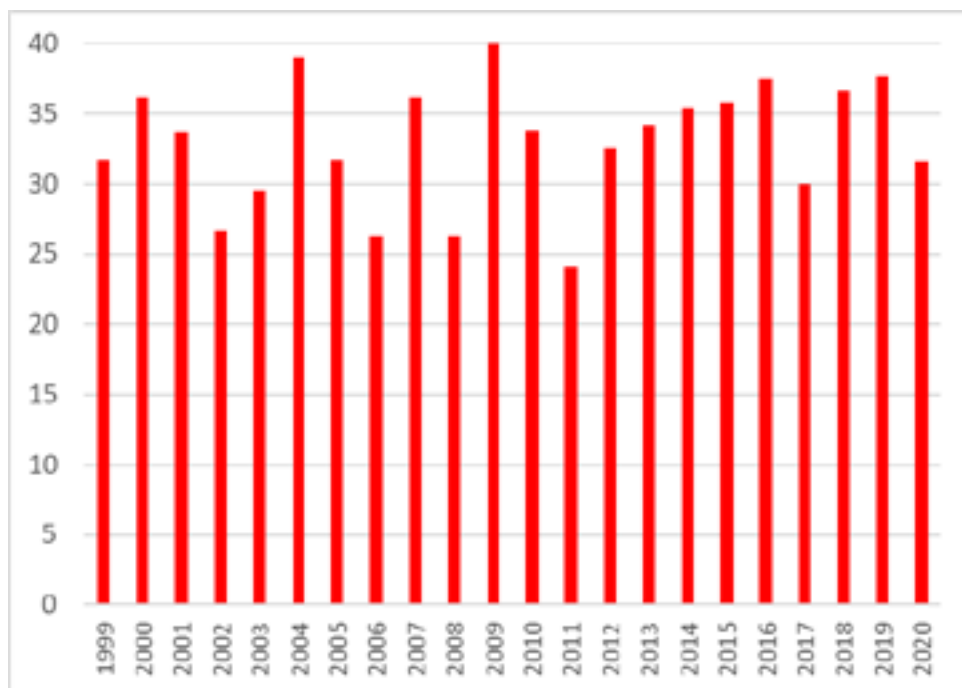
For production information, see publication A1166, "Field Pea Production" (www.ag.ndsu.edu/publications/crops/field-pea-production). Dry pea-planted acres and yield have fluctuated during the past 22 growing seasons, as shown in Figures 1 and 2.

Figure 1. North Dakota Dry Pea Harvested Acreage, 1999 to 2020.



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

Figure 2. North Dakota Dry Pea Yield in Bushels per Acre, 1999 to 2020.



Source: North Dakota Agricultural Statistics Service – USDA.

2020 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 2020 Average Temperature, Precipitation and Rankings for Selected North Dakota Locations.

Location	Average Temperature (Ranking)	Total Precipitation (Ranking)
Bowman	59.8 F (41st Warmest Period Since 1915)	9.9 inches (26th Driest Period Since 1915)
Bismarck	62.4 F (11th Warmest Period Since 1875)	6.4 inches (4th Driest Period Since 1875)
Cavalier	57.6 F (30th Coolest Period Since 1934)	12.8 inches (34th Driest Period Since 1927)
Fargo	61.1 F (44th Warmest Period Since 1881)	16.5 inches (65th Wettest Period Since 1881)
Minot Exp. Station	58.4 F (51st Warmest Period Since 1905)	9.8 inches (28th Driest Period Since 1905)
Williston Exp. Station	60.5 F (42nd Warmest Period Since 1894)	5.7 inches (6th Driest Period Since 1894)
North Dakota Average ¹	58.9 F (50th Warmest Period Since 1895)	11.1 inches (23rd 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. 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 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.

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. 2020 Locations Where Pea Varieties Were Tested.

Pea Variety	Company	Carrington	Carrington Organic	Langdon	Minot	Dickinson	Williston	Williston Irrigated	Hettinger
Yellow Cotyledon Type									
AAC Asher	Legume Logic	X	X	X	X	X	X	--	X
AAC Carver	Meridian Seeds	X	--	X	X	X	X	--	X
AAC Chrome	Legume Logic	X	X	X	X	X	X	--	X
AAC Profit	Birdsall Grain	X	X	X	X	X	X	--	X
Agassiz	Meridian Seeds	X	X	X	X	X	X	X	X
CDC Amarillo	Meridian Seeds	X	X	X	X	X	X	X	X
CDC Dakota	Legume Logic	X	--	X	X	X	X	--	X
CDC Inca	Meridian Seeds	X	--	X	X	X	X	--	X
CDC Saffron	Meridian Seeds	X	--	X	X	X	X	--	X
CDC Spectrum	Meridian Seeds	X	--	X	X	X	X	--	X
Cronos	Valesco	X	X	X	X	X	X	--	X
DL Apollo	Pulse USA	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
Flute	Pulse USA	--	X	--	--	--	--	--	--
Hyline	Great Northern Ag/Valesco	X	X	X	X	X	X	--	X
Jetset	Meridian Seeds	X	--	X	X	X	X	--	X
Kite	USDA/NDCIA	X	--	--	X	X	X	--	X
Korando	Pulse USA	X	--	X	X	X	X	--	X
LG Amigo	Pulse USA	X	--	--	--	--	--	--	--
LG Equator	Meridian Seeds	X	--	X	X	X	X	--	X
LG Stunner ¹	Pulse USA	X	--	X	X	--	X	--	X
LG Sunrise	Pulse USA	X	--	X	X	--	X	--	--
Majestic	JB Farms	X	--	X	X	--	--	--	--
Mystique	Pulse USA	--	--	--	X	--	--	--	--
ND Dawn	NDCIA	X	X	X	X	X	X	X	X
Nette 2010	Pulse USA	X	X	X	X	X	X	--	X
Orchestra	Legume Logic	X	--	X	X	--	X	--	X
Peregrine	USDA/NDCIA	X	--	--	X	X	X	--	X
Protecta	Selgen	--	X	--	--	--	--	--	--
Salamanca	Great Northern Ag/Valesco	X	X	X	X	X	X	--	X
Green Cotyledon Type									
AAC Comfort	Meridian Seeds	X	--	--	X	X	--	--	--
Aragorn	Great Northern Ag/Pulse USA	X	X	X	X	X	--	X	X
Arcadia	Pulse USA	X	X	X	X	X	--	X	X
Bluemoon	JB Farms	X	--	X	X	--	--	--	--
CDC Greenwater	Meridian Seeds	X	--	--	X	X	--	--	--
CDC Striker	Nodricks Norsask Seeds	X	X	X	X	X	--	X	X
Cruiser	Pulse USA	--	X	--	--	--	--	--	--
Daytona	Meridian Seeds	X	--	--	X	X	--	--	--
Empire	Legume Logic/Valesco	X	--	X	X	X	--	--	X
Greenwood	Great Northern Ag	X	X	X	X	X	--	--	X
Hampton	USDA/NDCIA	X		X	X	X	--	--	X
LG Koda	Pulse USA	--	--	--	--	--	--	--	X
Majoret	Pulse USA	X	--	--	--	--	--	--	--
Shamrock	Great Northern Ag/Valesco	X	X	X	X	X	--	--	X
Viper	Pulse USA				X		--	--	X
Maple Type									
PSTSP40	Photosyntech	X	--	--	--	--	--	--	--

¹LG Stunner, variety name pending. Was tested as LGPN 4915.

Table 3. 2020 Dry Pea - Carrington - Authors, B. Schatz and M. Ostlie.

Variety	Days to Flower	Flower Duration	Days to PM	Canopy Height ¹	Plant Lodge ²	Harvest Ease	1,000 Seed Wt.	Seed Protein	Test Weight	Seed Yield	
	(DAP) ³	(days)	(DAP) ³	(inch)	(0-9)	(0-9)	(gram)	(%)	(lb/bu)	2020	3-yr. Avg.
Yellow Cotyledon Type											
AAC Asher	53	7	83	12	3	3	271	24.0	61.9	43.3	44.1
AAC Carver	53	8	81	13	4	5	252	23.4	61.5	34.0	42.2
AAC Chrome	54	9	83	10	3	5	254	23.2	61.7	43.6	40.7
AAC Profit	54	8	81	13	4	5	250	24.1	61.4	39.0	44.6
Agassiz	53	10	84	15	5	6	264	24.7	61.5	39.8	43.9
CDC Amarillo	55	8	86	15	4	4	233	25.0	61.6	38.9	46.6
CDC Dakota	56	6	83	16	3	4	204	25.2	62.8	40.2	50.1
CDC Inca	54	8	81	14	4	4	231	23.9	62.1	41.3	48.9
CDC Saffron	54	7	80	12	4	5	235	23.5	62.3	39.0	41.3
CDC Spectrum	54	8	83	13	3	3	252	25.0	61.7	40.5	--
Cronos	49	8	87	14	4	5	249	25.6	60.0	19.2	--
DL Apollo	53	8	84	14	5	6	232	25.6	62.1	30.9	--
DS Admiral	51	8	79	13	4	4	260	23.8	62.4	35.1	42.9
Durwood	52	9	85	14	5	5	254	25.3	62.1	34.3	43.3
Hyline	54	8	82	12	5	5	247	24.3	61.5	37.6	40.1
Jetset	53	6	82	14	5	4	239	25.2	61.9	32.5	46.9
Kite	51	10	79	11	4	5	249	23.8	61.8	36.3	--
Korando	46	12	84	13	6	6	281	26.1	60.6	25.5	35.3
LG Amigo	54	9	88	12	6	6	247	24.7	61.9	27.0	36.8
LG Equator	50	11	86	11	4	4	219	26.1	61.2	27.2	--
LG Stunner	50	9	85	12	4	5	217	25.6	61.8	31.4	--
LG Sunrise	48	12	80	14	5	5	243	24.5	62.6	33.8	48.3
Majestic	54	7	83	16	3	3	252	25.6	61.2	32.0	34.5
ND Dawn	52	8	79	10	4	5	251	23.7	61.9	31.9	--
Nette 2010	51	8	78	12	5	6	248	23.5	62.6	34.1	39.2
Orchestra	51	10	90	13	5	6	225	26.2	62.2	23.9	--
Peregrine	48	12	78	11	5	7	245	24.2	61.7	28.5	--
Salamanca	53	8	88	12	5	6	258	26.3	62.1	30.0	31.9
Green Cotyledon Type											
AAC Comfort	56	7	88	12	5	7	285	24.1	61.2	38.9	35.2
Aragorn	49	9	77	8	7	8	227	25.1	60.1	21.2	--
Arcadia	52	8	80	10	6	7	213	24.5	61.8	35.3	42.6
Bluemoon	52	7	80	13	5	7	255	24.9	61.7	31.7	41.2
CDC Greenwater	54	9	84	14	3	4	256	24.0	62.0	44.4	48.0
CDC Striker	54	6	87	14	5	5	227	25.5	62.8	27.7	40.3
Daytona	52	6	85	14	5	6	233	25.5	60.8	29.5	--
Empire	54	9	84	14	4	5	244	25.6	63.0	28.3	43.1
Greenwood	50	7	79	10	7	8	214	25.4	61.8	26.1	--
Hampton	54	7	82	7	7	9	237	25.6	61.0	30.2	--
Majoret	52	7	85	13	4	5	227	25.6	62.6	27.8	39.8
Shamrock	55	8	82	14	6	7	263	25.1	61.7	35.1	40.5
Maple Type											
PSTSP40	54	6	81	14	4	5	236	24.3	62.2	38.1	--
Mean	52	8	83	13	4	5	243	24.8	61.8	33.3	41.9
CV %	1.3	11.5	2.4	22	26	20	3.4	2.7	0.7	11.7	--
LSD 0.05	0.9	1.3	2.7	3.7	1.7	1.5	12	0.9	0.6	5.6	--
LSD 0.10	0.8	1.1	2.3	3.1	1.4	1.3	10	0.8	0.5	4.7	--

Planted: April 30. Harvested: Aug. 6. Previous crop: spring wheat.

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

Table 4. 2020 Dry Pea - Organic - Carrington - Authors, S. Zwinger and S. Schaubert.

Variety	Days to Flower (DAP) ²	Flower Duration (days)	Days to PM (DAP) ²	Canopy Height ¹ (inch)	1,000 Seed Wt. (gram)	Seed Protein (%)	Test Weight (lb/bu)	Seed Yield	
								2020	3-yr. Avg.
Yellow Cotyledon Type									
AAC Asher	47	5	75	17	270	22.4	62.5	24.8	--
AAC Chrome	47	5	75	16	244	22.2	63.1	29.4	--
AAC Profit	47	8	73	20	240	22.5	63.5	29.8	--
Agassiz	45	8	72	21	238	21.6	63.1	32.0	43.8
CDC Amarillo	47	6	75	22	234	23.1	63.3	33.6	--
Cronos	44	6	70	19	264	23.3	62.2	12.2	--
DS Admiral	45	6	70	19	234	21.7	63.0	26.0	37.8
Durwood	45	6	72	22	241	23.9	63.3	20.5	--
Flute	47	6	74	23	218	22.6	63.8	30.4	41.1
Hyline	47	7	72	18	238	21.6	63.2	30.0	--
ND Dawn	47	5	71	18	237	21.0	62.9	31.4	--
Nette 2010	45	6	69	19	220	21.9	63.7	24.9	41.3
Protecta	47	5	72	19	268	23.3	63.5	35.4	--
Salamanca	45	6	71	21	249	23.5	63.0	25.2	--
Green Cotyledon Type									
Arcadia	46	4	69	16	210	21.7	63.2	24.4	39.2
Aragron	44	6	68	17	197	21.8	62.0	23.1	--
CDC Striker	46	6	70	17	208	22.1	63.4	26.6	41.1
Cruiser	43	9	68	20	233	21.5	62.9	18.7	36.0
Greenwood	46	6	69	16	202	20.9	63.9	19.6	--
Shamrock	47	6	74	21	234	22.6	63.6	21.2	40.8
Mean	46	6	71	19	234	22.3	63.2	26.0	40.1
CV %	1.3	21.5	1.8	9.6	3.7	2.2	0.5	12.0	--
LSD 0.05	0.9	1.8	1.8	2.7	12.0	0.7	0.4	4.5	--
LSD 0.10	0.7	1.5	1.5	2.2	10.0	0.6	0.4	3.7	--

Planted: May 12. Harvested: Aug. 30. Previous crop: spring wheat.

¹Height to the top of the canopy at harvest.²DAP = Days after planting.**Table 5. 2020 Dry Pea - Irrigated - Williston - Authors, T. Tjelde, J. Jacobs and A. Turnquist.**

Variety	Days to Flower (DAP) ³	Days to PM (DAP) ³	Canopy Height ¹ (inch)	Plant Lodge ² (0-9)	Seed Protein (%)	Test Weight (lb/bu)	Seed Yield	
							2020	2-yr. Avg.
Yellow Cotyledon Type								
Agassiz	53	90	28	5	29.6	63.0	63.3	58.3
DS Admiral	52	85	26	4	25.1	65.2	81.1	63.1
CDC Amarillo	57	91	31	3	27.3	63.9	67.8	--
ND Dawn	49	88	25	5	26.2	63.1	67.3	--
Green Cotyledon Type								
CDC Striker	55	88	23	4	28.0	64.5	54.5	52.5
Arcadia	54	86	14	7	25.9	64.1	67.5	57.6
Aragorn	49	86	14	7	26.8	62.8	61.5	--
Mean	53	87	23	5	27.0	63.8	66.1	57.9
CV %	1.9	3.2	18.6	14	4.0	0.9	12.4	--
LSD 0.05	1.5	4.2	6.4	1.1	1.6	0.9	12.2	--
LSD 0.10	1.2	3.5	5.3	0.9	1.3	0.7	10.0	--

Planted: May 6. Harvested: Aug. 12. Previous crop: durum.

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

Table 6. 2020 Dry Pea - Langdon - Authors, B. Hanson and L. Henry.

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	2020	2-yr. Avg.
	(DAP) ³	(DAP) ³	(inch)	(0-9)	(gram)	(%)	(seeds)	(lb/bu)	----- (bu/a) -----	
Yellow Cotyledon Type										
AAC Asher	48	80	10	8	228	25.5	1,992	62.2	64.2	70.7
AAC Carver	48	82	20	5	211	23.7	2,154	62.7	68.2	71.1
AAC Chrome	49	89	13	7	233	24.0	1,955	62.5	76.7	76.8
AAC Profit	48	90	21	5	205	25.7	2,203	62.9	74.5	72.0
Agassiz	47	87	14	6	232	25.5	1,957	61.9	76.3	70.3
CDC Amarillo	50	89	22	3	213	25.0	2,133	62.5	70.4	69.3
CDC Dakota	50	88	12	7	163	29.5	2,785	62.6	56.7	60.2
CDC Inca	49	87	23	3	213	25.4	2,127	63.0	74.4	72.5
CDC Saffron	48	84	13	8	214	25.4	2,335	63.1	80.9	76.4
CDC Spectrum	48	89	20	5	215	26.1	2,108	61.9	55.9	62.8
Cronos	43	77	16	6	248	26.8	1,836	62.0	58.2	--
DL Apollo	47	80	22	4	223	25.8	2,062	63.0	59.6	61.8
DS Admiral	46	79	17	6	220	23.9	2,063	63.2	73.0	67.1
Durwood	47	88	29	1	248	25.3	1,838	63.7	75.6	68.1
Hyline	47	86	18	6	245	25.3	1,867	62.6	62.1	65.4
Jetset	46	77	15	7	220	25.6	2,060	61.9	65.5	66.4
Korando	42	81	18	6	249	27.5	1,865	61.9	53.4	57.5
LG Equator	45	85	24	4	198	26.6	2,304	63.0	64.3	--
LG Stunner	46	82	21	5	209	28.6	2,190	62.6	61.1	--
LG Sunrise	44	90	23	2	248	24.4	1,826	63.1	72.4	68.1
Majestic	47	86	28	2	229	26.0	1,993	62.7	58.8	63.1
Mystique	48	87	22	3	255	24.2	1,782	62.6	71.5	68.5
ND Dawn	47	78	11	9	207	24.2	2,187	62.5	59.7	--
Nette 2010	45	79	17	6	207	23.9	2,213	63.4	70.7	67.8
Orchestra	47	84	13	7	292	27.2	1,554	62.8	72.4	--
Salamanca	48	85	25	3	278	27.5	1,639	62.9	74.5	67.9
Green Cotyledon Type										
Aragorn	45	78	11	8	185	26.6	2,448	62.3	53.2	--
Arcadia	47	80	9	9	203	24.1	2,235	62.6	64.6	65.0
Blumoon	48	84	16	6	242	26.2	1,888	62.8	60.5	--
CDC Striker	48	83	13	5	213	26.2	2,132	63.0	59.6	62.9
Empire	49	89	24	3	226	24.2	2,023	63.5	73.3	--
Greenwood	46	78	12	8	162	25.2	2,785	62.8	48.7	--
Hampton	49	85	5	9	195	28.4	2,340	62.0	44.7	52.0
Shamrock	50	89	19	5	245	24.7	1,868	62.4	58.9	--
Mean	47	84	17	6	223	25.7	2,081	62.7	65.1	66.8
CV %	1.5	1.9	17.6	17.9	6.9	2.3	8.4	0.8	8.7	--
LSD 0.05	1.1	2.6	4.9	1.7	24.7	1.0	290	0.8	9.1	--
LSD 0.10	0.9	2.1	4.1	1.4	20.6	0.8	243	0.6	7.6	--

Planted: May 19. Harvested: Aug. 24.

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 direct harvest).³DAP = Days after planting.

Table 7. 2020 Dry Pea - Minot - Authors, H. Worrall, N. Bandillo and S. Forster.

Variety	Days to Flower (DAP) ²	Days to PM (DAP) ²	Canopy Height ¹ (inch)	Seeds/ Pound (seeds)	1,000 Seed Wt. (gram)	Seed Protein (%)	Test Weight (lb/bu)	Seed Yield	
								2020	2-yr. Avg. ----- (bu/a) -----
Yellow Cotyledon Type									
AAC Asher	50	81	17	1,466	311	26.4	66.9	28.5	39.1
AAC Carver	48	77	21	1,571	287	25.0	66.4	27.6	36.8
AAC Chrome	50	81	17	1,533	295	25.2	67.0	27.5	39.2
AAC Profit	50	79	20	1,687	270	26.1	66.6	26.4	39.4
Agassiz	46	79	22	1,746	260	24.7	66.5	25.5	37.0
CDC Amarillo	52	81	20	1,747	261	26.6	66.4	23.3	41.2
CDC Dakota	52	78	20	2,010	225	29.3	67.0	20.8	34.6
CDC Inca	50	79	21	1,746	260	24.8	66.9	23.3	38.5
CDC Saffron	48	78	19	1,720	263	25.8	67.3	28.4	38.5
CDC Spectrum	49	79	20	1,695	268	26.2	66.5	26.1	37.6
Cronos	44	75	20	1,388	324	27.4	65.5	21.0	--
DL Apollo	47	75	20	1,871	242	25.5	67.2	21.3	36.6
DS Admiral	48	77	20	1,633	278	25.6	67.4	26.1	35.9
Durwood	47	78	23	1,705	266	26.9	66.9	27.4	34.5
Hyline	48	78	20	1,689	268	25.1	66.9	25.1	35.9
Jetset	47	74	20	1,791	252	25.2	66.8	25.6	36.7
Kite	45	77	14	1,690	269	26.2	66.1	19.3	--
Korando	43	74	17	1,528	296	28.1	65.9	17.3	30.4
LG Equator	45	76	19	1,810	250	25.4	67.2	21.7	--
LG Stunner	49	78	22	1,635	277	26.1	67.5	20.3	--
LG Sunrise	45	77	19	1,735	261	24.5	67.4	17.9	30.1
Majestic	47	78	19	1,590	286	26.9	65.8	21.9	32.3
Mystique	48	77	21	1,568	290	26.0	66.0	26.1	--
ND Dawn	47	76	18	1,782	255	23.6	65.2	19.6	--
Nette 2010	47	76	18	1,676	271	25.8	66.8	21.8	28.2
Orchestra	46	77	18	1,500	304	27.2	66.6	22.0	--
Peregrine	42	75	14	1,715	264	25.5	67.0	21.3	--
Salamanca	48	76	20	1,568	289	27.5	66.0	22.3	32.8
Green Cotyledon Type									
AAC Comfort	51	82	19	1,511	301	25.9	65.7	24.9	37.1
Aragorn	44	74	17	1,963	232	26.1	65.3	18.1	--
Arcadia	47	77	17	1,876	243	24.5	66.6	28.4	38.1
Bluemoon	47	78	21	1,612	283	26.2	66.0	20.1	26.6
CDC Greenwater	49	80	22	1,651	274	25.6	66.0	26.3	37.3
CDC Striker	49	78	20	1,686	269	28.0	67.1	20.3	33.8
Daytona	48	79	20	1,404	321	27.0	65.8	24.6	--
Empire	50	78	25	1,774	256	25.4	67.9	22.1	33.9
Greenwood	46	77	17	2,091	218	25.4	66.4	18.8	--
Hampton	47	78	15	1,728	263	28.3	65.5	20.0	33.0
Shamrock	50	78	22	1,646	276	25.6	67.0	24.6	37.7
Viper	44	75	19	1,717	265	26.5	65.8	13.4	26.9
Mean	47	77	19	1,686	271	26	66.5	22.9	46.5
CV %	2.1	2.1	10.4	2.4	2.3	1.7	0.7	16.2	--
LSD 0.05	1.2	1.9	2.4	143	7.2	5.5	0.5	4.5	--
LSD 0.10	0.9	1.5	1.6	137	0.4	0.4	0.4	3.5	--

Planted: May 8. Harvested: Aug. 3. Previous crop: Flax.

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

Table 8. 2020 Dry Pea - Recrop - Dickinson - Author, G. Martin.

Variety	Days to Flower (DAP) ²	Days to PM (DAP) ²	Canopy Height ¹ (inch)	Seeds/ Pound (seeds)	1,000 Seed Wt. (gram)	Test Weight (lb/bu)	Protein (%)	Seed Yield	
								2020 ----- (bu/a)	2-yr.Avg. ----- (bu/a)
Yellow Cotyledon Type									
AAC Asher	56	84	14	1,443	315	65.4	22.2	31.0	--
AAC Carver	55	84	15	1,558	292	65.4	22.5	24.2	35.6
AAC Chrome	56	85	13	1,411	322	66.1	21.8	26.1	38.1
AAC Profit	57	84	18	1,387	327	64.9	23.9	30.8	43.3
Agassiz	56	84	15	1,581	287	65.5	23.4	24.4	38.3
CDC Amarillo	58	86	19	1,559	291	65.5	24.7	34.5	38.9
CDC Dakota	60	86	20	2,099	217	66.5	26.6	29.9	--
CDC Inca	57	84	18	1,594	285	66.1	23.5	29.2	41.8
CDC Saffron	56	84	14	1,611	282	65.8	23.3	27.3	37.4
CDC Spectrum	56	84	17	1,480	307	65.8	23.5	29.5	37.6
Cronos	51	84	16	1,379	330	65.7	25.5	21.8	--
DS Admiral	54	84	18	1,571	289	66.6	23.9	30.4	35.6
Durwood	55	84	19	1,662	273	65.8	25.0	31.7	--
Hyline	56	84	18	1,462	311	66.4	21.9	34.1	41.4
Jetset	55	84	18	1,681	271	64.4	23.3	31.1	37.4
Kite	53	84	18	1,469	309	65.5	23.5	37.7	--
Korando	50	84	14	1,403	324	66.8	26.7	26.9	--
LG Equator	53	84	18	1,662	274	65.6	23.7	26.0	--
ND Dawn	55	84	16	1,446	316	64.5	23.8	25.8	33.8
Nette 2010	54	83	19	1,602	283	66.7	23.1	30.2	--
Peregrine	50	83	12	1,645	276	65.7	22.7	21.7	--
Salamanca	54	84	18	1,396	327	65.7	24.9	25.7	35.6
Green Cotyledon Type									
AAC Comfort	59	87	17	1,298	350	66.1	23.7	25.8	36.1
Aragorn	51	80	14	1,629	279	62.8	25.3	23.4	--
Arcadia	55	84	16	1,808	252	65.3	22.8	33.6	38.9
CDC Greenwater	56	86	20	1,477	307	65.3	23.1	34.9	38.0
CDC Striker	56	85	18	1,614	282	66.1	25.0	23.2	34.7
Daytona	55	84	17	1,406	324	65.0	23.9	28.7	--
Empire	56	85	22	1,526	300	66.6	24.6	26.7	--
Greenwood	54	83	15	1,796	254	64.8	24.2	25.1	--
Hampton	55	85	14	1,435	316	65.1	26.0	24.4	35.5
Shamrock	57	84	20	1,628	280	66.4	23.3	32.8	--
Mean	55	84	17	1,554	295	65.6	23.9	28.4	37.7
CV %	2.1	0.7	14.6	5.7	5.6	0.6	4.0	17.1	--
LSD 0.05	1.7	0.9	3.5	124	23.3	0.5	1.3	6.8	--
LSD 0.10	1.4	0.7	2.9	104	19.5	0.4	1.1	5.7	--

Planted: April 28. Harvested: July 29. Previous crop: durum.

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

Table 9. 2020 Dry Pea - Williston - Authors, G. Pradhan, M. Miller, C. Wahlstrom and J. Bergman.

Variety	Days to Flower (DAP) ²	Days to PM (DAP)	Canopy Height ¹ (inch)	1,000 Seed Wt. (gram)	Seed Protein (%)	Test Weight (lb/bu)	Seed Yield	
							2020	3-yr. Avg.
							------(bu/a)-----	
Yellow Cotyledon Type								
AAC Asher	52	82	13	291	25.9	64.1	26.9	--
AAC Carver	53	82	17	257	24.0	64.4	28.4	42.2
AAC Chrome	55	85	15	291	24.1	64.4	26.9	45.3
AAC Profit	53	82	16	268	25.0	64.3	22.9	41.1
Agassiz	52	83	16	278	25.4	64.7	26.0	40.6
CDC Amarillo	56	84	18	264	25.3	64.4	28.3	38.1
CDC Dakota	59	85	19	239	29.0	64.9	28.5	--
CDC Inca	54	83	18	254	25.7	64.5	26.8	40.1
CDC Saffron	54	81	15	253	25.0	64.6	30.9	42.7
CDC Spectrum	54	86	17	273	26.8	64.2	25.8	--
Cronos	48	83	16	269	31.5	62.2	13.4	--
DL Apollo	52	83	19	247	29.1	64.7	22.4	--
DS Admiral	50	82	15	267	25.8	65.1	23.7	36.4
Durwood	52	83	18	262	27.0	64.2	22.2	36.8
Hyline	54	82	18	283	25.6	64.8	24.1	38.0
Jetset	50	81	17	247	26.5	64.3	26.1	39.0
Kite	50	80	13	254	26.3	64.2	17.1	--
Korando	49	85	14	287	31.3	63.7	19.2	36.2
LG Equator	50	86	15	239	29.5	63.8	18.2	--
LG Stunner	50	82	18	244	29.8	64.6	27.9	38.7
LG Sunrise	51	82	17	264	26.0	64.8	20.9	36.5
ND Dawn	51	81	17	262	24.9	63.9	17.8	--
Nette 2010	50	83	17	274	25.8	65.3	20.0	--
Orchestra	50	86	17	282	31.2	63.7	20.2	--
Peregrine	48	78	13	257	26.1	64.5	21.4	--
Salamanca	52	83	18	281	29.4	64.0	22.2	36.5
Green Cotyledon Type								
AAC Comfort	59	88	15	319	25.0	62.9	26.6	38.8
Aragorn	50	76	15	229	27.3	62.6	15.7	--
Arcadia	51	82	14	227	25.1	65.0	25.2	39.5
CDC Greenwater	54	85	16	266	25.3	64.0	27.2	37.1
CDC Striker	54	85	18	263	29.5	64.6	22.9	39.5
Daytona	53	83	17	288	28.9	64.1	21.2	--
Empire	55	83	21	262	26.5	65.2	24.5	--
Greenwood	50	77	15	217	25.2	64.5	16.1	--
Hampton	54	86	17	264	29.4	63.8	22.6	--
Shamrock	54	81	16	267	25.0	64.5	18.4	34.8
Viper	50	82	17	261	29.4	63.7	18.5	33.0
Mean	52	83	17	266	26.7	64.4	23.1	38.6
CV %	2.1	3.6	12.3	3.5	2.5	0.7	16.2	-
LSD 0.05	1.5	4.1	2.8	13.0	0.9	0.6	5.2	-
LSD 0.10	1.3	3.5	2.4	10.9	0.8	0.5	4.4	-

Planted: April 27. Harvested: July 31. Previous crop: wheat.

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

Table 10. 2020 Dry Pea - Hettinger - Authors, J. Rickertsen and M. Wells.

Variety	Days to Flower	Flower Duration	Days to PM	Canopy Height ¹	Lodge	Seed Protein	1,000 Seed Wt.	Seeds/Pound	Test Weight	Seed Yield	
	(DAP) ²	(days)	(DAP) ²	(inch)	(0-9)	(%)	(gram)	(seeds)	(lb/bu)	2020	2-yr. Avg.
Yellow Cotyledon Type											
AAC Asher	55	15	81	15	3	25.7	251	1,815	62.1	36.6	41.3
AAC Carver	55	15	80	22	3	25.4	232	1,958	62.2	33.6	42.0
AAC Chrome	56	14	81	19	3	25.5	247	1,835	62.5	31.9	40.2
AAC Profit	57	13	81	22	3	25.8	235	1,929	63.4	35.8	43.0
Agassiz	57	15	83	23	3	25.6	226	2,013	62.4	31.9	40.2
CDC Amarillo	58	13	82	21	1	25.5	228	1,992	61.9	34.2	39.2
CDC Dakota	59	11	81	18	2	30.9	202	2,250	61.2	29.8	--
CDC Inca	57	14	83	21	3	26.1	240	1,892	63.2	35.4	43.2
CDC Saffron	57	14	81	17	3	26.1	236	1,926	61.9	29.2	38.0
CDC Spectrum	58	14	83	20	3	27.2	236	1,923	60.9	33.5	40.1
Cronos	52	15	78	19	3	29.9	220	2,070	60.3	19.2	--
DL Apollo	54	16	81	21	2	28.1	217	2,112	62.8	25.0	36.4
DS Admiral	54	17	81	22	2	27.5	237	1,923	62.0	26.2	35.1
Durwood	55	16	82	24	2	27.1	221	2,069	61.6	29.2	37.2
Hyline	57	13	81	19	3	25.9	253	1,797	63.6	30.8	38.1
Jetset	54	16	81	21	3	27.9	208	2,181	60.2	24.4	35.2
Kite	53	17	81	17	6	27.1	235	1,939	60.0	21.5	--
Korando	52	18	81	20	3	30.6	284	1,599	60.5	24.0	32.9
LG Equator	53	19	82	20	2	27.0	226	2,008	61.4	28.6	--
LG Stunner	54	16	81	21	2	27.9	246	1,850	61.6	27.5	36.0
ND Dawn	55	14	81	22	3	26.3	236	1,929	60.9	27.2	34.9
Nette 2010	53	17	81	19	2	27.5	225	2,021	61.8	26.7	36.1
Orchestra	53	18	82	21	3	28.9	228	2,003	60.2	26.1	--
Peregrine	52	16	80	17	5	27.8	232	1,958	61.0	19.8	--
Salamanca	54	17	82	20	3	27.9	249	1,829	61.6	27.1	38.2
Green Cotyledon Type											
Aragorn	53	17	81	18	4	27.7	214	2,126	61.9	22.4	--
Arcadia	54	15	80	19	3	26.6	219	2,080	63.6	31.6	36.1
CDC Striker	56	14	81	19	3	28.9	227	1,998	61.4	25.9	34.6
Empire	57	12	80	23	2	25.5	217	2,104	62.1	27.4	33.9
Greenwood	54	17	81	17	4	26.8	215	2,117	62.9	26.7	--
Hampton	56	15	81	19	4	29.1	240	1,893	61.1	25.1	28.7
LG Koda	57	13	81	21	3	26.0	241	1,885	62.2	26.1	33.0
Shamrock	56	15	82	20	3	26.7	218	2,098	59.4	25.2	33.1
Viper	53	17	80	22	4	29.9	210	2,163	59.8	20.1	29.3
Mean	55	15	81	20	3	27.3	231	1,979	61.6	27.8	36.8
CV %	1.4	8.6	1.4	9.2	39	2.1	5.1	5.3	1.5	10.2	--
LSD 0.05	1.1	1.8	1.6	2.6	1.6	0.8	16.5	146	1.3	3.2	--
LSD 0.10	0.9	1.5	1.3	2.1	1.4	0.7	14.0	122	1.1	2.5	--

Planted: April 27. Harvested: Aug. 3. Previous crop: corn.

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

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