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North Dakota Dry Bean

Variety Trial Results for 2020 and Selection Guide

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North Dakota Bean Production

Dry edible beans have been a significant crop in eastern and east-central North Dakota during the past decades.

Acreage for the past 18 years is shown in Table 1, with production by classes in Table 2. Dry edible bean production for 2020 is estimated at 1,820 pounds per acre, up 420 pounds from 2019.

Table 1. North Dakota Dry Edible Bean Harvested Acreage, 2003 to 2020.

Year	Acreage
2003	520,000
2004	475,000
2005	565,000
2006	640,000
2007	665,000
2008	640,000
2009	580,000
2010	770,000
2011	380,000
2012	685,000
2013	430,000
2014	615,000
2015	635,000
2016	565,000
2017	685,000
2018	615,000
2019	550,000
2020	800,000 ¹

Source: North Dakota Agricultural Statistics Service – USDA.

¹Forecasted.

Table 2. North Dakota Dry Edible Bean Production by Commercial Class, 2003 to 2019.

Year	Pinto (Cwt)	Navy (Cwt)
2003	5,864,000	1,164,000
2004	3,561,000	650,000
2005	6,530,000	1,330,000
2006	4,988,000	1,585,000
2007	7,606,000	1,636,000
2008	6,660,000	2,087,000
2009	6,106,000	1,263,000
2010	7,543,000	1,958,000
2011	2,709,000	1,125,000
2012	7,610,000	2,215,000
2013	4,779,000	1,302,000
2014	5,677,000	1,622,000
2015	4,932,000	1,694,000
2016	5,745,000	1,321,000
2017	8,409,000	1,648,000
2018	5,352,000	1,620,000
2019	4,466,000	1,051,000

Source: North Dakota Agricultural Statistics Service – USDA.

2020 Dry Bean Performance Trials

Information about dry bean variety performance can be accessed on the web at www.ag.ndsu.edu/varietytrials/, the site with all variety trial data from all NDSU Experiment Station locations for all crops. 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 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 90% to 95% probability (0.10 and 0.05 level, respectively), 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. 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 bean varieties are arranged in alphabetical order within market class. Footnotes provide more detailed information about data in the table under which they appear. Characteristics to evaluate for selecting a dry bean variety include marketing 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. Choose a high-quality variety that, on average, performs the best at multiple locations near your farm during several years.

Information contained in this publication is based on research conducted by North Dakota Agricultural Experiment Station scientists. We express our thanks to dry bean growers who assisted with the on-farm variety testing.

We acknowledge the support for Juan Osorno’s breeding project, and conducting the statewide dry bean variety trials from the Northharvest Bean Growers Association. Research specialists and technicians helped with the field work and data compilation. The assistance given by many secretaries in entering data in respective portions of the document is very much appreciated. A special thank you goes to Lisa Johnson, Extension Plant Sciences secretary, for assisting in the compilation of this publication.

Presentation of data for the varieties tested does not imply approval or endorsement by the authors or agencies conducting the tests. NDSU 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 credited for the data.

Variety	Days to Flower (DAP) ¹	Days to Maturity (DAP) ¹	Plant Height (inch)	100 Seed Weight (gram)	Seed Yield (lb/a)
Charro	53	96	24	37.8	2,417
Cowboy	46	91	26	36.6	3,299
Gleam	45	93	22	33.6	3,346
GTS-904	56	95	19	38.7	2,560
GTS-907	44	91	18	32.6	1,959
La Paz	58	94	23	35.3	3,409
Lariat	57	--	22	39.9	2,993
Lumen	45	91	22	34.7	1,572
Monterrey	56	98	25	35.4	2,537
ND Falcon	58	--	24	36.4	2,233
ND Palomino	45	97	21	37.6	2,190
Othello	50	93	17	37.4	2,685
Radiant	43	93	23	33.7	2,482
Sinaloa	46	94	26	35.5	3,007
Stampede	49	94	26	34.5	2,501
StayBright	56	--	22	37.3	2,488
SV6139GR	46	93	21	33.4	2,735
Torreon	45	94	23	37.9	2,476
Vibrant	44	90	23	32.8	2,413
Windbreaker	45	93	18	38.6	2,901
Mean	49	93	22	36.0	2,610
CV %	7.7	1.9	8.8	6.1	21.2
LSD 0.05	7.6	3.6	3.9	4.5	1050
LSD 0.10	6.4	3.0	3.3	3.8	879

Planted: June 2. Harvested: Sept. 16. Previous crop: sugarbeet.

¹Days after planting.

Table 4. 2020 Pinto Bean Variety Trial - Forest River - Authors, J. Osorno, J. VanderWal and J. Posch.

Variety	Days to Maturity (DAP) ¹	Plant Height (inch)	100 Seed Weight (gram)	Seed Yield (lb/a)
Charro	97	19	32.9	1,344
Cowboy	95	19	33.8	2,018
Gleam	99	19	31.0	1,724
GTS-904	98	15	33.5	1,360
GTS-907	91	15	29.0	793
La Paz	97	18	31.3	1,609
Lariat	98	17	34.0	1,789
Lumen	98	17	29.6	1,525
Monterrey	95	19	30.4	1,822
ND Falcon	100	20	32.5	1,202
ND Palomino	102	17	33.4	1,588
Radiant	94	17	30.6	1,454
Sinaloa	94	19	30.8	1,907
Stampede	97	19	31.9	1,657
StayBright	105	19	32.7	1,660
SV6139GR	94	15	30.9	1,556
Torreon	97	18	33.8	1,734
Vibrant	95	18	29.5	1,361
Windbreaker	95	13	33.5	1,691
Mean	97	17	31.8	1,568
CV %	2.7	9.6	6.7	27.4
LSD 0.05	3.7	2.3	3.0	580
LSD 0.10	3.1	2.0	2.6	492

Planted: May 27. Harvested: Sept. 11. Previous crop: small grain.

¹Days after planting.**Table 5. 2020 Miscellaneous Dry Bean Variety Trial - Forest River - Authors, J. Osorno, J. VanderWal and J. Posch.**

Variety	Market Class	Days to Maturity (DAP) ¹	Plant Height (inch)	100 Seed Weight (gram)	Seed Yield (lb/a)
Aries	Great Northern	94	18	30.0	1,288
Draco	Great Northern	101	19	27.8	1,735
Eiger	Great Northern	98	21	30.8	1,950
Matterhorn	Great Northern	100	19	29.1	1,263
ND Pegasus	Great Northern	99	22	28.9	2,034
Powderhorn	Great Northern	94	19	28.1	1,000
Floyd	Pink	97	13	29.2	1,002
Magnolia	Pink	96	19	33.6	1,791
Rosetta	Pink	97	19	28.6	1,209
Sedona	Pink	97	19	31.9	1,471
Caldera	Small red	99	21	32.9	2,041
Merlot	Small red	99	19	29.2	1,222
Ruby	Small red	97	19	25.0	1,650
Viper	Small red	98	20	24.6	1,477
Mean		97	19	29.3	1,510
CV %		2.2	8.2	7.3	19.1
LSD 0.05		3.1	2.2	3.1	440
LSD 0.10		2.5	1.8	2.6	360

Planted: May 27. Harvested: Sept. 11. Previous crop: small grain.

¹Days after planting.

Table 6. 2020 Navy Bean Variety Trial - Forest River - Authors, J. Osorno, J. VanderWal and J. Posch.

Variety	Days to Maturity	Plant Height	100 Seed Weight	Seed Yield
	(DAP) ¹	(inch)	(gram)	(lb/a)
AAC Argosy	102	17	19.2	1,679
AAC Shock	98	15	19.7	1,763
AC Portage	99	17	17.6	1,002
Apex	105	14	20.3	1,499
Armada	103	15	18.4	1,093
Blizzard	100	17	16.8	1,331
HMS Medalist	102	14	17.5	1,279
Nautica	100	16	16.2	1,272
SV1893GH	103	17	17.8	652
T9905	97	16	18.3	1,843
Valiant	100	16	16.2	1,291
Mean	101	16	18.0	1,337
CV %	3.6	15.7	4.6	33.9
LSD 0.05	5.1	3.6	1.6	840
LSD 0.10	4.3	3.0	1.3	699

Planted: May 27. Harvested: Sept. 11. Previous crop: small grain.

¹Days after planting.

Table 7. 2020 Black Bean Variety Trial - Forest River - Authors, J. Osorno, J. VanderWal and J. Posch.

Variety	Days to Maturity	Plant Height	100 Seed Weight	Seed Yield
	(DAP) ¹	(inch)	(gram)	(lb/a)
AAC Knight Rider	101	17	16.6	1,215
Ace	94	18	16.7	1,554
Adams	95	17	15.4	1,265
Black Bear	100	17	15.5	1,223
Black Tails	97	18	17.0	1,294
Blackbeard	98	21	17.6	1,426
Eclipse	95	19	16.9	1,498
GTS-1103	100	18	17.7	1,667
Loreto	95	17	15.7	1,143
ND Twilight	94	17	18.0	1,516
Spectre	100	18	16.7	1,091
Zorro	94	17	15.7	1,078
Mean	97	18	16.6	1,331
CV %	2.9	7.8	4.3	19.8
LSD 0.05	3.9	2.0	1.0	370
LSD 0.10	3.3	1.7	0.8	312

Planted: May 27. Harvested: Sept. 11. Previous crop: small grain.

¹Days after planting.

Table 8. 2020 Cranberry and Kidney Bean Variety Trial - Perham, Minn. - Authors, J. Osorno, J. VanderWal and J. Posch.

Variety	Market Class	Days to Flower (DAP) ¹	Plant Height (inch)	100 Seed Weight (gram)	Seed Yield (lb/a)
AAC Scotty	Cranberry	36	13	46.7	750
Amaranto	Cranberry	40	12	46.3	738
Etna	Cranberry	36	13	47.4	808
Vero	Cranberry	36	13	47.9	672
Chaparral	Dark Red Kidney	41	15	39.1	1,373
Dynasty	Dark Red Kidney	37	16	49.1	1,232
Epic	Dark Red Kidney	41	15	44.8	707
Montcalm	Dark Red Kidney	40	14	43.1	1,004
Rampart	Dark Red Kidney	44	15	38.3	787
Red Hawk	Dark Red Kidney	35	14	41.3	819
Red Rover	Dark Red Kidney	35	18	41.1	1,009
Spire	Dark Red Kidney	42	15	40.6	1,177
Talon	Dark Red Kidney	39	14	43.3	1,009
Big Red	Light Red Kidney	34	13	44.5	532
CELRK	Light Red Kidney	34	14	46.3	649
Clouseau	Light Red Kidney	34	16	45.9	1,059
Foxfire	Light Red Kidney	35	13	42.1	510
Pink Panther	Light Red Kidney	35	13	44.6	418
Red Dawn	Light Red Kidney	34	11	43.7	485
Ronnie's Red	Light Red Kidney	44	16	46.2	927
Rosie	Light Red Kidney	39	17	43.8	1,154
ND Whitetail	White Kidney	39	17	44.9	1,437
Mean		38	14	44.1	875
CV %		9.7	7.4	4.1	22.7
LSD 0.05		5.1	1.5	2.5	280
LSD 0.10		4.3	1.3	2.1	240

Planted: June 3. Harvested: Sept. 18. Previous crop: corn.

¹Days after planting.**Table 9. 2020 Miscellaneous Dry Bean Variety Trial - Perham, Minn. - Authors, J. Osorno, J. VanderWal and J. Posch.**

Variety	Market Class	Days to Flower (DAP) ¹	Plant Height (inch)	100 Seed Weight (gram)	Seed Yield (lb/a)
AAC Knight Rider	Black	52	16	17.7	1,430
Eclipse	Black	45	19	18.4	1,859
ND Twilight	Black	45	17	20.2	1,713
AC Portage	Navy	51	17	20.5	1,322
HMS Medalist	Navy	50	18	16.5	1,444
T9905	Navy	50	17	20.7	1,513
LaPaz	Pinto	46	19	36.3	1,651
Lariat	Pinto	44	17	37.9	1,485
Monterrey	Pinto	46	19	35.2	1,575
ND Falcon	Pinto	51	20	37.2	1,512
ND Palomino	Pinto	44	16	37.7	839
Stampede	Pinto	45	17	36.6	992
Windbreaker	Pinto	43	16	36.9	1,397
Mean		47	18	28.6	1,441
CV %		4.4	6.6	3.4	22.3
LSD 0.05		2.9	1.6	1.4	460
LSD 0.10		2.5	1.4	1.2	383

Planted: June 3. Harvested: Sept. 18. Previous crop: corn.

¹Days after planting.

Table 10. 2020 Cranberry and Kidney Bean Variety Trial - Staples, Minn. - Authors, J. Osorno, J. VanderWal, J. Posch and H. Barrett.

Variety	Market Class	Days to Flower (DAP) ¹	Plant Height (inch)	100 Seed Weight (gram)	Seed Yield (lb/a)
AAC Scotty	Cranberry	89	15	49.7	1,338
Vero	Cranberry	83	12	46.4	1,425
Chaparral	Dark Red Kidney	95	14	43.4	1,799
Dynasty	Dark Red Kidney	89	16	50.6	1,729
Epic	Dark Red Kidney	87	14	47.8	949
Montcalm	Dark Red Kidney	89	15	44.5	1,665
Rampart	Dark Red Kidney	91	15	41.4	1,148
Red Hawk	Dark Red Kidney	85	15	43.4	1,672
Red Rover	Dark Red Kidney	85	20	43.8	1,939
Spire	Dark Red Kidney	95	13	42.2	1,223
Talon	Dark Red Kidney	91	14	46.6	1,841
Big Red	Light Red Kidney	78	13	43.3	898
Clouseau	Light Red Kidney	85	16	49.3	1,814
Foxfire	Light Red Kidney	87	15	43.2	1,290
Pink Panther	Light Red Kidney	83	15	47.7	1,227
Red Dawn	Light Red Kidney	78	11	41.5	769
Ronnie's Red	Light Red Kidney	89	15	46.0	885
Rosie	Light Red Kidney	100	18	46.6	2,557
ND Whitetail	White Kidney	97	16	48.9	1,757
Mean		88	15	45.6	1,470
CV %		3.8	17.3	6.4	32.0
LSD 0.05		4.7	3.5	4.1	690
LSD 0.10		4.0	3.0	3.5	580

Planted: June 1. Harvested: Sept. 17. Previous crop: corn.

¹Days after planting.

Table 11. 2020 Dry Bean Variety Trial - Dryland - Carrington - Authors, M. Ostlie, B. Schatz and G. Endres.

Variety	Market Class	Maturity (DAP) ³	Growth Habit ¹ (1-9)	Direct Harvest ² (%)	Seeds/ Pound	100 Seed Weight (gram)	Seed Yield	
							2020	3-yr. Avg.
Black Tails	Black	83	8	98	2,629	17.3	2,252	--
Eclipse	Black	86	8	94	2,463	18.5	1,782	1,872
ND Twilight	Black	86	7	91	2,377	19.1	2,141	--
ND Pegasus	Great Northern	90	5	92	1,431	31.8	2,608	--
Blizzard	Navy	89	8	92	2,590	17.5	2,087	--
HMS Medalist	Navy	86	8	89	2,961	15.3	2,188	1,876
T9905	Navy	89	7	95	2,479	18.3	2,040	2,009
Centennial	Pinto	89	4	88	1,283	35.4	1,843	--
Cowboy	Pinto	83	7	93	1,283	35.4	2,512	--
Croissant	Pinto	88	3	79	1,386	32.8	2,163	--
DR Wood	Pinto	93	4	93	1,403	32.4	1,820	--
La Paz	Pinto	87	6	94	1,376	33.0	2,620	2,379
Lariat	Pinto	89	4	83	1,328	34.2	2,494	2,071
Long's Peak	Pinto	87	5	89	1,367	33.4	1,593	--
Monterrey	Pinto	85	6	95	1,445	31.4	2,109	2,197
ND Falcon	Pinto	90	6	93	1,317	34.5	2,284	--
ND Palomino	Pinto	87	5	89	1,360	33.4	2,252	2,176
Radiant	Pinto	85	6	92	1,416	32.1	2,334	--
Stampede	Pinto	86	6	92	1,334	34.0	2,265	2,213
Torreón	Pinto	86	6	98	1,221	37.2	2,747	--
Vibrant	Pinto	86	7	91	1,313	34.6	2,598	--
Windbreaker	Pinto	85	5	80	1,273	35.7	2,146	2,366
Merlot	Small Red	89	4	90	1,340	33.9	2,095	1,894
Viper	Small Red	89	4	91	1,769	25.7	2,410	--
Mean		87	6	91	1,697	29.2	2,224	2,105
CV %		2.5	15.3	4.3	4.7	4.2	11.2	--
LSD 0.05		3.1	1.2	5.5	112	1.7	351	--
LSD 0.10		2.6	1.0	4.6	94	1.5	294	--

Planted: May 27. Harvested: Sept. 4. Previous crop: barley.

¹Growth Habit: Scored on scale of 1 to 9; 1 = longer vine, low-stature plant, pods lower to ground; 9 = very upright plant stature, pods held well off ground.

²Direct Harvest: A relative score to estimate the percent of beans that would be harvested successfully in a direct/straight harvest system.

³Days after planting.

Table 12. 2020 Dry Bean Variety Trial - Irrigated - Carrington - Authors, M. Ostlie, B. Schatz and G. Endres.

Variety	Market	Maturity	Growth	Direct	Seeds/ Pound	100 Seed	Seed Yield	
	Class		Habit ¹	Harvest ²		Weight	2020	3-yr. Avg.
		(DAP) ³	(1-9)	(%)		(gram)	------(lb/a)-----	
Black Tails	Black	93	6	90	2,370	19.2	2,719	--
Eclipse	Black	95	7	86	2,399	18.9	2,454	2,873
ND Twilight	Black	98	3	81	2,273	20.0	2,385	--
ND Pegasus	Great Northern	101	2	83	1,323	34.4	3,353	--
Blizzard	Navy	99	5	81	2,422	18.8	3,029	--
HMS Medalist	Navy	97	5	80	2,773	16.4	2,993	3,308
T9905	Navy	101	4	79	2,172	20.9	2,475	3,208
Centennial	Pinto	101	3	75	1,258	36.1	2,336	--
Cowboy	Pinto	90	4	75	1,235	36.8	2,990	--
Croissant	Pinto	98	1	69	1,334	34.0	2,239	--
DR Wood	Pinto	--	3	70	1,235	36.8	1,322	--
La Paz	Pinto	96	3	79	1,343	33.8	3,076	3,578
Lariat	Pinto	97	1	70	1,208	37.6	3,212	3,308
Long's Peak	Pinto	103	2	70	1,184	38.4	1,966	--
Monterrey	Pinto	94	3	80	1,391	32.6	3,145	3,392
ND-Falcon	Pinto	105	2	76	1,268	35.8	2,550	--
ND-Palomino	Pinto	100	3	76	1,318	34.4	2,608	3,285
Radiant	Pinto	91	3	84	1,390	32.7	2,831	--
Stampede	Pinto	93	3	79	1,296	35.0	3,220	3,121
Torreon	Pinto	93	3	88	1,213	37.4	3,130	--
Vibrant	Pinto	91	4	83	1,303	34.9	2,873	--
Windbreaker	Pinto	92	1	68	1,202	37.8	2,767	3,336
Merlot	Small Red	101	2	69	1,353	33.8	2,683	3,017
Viper	Small Red	97	5	88	1,776	25.6	3,082	--
Mean		97	3	78	1,636	30.2	2,727	3,243
CV %		1.2	29	5.9	3.5	3.7	9.9	--
LSD 0.05		2	1.3	6.5	81	1.6	380	--
LSD 0.10		1	1.1	5.5	68	1.3	317	--

Planted: May 27. Harvested: Sept. 11. Previous crop: barley.

¹Growth Habit: Scored on scale of 1 to 9; 1 = longer vine, low-stature plant, pods lower to ground; 9 = very upright plant stature, pods held well off ground.

²Direct Harvest: A relative score to estimate the percent of beans that would be harvested successfully in a direct/straight harvest system.

³Days after planting.

Table 13. 2020 Dry Bean Variety Trial - Irrigated - Oakes (Carrington REC) - Authors, K. Cooper, H. Eslinger and S. Nelson.

Variety	Market Class	Maturity (DAP) ¹	Seeds/Pound (seeds)	100 Seed Weight (gram)	Test Weight (lb/bu)	Seed Yield	
						2020	3-yr. Avg.
Eclipse	Black	86	1,938	23.5	60.2	1,544	2,885
Black Tails	Black	82	2,166	21.0	61.5	1,153	--
ND Pegasus	Great Northern	81	1,308	34.7	60.5	2,390	--
Merlot	Small Red	83	1,172	38.8	57.3	1,671	3,297
Viper	Small Red	83	1,726	26.3	59.5	1,509	--
Mean		83	1,662	28.9	59.8	1,653	3,091
CV %		2.9	5.9	5.3	1.0	12.5	--
LSD 0.05		3.1	123	1.9	0.7	259	--
LSD 0.10		3.7	151	2.3	0.9	317	--

Planted: June 1. Harvested: Sept. 2. Previous crop: soybean.

¹Days after planting.**Table 14. 2020 Pinto Bean Variety Trial - Irrigated - Oakes (Carrington REC) - Authors, K. Cooper, H. Eslinger and S. Nelson.**

Variety	Market Class	Maturity (DAP) ¹	Seeds/Pound (seeds)	100 Seed Weight (gram)	Test Weight (lb/bu)	Seed Yield	
						2020	3-yr. Avg.
La Paz	Pinto	80	1,201	37.9	58.6	2,850	3,242
Lariat	Pinto	80	1,114	40.7	57.8	2,833	3,084
Monterrey	Pinto	80	1,168	38.9	59.4	2,851	3,098
ND Falcon	Pinto	84	1,093	41.5	54.8	2,732	--
ND Palomino	Pinto	81	1,090	41.7	55.1	2,065	2,606
Stampede	Pinto	78	1,158	39.3	56.2	2,258	2,347
Torreón	Pinto	79	1,159	39.2	58.9	2,135	--
Vibrant	Pinto	79	1,230	36.9	60.0	2,355	--
Windbreaker	Pinto	78	994	45.8	55.6	2,791	2,933
Mean		80	1,134	40.2	57.4	2,541	2,885
CV %		1.2	4.9	4.9	1.5	11.5	--
LSD 0.05		1.4	81	2.8	1.2	412	--
LSD 0.10		1.2	67	2.3	1.0	342	--

Planted: June 1. Harvested: Sept. 2. Previous crop: soybean.

¹Days after planting.**Table 15. 2020 Dry Bean Variety Trial - Wishek (Carrington REC) - Authors, G. Endres, T. Indergaard and B. Schatz.**

Variety	Market Class	Seed Protein (%)	Seeds/Pound (seeds)	100 Seed Weight (gram)	Test Weight (lb/bu)	Seed Yield
						(lb/a)
Eclipse	Black	25.7	2,529	18.0	59.4	1,842
ND Falcon	Pinto	22.9	1,462	31.1	54.3	2,246
ND Palomino	Pinto	22.5	1,362	33.3	55.3	1,911
Vibrant	Pinto	21.7	1,454	31.2	57.2	1,872
Windbreaker	Pinto	22.5	1,306	34.8	55.0	1,657
Mean		23.1	1,623	29.7	56.3	1,906
CV %		2.0	3.5	4.2	1.4	18.6
LSD 0.05		0.7	88	1.9	1.2	NS
LSD 0.10		0.6	72	1.6	1.0	NS

Planted: May 27. Harvested: Sept. 4. Previous crop: barley.

Table 16. 2020 Dry Bean Variety Trial - Hettinger - Authors, J. Rickertsen and M. Wells.

Variety	Market Class	Plant Height (inch)	Plant Lodge ¹ (0-9)	Test Weight (lb/bu)	Seed Yield (lb/a)		
					2020	2-yr. Avg.	3-yr. Avg.
Black Tails	Black	24	6	56.6	1,151	1,511	--
Eclipse	Black	24	3	49.0	1,250	1,456	1,358
ND Twilight	Black	24	4	58.3	1,073	1,299	--
ND Pegasus	Great Northern	32	3	50.4	1,342	1,577	--
Blizzard	Navy	31	5	--	787	977	--
HMS Medalist	Navy	29	3	51.8	962	1,046	1,010
T9905	Navy	27	4	--	878	1,114	1,157
La Paz	Pinto	26	6	49.9	1,139	1,290	1,424
Lariat	Pinto	36	8	51.8	1,159	1,202	1,260
Monterrey	Pinto	30	5	51.1	1,036	1,191	1,345
ND Falcon	Pinto	27	6	50.9	1,105	1,307	--
ND Palomino	Pinto	29	5	53.2	1,019	1,315	1,389
Stampede	Pinto	33	5	50.4	1,207	1,502	1,538
Torreon	Pinto	31	5	53.2	1,031	1,234	--
Vibrant	Pinto	30	5	56.1	1,150	1,218	--
Windbreaker	Pinto	36	7	51.2	1,070	1,183	1,300
Merlot	Small Red	24	6	--	794	1,276	1,187
Viper	Small Red	25	5	54.3	1,257	1,458	--
Mean		29	5	52.5	1,078	1,286	1,297
C.V. %		16.8	10.2	--	12.2	--	--
LSD 0.05		6.8	1.0	--	184	--	--
LSD 0.10		5.7	0.8	--	154	--	--

Planted: May 19. Harvested: Sept. 15. Previous crop: oats.

¹0 = no lodging, 9 = lying flat on ground.

Table 17. 2020 Dry Bean Variety Trial - Langdon - Authors, B. Hanson and L. Henry.

Variety	Market Class	Days to Maturity	Plant Height (inch)	100 Seed Weight (gram)	Seed Yield (lb/a)				
					2018	2019	2020	2-yr. Avg.	3-yr. Avg.
Black Tails	Black	104	16	20.9	--	2,112	3,759	2,935	--
Eclipse	Black	103	17	19.9	2,679	2,181	3,634	2,907	2,831
ND Twilight	Black	101	16	21.1	--	--	3,205	--	--
Dynasty	Dark Red Kidney	108	17	55.2	--	--	2,717	--	--
ND Pegasus	Great Northern	105	16	35.2	--	2,811	4,124	3,468	
AAC Argosy	Navy	110	17	22.3	--	--	3,313	--	--
AAC Shock	Navy	104	15	23.3	--	--	3,065	--	--
Blizzard	Navy	104	19	19.2	--	2,327	3,321	2,824	--
HMS Medalist	Navy	104	18	17.6	2,567	2,346	3,891	3,118	2,935
Nautica	Navy	108	16	17.8	--	--	2,367	--	--
T9905	Navy	104	15	21.1	2,781	2,065	3,781	2,923	2,876
La Paz	Pinto	101	15	34.4	2,741	2,564	3,693	3,129	2,999
Lariat	Pinto	105	16	37.4	2,861	2,516	3,455	2,986	2,944
Monterrey	Pinto	101	16	33.4	2,068	2,442	3,807	3,124	2,772
ND Falcon	Pinto	109	18	33.3	--	2,280	3,114	2,697	--
ND Palomino	Pinto	105	15	35.2	2,864	2,239	3,020	2,629	2,708
Stampede	Pinto	102	14	36.2	3,202	2,415	3,899	3,157	3,172
Torreón	Pinto	101	17	35.6	--	2,553	3,804	3,179	--
Vibrant	Pinto	101	18	37.1	--	2,693	4,033	3,363	--
Windbreaker	Pinto	99	15	36.7	2,552	2,291	3,876	3,084	2,906
Merlot	Small Red	108	16	34.7	2,284	2,205	3,089	2,647	2,526
Viper	Small Red	109	15	27.1	--	2,854	3,329	3,091	--
Mean		104	16	29.8	2,660	2,406	3,468	3,015	2,867
CV %		2.4	7.4	4.1	8.2	10.8	7.8	8.3	9.3
LSD 0.05		4.2	2.0	2.0	385	427	446	528	455
LSD 0.10		3.5	1.6	1.7	319	355	371	435	375

Planted: May 29. Harvested: Sept. 25.

Table 18. 2020 Dry Bean Variety Trial - Minot - Authors, E. Eriksmoen, D. Howat and A. Kraklau.

Variety	Market Class	Visual Stand at Harvest (%)	Plant Height (inch)	Test Weight (lb/bu)	100 Seed Weight (grams)	Seed Yield (lb/a)		
						2020	2-yr. Avg.	3-yr. Avg.
Black Tails	Black	88	18	67.2	16.4	1,752	1,712	--
Eclipse	Black	96	19	66.8	16.9	1,936	1,810	1,445
ND Twilight	Black	70 ^a	17	67.7	16.7	1,392	--	--
ND Pegasus	Great Northern	77 ^a	20	64.1	29.6	1,546	1,829	--
Blizzard	Navy	93	19	67.8	16.8	1,803	1,674	--
HMS Medalist	Navy	96	18	67.2	15.3	1,675	1,609	1,372
T9905	Navy	60 ^a	18	67.8	17.2	1,366	1,395	1,251
Centennial	Pinto	96	18	64.9	29.1	1,223	--	--
Croissant	Pinto	96	16	64.3	28.9	1,403	--	--
DR Wood	Pinto	97	18	64.5	29.3	1,833	--	--
La Paz	Pinto	97	18	64.5	28.5	1,867	1,743	1,661
Lariat	Pinto	96	18	63.4	29.1	1,952	1,980	1,894
Long's Peak	Pinto	85 ^a	17	63.4	29.7	1,455	--	--
Monterrey	Pinto	98	18	65.2	29.9	2,443	1,989	1,711
ND Falcon	Pinto	95	18	61.9	29.3	1,513	1,478	--
ND Palomino	Pinto	95	18	62.6	30.0	1,766	1,632	1,648
Stampede	Pinto	96	16	63.1	28.3	1,761	1,682	1,447
Torreón	Pinto	90	19	64.9	30.6	1,823	1,870	--
Vibrant	Pinto	97	18	65.0	27.5	1,945	1,744	--
Windbreaker	Pinto	93	14	62.5	32.6	2,090	1,666	1,466
Merlot	Small Red	67 ^a	19	65.5	28.0	1,210	1,304	1,165
Viper	Small Red	97	19	65.8	24.1	2,170	2,107	--
Mean		90	18	65.0	25.6	1,724	1,719	1,506
C.V. %		9.4	10.0	0.9	4.8	12.6	--	--
LSD 0.05		14	NS	0.9	2.0	351	--	--
LSD 0.10		11	2.0	0.8	1.7	292	--	--

Planted: May 28. Harvested: Sept. 17. Previous crop: spring wheat.

^aThese varieties had reduced stands at harvest, which affected yields.

Table 19. 2020 Dry Bean Variety Trial - Irrigated - Williston - Authors, J. Jacobs, T. Tjelde and A. Turnquist.

Variety	Market Class	Days to Maturity (DAP) ²	Canopy Height (inch)	Plant Lodge ¹ (0-9)	Seeds/Pound (seeds)	Test Weight (lb/bu)	100 Seed Weight (gram)	Seed Yield		
								2020	2-yr. Avg.	3-yr. Avg.
Black Tails	Black	96	13	0	2,395	65.7	19	2,706	2,247	--
Eclipse	Black	95	12	0	2,425	64.3	19	2,053	1,798	1,797
ND Pegasus	Great Northern	98	16	1	1,496	61.9	30	3,834	2,817	--
Blizzard	Navy	97	12	0	2,639	64.3	17	2,327	1,774	--
T9905	Navy	98	12	1	2,579	65.5	18	2,533	1,918	1,723
La Paz	Pinto	96	14	1	1,455	63.2	31	4,259	2,842	2,736
Lariat	Pinto	96	13	2	1,365	61.5	33	3,579	2,641	2,563
Monterrey	Pinto	97	14	1	1,413	63.1	32	3,069	2,379	2,480
ND Falcon	Pinto	100	13	0	1,391	58.3	33	2,284	1,927	--
ND Palomino	Pinto	97	11	2	1,286	59.9	35	3,405	2,680	2,680
Stampede	Pinto	95	11	1	1,427	60.2	32	3,262	2,400	2,271
Torreón	Pinto	96	14	1	1,332	62.1	34	3,799	2,846	--
Vibrant	Pinto	99	11	1	1,441	63.3	31	2,708	2,290	--
Windbreaker	Pinto	95	12	1	1,221	60.1	37	2,120	2,031	1,981
Merlot	Small Red	97	10	2	1,504	62.2	30	2,287	2,134	1,911
Viper	Small Red	95	14	1	1,880	62.5	24	3,768	2,754	--
Mean		97	13	0.9	1,703	62.4	28.4	3,000	2,342	2,238
C.V. %		1.3	14.3	94	4.0	3.5	4.0	14.4	--	--
LSD 0.05		2.1	3.0	1.4	113	1.6	53.7	720	--	--
LSD 0.10		1.8	2.5	1.2	94	1.4	44.6	598	--	--

Planted: May 29. Harvested: Sept. 22. Previous crop: winter wheat.

¹0 = no lodging, 9 = lying flat on ground.²Days after planting.

Table 20. Pinto Bean Variety Descriptions.

Class and Cultivar	Origin/owner	RM ¹	Plant Type ²
PINTO			
Centennial	Colorado State Univ.	ML	UV
Charro	MSU	M	USV
Cowboy	Provita/ADM	ML	UV
Croissant	Colorado State Univ.	ML	UV
DR Wood	Colorado State Univ.	L	UV
Gleam	Provita/ADM	ME	UV
GTS-904	GenTec	ML	UV
GTS-907	GenTec	M	UV
La Paz	Provita/ADM	L	USV
Lariat	NDSU	L	USV
Long's Peak	Colorado State Univ.	ML	UV
Lumen	Provita/ADM	ME	UV
Monterrey	Provita/ADM	ME	USV
ND Falcon	NDSU	L	USV
ND Palomino ³	NDSU	ME	USV
Othello	USDA-Prosser	E	V
Radiant ³	Provita/ADM	ME	USV
Sinaloa	Provita/ADM	ML	USV
Stampede	NDSU	M	USV
StayBright ³	Colorado State Univ./TVS ⁴	ML/L	UV
SV6139GR	Seminis/Monsanto/Bayer	ME	USV
Torreón	Provita/ADM	M	USV
Vibrant ³	Provita/ADM	E	USV
Windbreaker	Seminis	M	UV

¹RM = Relative Maturity; E = Early; ME = Medium Early; M = Medium; ML = Medium Late; L = Late.

²V = Vine; UV = Upright Vine; USV = Upright Short Vine; B = Bush.

³Slow darkening cultivar.

⁴TVS = Treasure Valley Seed Company.

Table 21. Navy Bean Variety Descriptions.

Class and Cultivar	Origin/owner	RM ¹	Plant Type ²
NAVY			
AAC Argosy	Ag. Can./ Univ. Guelph	ML	USV
AAC Shock	Ag. Can./ Univ. Guelph	ME	USV
AC Portage	Ag. Can./Meridian	ME	B
Apex	TVS ³	L	USV
Armada	Provita/ADM	ML	USV
Blizzard	Provita/ADM	M	USV
HMS Medalist	AmeriSeed/ADM	M	UV
Nautica	Ag. Can.	ML	USV
SV1893GH	Seminis/Monsanto/Bayer	ML	USV
T9905	Hyland	M	USV
Valiant	Provita/ADM	M	USV

¹RM = Relative Maturity; E = Early; ME = Medium Early; M = Medium; ML = Medium Late; L = Late.

²V = Vine; UV = Upright Vine; USV = Upright Short Vine; B = Bush.

³TVS = Treasure Valley Seed Company.

Table 22. Small Red, Black and Pink Bean Variety Descriptions.

Class and Cultivar	Origin	RM¹	Plant Type²
<u>SMALL RED</u>			
Caldera	Provita	ML	USV
Ruby	Provita	M	USV
Merlot	MSU	ME	USV
Viper	Provita	M	USV
<u>BLACK</u>			
AAC Knight Rider	Meridian	L	USV
Ace	ADM Seedwest	M	USV
Adams	MSU	M	USV
Black Bear	Provita	M	USV
Black Tails	Provita	M	USV
Blackbeard	Provita/ADM	ML	USV
Eclipse	NDSU	M	USV
GTS-1103	GenTec	L	UV
Loreto	Provita	M	UV
ND Twilight	NDSU	ME	USV
Spectre	Provita/ADM	ML	USV
Zorro	MSU	L	USV
<u>PINK</u>			
Floyd	Rogers	ML	V
Magnolia	Provita/ADM	M	USV
Rosetta	MSU/ARS	M	USV
Sedona	MSU/ARS	M	USV

¹RM = Relative Maturity; E = Early; ME = Medium Early; M = Medium; ML = Medium Late; L = Late.

²V = Vine; UV = Upright Vine; USV = Upright Short Vine; B = Bush.

Table 23. Light Red, Dark Red and White Kidney, Great Northern and Cranberry Bean Variety Descriptions.

Class and Cultivar	Origin	RM¹	Plant Type²
<u>LIGHT RED KIDNEY</u>			
Big Red	Provita	ML	B
California Early (CELRK)	U. Calif.	E	B
Clouseau	Seminis	ML	B
Foxtire	Rogers	ME	B
Pink Panther	Seminis	M	B
Red Dawn	Provita	M	B
Ronnie's Red	Provita	ML	B
Rosie	NDSU	L	B
<u>DARK RED KIDNEY</u>			
Chaparral	Provita	ML	B
Dynasty	U. of Guelph	ML	B
Epic	Provita	ML	B
Montcalm	MSU	ML	B
Rampart	Provita	M	B
Red Hawk	MSU	M	B
Red Rover	Seminis	ME	B
Spire	Provita	ML	B
Talon	NDSU	M	B
<u>WHITE KIDNEY</u>			
ND Whitetail	NDSU	M	B
<u>GREAT NORTHERN</u>			
Aries	Provita	ME	USV
Draco	Provita	M	USV
Eiger	MSU	M	USV
Matterhorn	MSU	ME	USV
ND Pegasus	NDSU	ML	UV
Powderhorn	MSU	M	USV
<u>CRANBERRY</u>			
AAC Scotty	Ag. Can./Meridian	ML	B
Amaranto	Seminis/Monsanto/Bay	E	B
Etna	Seminis	E	B
Vero	ADM-Seedwest	M	B

¹RM = Relative Maturity; E = Early; ME = Medium Early; M = Medium; ML = Medium Late; L = Late.

²V = Vine; UV = Upright Vine; USV = Upright Short Vine; B = Bush.

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