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North Dakota Dry Bean

Variety Trial Results for 2021 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 2021 is estimated (NASS forecast) at 930 pounds per acre, down 700 pounds from 2020.

Table 1. North Dakota Dry Edible Bean Harvested Acreage, 2003 to 2021.

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	551,500
2020	785,000
2021	640,000[1]

Source: North Dakota Agricultural Statistics Service – USDA.
[1]Forecasted.

Table 2. North Dakota Dry Edible Bean Production by Commercial Class, 2003 to 2020.

Year	Pinto	Navy
	(Cwt)	(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	4,494,000	1,037,000
2020	9,102,000	1,372,000

Source: North Dakota Agricultural Statistics Service – USDA.

2021 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 North Dakota Agricultural Experiment Station locations for all crops or the new variety selection tool at https://vt.ag.ndsu.edu/. 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. **During the 2021 growing season many experimental sites experienced drought conditions with reduced yields and higher CVs than normal. Use data with caution from sites with high yield CVs.**

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 Northarvest Bean Growers Association. Research specialists, technicians, students and summer workers 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.

Table 3. 2021 Pinto Bean Variety Trial - Hatton - Authors, J. Osorno, and J. VanderWal.

Variety	Days to Flower	Days to Maturity	Plant Height	100 Seed Weight	Seed Yield
	(DAP)[1]	(DAP)[1]	(inch)	(gram)	(lb/a)
Cancun	53	95	25	40.5	1,828
Charro	52	95	23	37.8	1,690
Cowboy	50	81	19	38.4	1,822
Gleam	50	87	20	33.0	1,607
La Paz	51	86	21	30.1	1,700
Lariat	50	95	24	38.2	1,716
Lumen	48	83	22	33.3	2,165
Monterrey	52	85	23	34.7	2,139
Mystic	49	84	20	35.8	2,052
ND Falcon	53	95	20	32.1	1,602
ND Palomino	48	95	25	34.4	1,737
Othello	48	86	19	32.4	1,347
Sinaloa	51	85	19	33.6	1,416
Stampede	50	85	23	37.1	1,923
Staybright	56	95	23	33.8	1,658
SV6139GR	50	83	19	31.9	1,638
Torreon	48	84	24	34.0	2,095
USDA-Rattler	51	86	19	37.2	1,570
Vibrant	48	86	21	32.7	1,546
Windbreaker	48	64	17	36.3	1,678
Mean	50	87	21	34.8	1,746
CV %	3.1	10.1	17.6	7.7	26.2
LSD 0.05	1.8	10.2	4.3	3.1	519
LSD 0.10	1.4	7.9	3.3	2.4	404

Planted: June 2. Harvested: Sept. 17. Previous crop: sugarbeet.

[1]Days after planting.

Table 4. 2021 Navy Bean Variety Trial - Hatton - Authors, J. Osorno and J. VanderWal.

Variety	Days to Flower	Days to Maturity	Plant Height	100 Seed Weight	Seed Yield
	(DAP)[1]	(DAP)[1]	(inch)	(gram)	(lb/a)
AAC Argosy	48	85	21	18.2	1,577
AAC Shock	48	85	18	12.4	1,323
Apex	49	85	19	19.8	1,576
Armada	52	95	22	20.2	1,834
Blizzard	51	95	21	17.1	1,524
HMS Medalist	53	95	19	18.2	1,070
HMS Victory	50	86	21	18.8	1,744
Liberty	52	95	19	20.6	1,445
Rogue	53	86	20	15.5	1,846
SV1893GH	51	85	20	18.4	1,396
T9905	52	86	18	16.8	1,256
Valiant	50	86	22	19.6	1,139
Mean	51	88	20	18.0	1,478
CV %	2.8	0.6	12.5	12.3	18.5
LSD 0.05	1.7	1.1	2.9	3.8	475
LSD 0.10	1.3	0.8	2.2	2.9	365

Planted: June 2. Harvested: Sept. 17. Previous crop: sugarbeet.

Only two out of four reps were harvested due to dicamba drift damage.

[1]Days after planting.

Table 5. 2021 Cranberry and Kidney Bean Variety Trial - Perham, Minn. - Authors, J. Osorno and J. VanderWal.

Variety	Market Class	Days to Flower	Days to Maturity	Plant Height	Common Bacterial Blight[1]	Root Rot[1]	100 Seed Weight	Seed Yield
		(DAP)[2]	(DAP)[2]	(inch)	(1-9)	(1-9)	(gram)	(lb/a)
Amaranto	Cranberry	46	84	20	6	3	44.5	1,535
Etna	Cranberry	45	85	18	5	4	47.0	1,856
Chaparral	Dark red kidney	47	102	18	2	3	42.5	2,072
Dynasty	Dark red kidney	46	98	23	4	4	46.6	1,194
Epic	Dark red kidney	46	93	23	5	3	47.5	1,419
Gallantry	Dark red kidney	45	95	21	3	3	46.1	1,937
Montcalm	Dark red kidney	45	94	21	4	3	43.2	1,378
Rampart	Dark red kidney	45	86	22	6	3	44.7	1,461
Red Hawk	Dark red kidney	45	85	21	6	3	41.4	1,201
Red Rover	Dark red kidney	45	88	20	5	2	47.8	1,450
Spire	Dark red kidney	46	99	19	4	2	42.2	1,795
Talon	Dark red kidney	45	91	19	4	2	44.2	1,422
Big Red	Light red kidney	45	84	22	6	2	48.7	1,379
Clouseau	Light red kidney	45	87	22	7	4	52.1	1,477
Foxfire	Light red kidney	46	89	19	6	3	42.4	1,323
Pink Panther	Light red kidney	44	86	21	5	2	46.1	1,562
Red Dawn	Light red kidney	45	82	21	8	3	49.3	1,186
Ronnies Red	Light red kidney	45	97	21	5	3	52.3	1,416
Rosie	Light red kidney	46	104	22	4	2	42.3	1,519
Beluga	White kidney	45	98	20	3	2	44.2	1,231
ND Whitetail	White kidney	45	95	18	5	3	43.2	1,295
Yeti	White kidney	47	104	19	4	4	44.4	1,670
Mean		45	92	21	5	3	45.6	1,490
CV %		2.5	4.5	9.9	20.2	43.2	10.3	22.6
LSD 0.05		1.3	4.8	2.4	1.2	1.4	5.4	382
LSD 0.10		1.0	3.8	1.9	0.9	1.1	4.2	297

Planted: May 24. Harvested: Sept. 8. Previous crop: potato.

[1]Common bacterial blight and common root rot use scale 1 to 9, with nine being the worst.

[2]Days after planting.

Table 6. 2021 Miscellaneous Dry Bean Variety Trial - Perham, Minn. - Authors, J. Osorno and J. VanderWal.

Variety	Market Class	Days to Flower	Days to Maturity	Plant Height	100 Seed Weight	Seed Yield
		(DAP)[1]	(DAP)[1]	(inch)	(gram)	(lb/a)
Eclipse	Black	55	87	20	17.8	2,043
ND Twilight	Black	55	88	22	19.2	2,062
Draco	Great Northern	57	102	22	32.6	1,503
ND Pegasus	Great Northern	54	93	26	33.2	1,891
HMS Medalist	Navy	55	101	20	18.7	1,664
T9905	Navy	56	99	19	20.2	1,809
La Paz	Pinto	55	97	24	31.9	1,897
Lariat	Pinto	54	94	25	35.8	1,742
Monterrey	Pinto	55	97	26	34.0	2,186
ND Falcon	Pinto	54	93	22	34.3	1,894
ND Palomino	Pinto	51	93	24	37.5	2,529
Windbreaker	Pinto	49	86	20	31.4	2,208
Mean		54	94	22	28.9	1,952
CV %		3.2	4.1	9.6	6.6	16.3
LSD 0.05		2.0	4.7	2.6	2.3	227
LSD 0.10		1.6	3.6	2.0	1.8	175

Planted: May 24. Harvested: Sept. 8. Previous crop: potato.

[1]Days after planting.

Table 7. 2021 Cranberry and Kidney Bean Variety Trial - Staples, Minn. - Authors, J. Osorno, J. VanderWal and H. Barrett.

Variety	Market Class	Days to Flower	Days to Maturity	Plant Height	Root Rot[1]	100 Seed Weight	Seed Yield
		(DAP)[1]	(DAP)[1]	(inch)	(1-9)	(gram)	(lb/a)
Amaranto	Cranberry	70	89	26	2	57.5	4,357
Etna	Cranberry	69	89	25	1	56.4	4,331
Chaparral	Dark red kidney	73	98	25	2	51.1	3,774
Dynasty	Dark red kidney	73	98	31	2	65.5	3,340
Epic	Dark red kidney	73	99	28	1	61.6	3,239
Gallantry	Dark red kidney	70	98	27	2	58.1	4,153
Montcalm	Dark red kidney	71	100	29	3	54.8	3,786
Rampart	Dark red kidney	72	98	29	1	52.5	3,844
Red Hawk	Dark red kidney	70	94	27	3	51.4	3,916
Red Rover	Dark red kidney	70	99	28	2	57.0	3,634
Spire	Dark red kidney	72	99	29	2	52.3	3,814
Talon	Dark red kidney	71	98	28	1	57.1	3,495
Big Red	Light red kidney	67	89	29	2	58.6	4,601
Clouseau	Light red kidney	68	91	29	2	58.9	4,611
Foxfire	Light red kidney	68	98	28	3	52.9	3,384
Pink Panther	Light red kidney	69	96	27	2	60.2	4,253
Red Dawn	Light red kidney	68	89	23	1	61.2	4,292
Ronnies Red	Light red kidney	73	100	32	1	64.6	3,133
Rosie	Light red kidney	72	103	31	1	56.3	2,468
Beluga	White kidney	73	102	30	2	56.8	3,718
ND Whitetail	White kidney	73	103	30	2	58.9	3,475
Yeti	White kidney	73	103	28	3	60.3	3,706
Mean		71	97	28	2	57.4	3,787
CV %		1.7	2.8	6.6	36.2	4.8	9.7
LSD 0.05		1.4	3.1	2.2	0.9	3.8	501
LSD 0.10		1.0	2.0	1.6	0.6	2.5	330

Planted: June 3. Harvested: Sept. 15. Previous crop: corn.

[1]Common root rot, scale 1 to 9 with nine being the worst.

[2]Days after planting.

Table 8. 2021 Dry Bean Variety Trial - Irrigated - Carrington - Authors, M. Ostlie, B. Schatz, G. Endres and T. Indergaard.

Variety	Market Class	Maturity	Growth Habit[1]	Direct Harvest[2]	Protein	Test Weight	100 Seed Weight	Seed Yield	
								2021	3-yr. Avg.
		(DAP)[3]	(1-9)	(%)	(%)	(lb/bu)	(gram)	--------(lb/a)--------	
Black Tails	Black	100	6	96	22.8	64.2	16.9	3,003	3,131
Eclipse	Black	97	8	93	23.7	63.7	17.5	2,667	2,839
ND Twilight	Black	99	5	89	20.9	65.9	19.0	2,946	3,061
Zorro	Black	99	7	92	22.2	65.0	17.0	2,768	--
ND Pegasus	Great Northern	100	5	95	19.9	62.7	34.1	3,555	3,692
Blizzard	Navy	104	7	94	21.0	65.6	17.1	3,060	3,271
HMS Medalist	Navy	102	7	95	21.2	65.1	16.9	2,995	3,202
T9905	Navy	106	6	93	20.7	65.2	18.5	3,161	3,168
Rosetta	Pink	99	6	81	19.7	62.6	30.5	2,180	--
Cancun	Pinto	97	6	92	20.9	60.1	39.4	2,815	--
Centennial	Pinto	106	5	91	21.6	59.5	35.7	2,854	2,854
Cowboy	Pinto	93	7	95	20.3	61.1	34.1	3,333	3,281
Croissant	Pinto	102	3	73	21.6	61.4	34.5	3,108	2,817
DR Wood	Pinto	109	5	91	21.0	59.7	37.5	2,853	2,480
Gleam	Pinto	95	6	93	20.6	63.1	29.5	3,251	--
La Paz	Pinto	102	5	93	20.6	61.3	31.5	2,883	3,236
Lariat	Pinto	100	3	64	20.8	60.5	35.2	2,419	2,986
Long's Peak	Pinto	97	5	89	21.6	60.0	35.5	2,962	2,588
Monterrey	Pinto	101	6	93	20.4	61.9	30.7	3,141	3,234
Mystic	Pinto	99	7	93	20.1	63.7	32.9	3,269	--
ND Falcon	Pinto	102	7	93	21.1	58.4	33.4	2,725	2,746
ND Palomino	Pinto	97	4	82	20.7	59.9	34.2	2,903	3,162
Stampede	Pinto	92	6	93	20.7	59.2	32.1	2,960	2,889
Torreon	Pinto	98	5	93	20.4	61.3	34.6	3,338	3,363
Vibrant	Pinto	93	7	91	20.3	61.6	32.6	3,608	3,263
Windbreaker	Pinto	91	4	80	21.1	58.8	37.7	2,993	3,161
Merlot	Small Red	104	3	68	20.5	62.1	30.5	2,762	2,891
Viper	Small Red	101	5	95	20.4	62.4	25.6	3,133	3,154
Mean		99	5	89	21.0	62.0	29.5	2,987	3,064
CV %		2.7	17	4.8	2.5	1.1	4.5	10.6	11.0
LSD 0.05		3.8	1.3	5.9	0.7	0.9	3.7	450	556
LSD 0.10		3.2	1.1	4.9	0.6	0.8	3.1	377	463

Planted: May 20. Harvested: Sept. 10. Previous crop: field pea.

[1]Growth 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.

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

[3]Days after planting.

Table 9. 2021 Dry Bean Variety Trial - Irrigated - Oakes (Carrington REC) - Authors, K. Cooper, H. Eslinger and S. Nelson.

Variety	Market Class	Maturity	Seeds/ Pound	100 Seed Weight	Test Weight	Seed Yield 2021	Seed Yield 3-yr. Avg.
		(DAP)[1]	(seeds)	(gram)	(lb/bu)	--------(lb/a)--------	
Black Tails	Black	80	2,506	18.1	61.4	2,894	2,553
Eclipse	Black	81	2,463	18.4	62.4	3,207	2,991
ND Twilight	Black	83	2,236	20.3	63.2	3,603	--
Zorro	Black	83	2,552	17.8	62.1	2,864	--
ND Pegasus	Great Northern	82	1,405	32.4	59.8	3,349	3,286
Rosetta	Pink	82	1,462	31.1	58.7	2,686	--
Merlot	Small Red	85	1,284	35.4	58.5	3,180	3,248
Viper	Small Red	85	1,642	27.7	59.8	3,234	2,757
Mean		83	1,944	25.2	60.7	3,127	2,967
CV %		1.6	3.4	4.1	1.1	6.6	12
LSD 0.05		1.9	97	1.5	1.0	305	651
LSD 0.10		1.6	80	1.2	0.8	253	525

Planted: June 2. Harvested: Sept. 5 and 6. Previous crop: onion.
[1]Days after planting.

Table 10. 2021 Pinto Bean Variety Trial - Irrigated - Oakes (Carrington REC) - Authors, K. Cooper, H. Eslinger and S. Nelson.

Variety	Market Class	Maturity	Seeds/ Pound	100 Seed Weight	Test Weight	Seed Yield 2021	Seed Yield 3-yr. Avg.
		(DAP)[1]	(seeds)	(gram)	(lb/bu)	--------(lb/a)--------	
Cowboy	Pinto	78	1,338	34.0	58.5	3,108	--
La Paz	Pinto	83	1,391	32.6	59.2	2,890	3,158
Lariat	Pinto	83	1,306	34.8	58.7	3,083	3,083
Monterrey	Pinto	83	1,431	31.7	59.2	3,229	3,206
ND Falcon	Pinto	84	1,361	33.3	57.1	2,868	2,937
ND Palomino	Pinto	82	1,232	37.0	56.7	3,273	2,783
Stampede	Pinto	79	1,395	32.6	56.9	2,555	2,520
Torreon	Pinto	82	1,338	34.0	58.8	2,926	2,722
Vibrant	Pinto	80	1,379	32.9	59.8	3,173	2,882
Windbreaker	Pinto	81	1,190	38.2	56.8	3,189	3,181
Mean		82	1,329	34.3	58.4	3,095	2,941
CV %		1.6	3.0	3.2	0.8	9.6	7
LSD 0.05		1.8	58	1.6	0.7	429	371
LSD 0.10		1.5	48	1.3	0.6	357	306

Planted: June 2. Harvested: Sept. 5 and 6. Previous crop: onion.
[1]Days after planting.

Table 11. 2021 Navy Bean Variety Trial - Irrigated - Oakes (Carrington REC) - Authors, K. Cooper, H. Eslinger and S. Nelson.

Variety	Market Class	Maturity	Seeds/ Pound	100 Seed Weight	Test Weight	Seed Yield 2021	Seed Yield 3-yr. Avg.
		(DAP)[1]	(seeds)	(gram)	(lb/bu)	--------(lb/a)--------	
Blizzard	Navy	87	2,334	19.5	59.9	3,435	2,517
HMS Medalist	Navy	86	2,488	18.3	61.8	3,543	--
T9905	Navy	86	2,303	19.7	63.2	3,362	2,694
Mean		86	2,404	18.9	61.7	3,308	2,606
CV %		1.9	2.4	2.4	3.7	5.2	--
LSD 0.05		2.6	90	1	3.6	277	--
LSD 0.10		2.1	73	1	2.9	225	--

Planted: June 2. Harvested: Sept. 6. Previous crop: onion.
[1]Days after planting.

Table 12. 2021 Dry Bean Variety Trial - Hettinger - Authors, J. Rickertsen and M. Wells.

Variety	Market Class	Plant Height	Plant Lodge[1]	Seed Yield				
				2019	2020	2021	2-yr. Avg.	3-yr. Avg.
		(inch)	(0-9)			----------(lb/a)----------		
Black Tails	Black	21	6	1,870	1,151	730	941	1,250
Eclipse	Black	20	5	1,661	1,250	457	854	1,123
ND Twilight	Black	16	6	1,525	1,073	663	868	1,087
Zorro	Black	20	6	--	--	753	--	--
ND Pegasus	Great Northern	24	5	1,811	1,342	740	1,041	1,298
Blizzard	Navy	22	6	1,166	787	448	618	800
HMS Medalist	Navy	20	5	1,130	962	474	718	855
T9905	Navy	18	5	1,350	878	580	729	936
Rosetta	Pink	19	5	--	--	738	--	--
Cowboy	Pinto	21	7	--	--	586	--	--
La Paz	Pinto	20	7	1,441	1,139	819	979	1,133
Lariat	Pinto	21	8	1,245	1,159	690	925	1,031
Monterrey	Pinto	23	6	1,345	1,036	809	923	1,063
ND Falcon	Pinto	22	7	1,509	1,105	746	926	1,120
ND Palomino	Pinto	20	6	1,611	1,019	801	910	1,144
Stampede	Pinto	21	6	1,797	1,207	714	961	1,239
Torreon	Pinto	21	7	1,437	1,031	895	963	1,121
Vibrant	Pinto	20	7	1,286	1,150	569	860	1,002
Windbreaker	Pinto	18	7	1,295	1,070	640	855	1,002
Merlot	Sm Red	21	5	1,757	794	654	724	1,068
Viper	Sm Red	20	5	1,659	1,257	1,042	1,150	1,319
Mean		20	6	1,488	1,063	709	879	1,088
C.V. %		9.4	9.7	15.7	12.2	18.7	13.7	13.3
LSD 0.05		2.7	0.8	330	184	187	257	239
LSD 0.10		2.3	0.7	275	154	156	212	199

Planted: June 2. Harvested: Oct. 8. Previous crop: durum.

[1]0 = no lodging, 9 = lying flat on ground.

Table 13. 2021 Dry Bean Variety Trial - Langdon - Authors, B. Hanson, L. Henry and J. Faul.

Variety	Market Class	Days to Maturity	100 Seed Weight	Seed Yield				
				2019	2020	2021	2-yr. Avg.	3-yr. Avg.
		(DAP)[1]	(gram)	----------(lb/a)----------				
Black Tails	Black	106	19.0	2,112	3,759	2,063	2,911	2,645
Eclipse	Black	102	19.9	2,181	3,634	2,049	2,841	2,621
ND Twilight	Black	101	19.7	--	3,205	1,522	2,363	--
Zorro	Black	103	19.8	2,376	--	1,899	--	--
ND Pegasus	Great Northern	106	38.5	2,811	--	2,320	--	--
Blizzard	Navy	103	18.9	2,327	3,321	1,962	2,642	2,537
HMS Medalist	Navy	106	16.5	2,346	3,891	2,197	3,044	2,811
T9905	Navy	107	19.5	2,065	3,781	1,835	2,808	2,560
Rosetta	Pink	107	33.6	2,389	--	2,044	--	--
Centennial	Pinto	107	38.3	--	--	1,567	--	--
Cowboy	Pinto	100	36.1	--	--	1,638	--	--
Croissant	Pinto	106	35.5	--	--	1,710	--	--
DR Wood	Pinto	107	37.6	--	--	2,127	--	--
La Paz	Pinto	105	37.3	2,564	3,693	1,827	2,760	2,695
Lariat	Pinto	105	38.3	2,516	3,455	1,714	2,585	2,562
Monterrey	Pinto	103	35.4	2,442	3,807	2,105	2,956	2,785
ND Falcon	Pinto	105	35.2	2,280	3,114	1,695	2,405	2,363
ND Palomino	Pinto	105	36.5	2,239	3,020	1,585	2,302	2,281
Stampede	Pinto	104	33.7	2,415	3,899	2,028	2,963	2,781
Torreon	Pinto	103	37.2	2,553	3,804	2,165	2,984	2,841
Vibrant	Pinto	106	34.7	2,693	4,033	2,114	3,074	2,947
Windbreaker	Pinto	101	38.4	2,291	3,876	1,587	2,732	2,585
Merlot	Small Red	104	37.0	2,205	3,089	2,036	2,562	2,443
Viper	Small Red	105	28.7	2,854	3,329	2,587	2,958	2,923
Mean		104	31.1	2,385	3,470	1,904	2,758	2,649
CV %		0.9	3.4	10.8	7.8	9.5	9.4	8.8
LSD 0.05		1.2	1.3	427	446	235	555	388
LSD 0.10		1.0	1.1	355	371	197	457	322

Planted: May 25. Harvested: Sept. 15.

[1]Days after planting.

Table 14. 2021 Dry Bean Variety Trial - Minot - Authors, E. Eriksmoen, A. Kraklau and J. Hansen.

Variety	Market Class	Days to Maturity	Plant Height	100 Seed Weight	Seed Yield	
					2021	2-yr. Avg.[1]
		(DAP)[2]	(inch)	(grams)	----------(lb/a)----------	
Black Tails	Black	98	10	17.8	519	1,712
Eclipse	Black	99	11	18.5	600	1,810
ND Twilight	Black	99	12	17.3	805	--
Zorro	Black	96	13	17.3	757	--
ND Pegasus	Great Northern	100	15	37.3	715	1,829
Blizzard	Navy	98	11	18.3	347	1,674
HMS Medalist	Navy	104	10	21.0	241	1,609
T9905	Navy	99	11	22.4	404	1,395
Rosetta	Pink	99	12	34.0	428	--
Centennial	Pinto	92	16	33.6	794	--
Cowboy	Pinto	87	13	33.3	1,114	--
Croissant	Pinto	91	14	30.8	1,239	--
DR Wood	Pinto	93	16	33.5	1,030	--
La Paz	Pinto	91	15	32.9	1,151	1,743
Lariat	Pinto	92	17	32.2	1,024	1,980
Longs Peak	Pinto	93	13	39.6	893	--
Monterrey	Pinto	90	16	34.2	1,095	1,989
ND Falcon	Pinto	93	16	30.1	889	1,478
ND Palomino	Pinto	91	17	29.2	1,024	1,632
Stampede	Pinto	89	15	30.6	1,143	1,682
Torreon	Pinto	90	15	34.7	1,303	1,870
Vibrant	Pinto	88	16	29.4	1,234	1,744
Windbreaker	Pinto	86	12	33.2	987	1,666
Merlot	Small Red	101	15	23.5	603	1,304
Viper	Small Red	98	15	23.4	1,111	2,107
Mean		94	14	28.3	858	1,719
C.V. %		1.1	11.6	4.5	15.0	14.4
LSD 0.05		2.0	3.0	2.1	204	524
LSD 0.10		1.0	2.0	1.7	170	431

Planted: May 26. Harvested: Sept. 21. Previous crop: soybean.

[1]Two-year average 2019 and 2020.

[2]Days after planting.

Table 15. 2021 Dry Bean Variety Trial - Irrigated - Williston - Authors, J. Jacobs, T. Tjelde and A. Turnquist.

		2021						2020
Variety	Market Class	Days to Maturity	Canopy Height	Plant Lodge[1]	Seeds/ Pound	Test Weight	100 Seed Weight	Seed Yield[2]
		(DAP)[3]	(inch)	(0-9)	(seeds)	(lb/bu)	(gram)	(lb/a)
Black Tails	Black	101	13	2	2,387	62.3	19.6	2,706
Eclipse	Black	100	11	3	1,717	62.2	29.2	2,053
ND Twilight	Black	100	13	2	2,338	63.5	20.9	--
Zorro	Black	101	9	5	2,850	63.2	15.9	--
ND Pegasus	Great Northern	100	11	4	1,390	60.3	32.8	3,834
Blizzard	Navy	100	8	5	1,766	62.5	26.7	2,327
HMS Medalist	Navy	101	9	4	2,020	62.8	24.8	--
T9905	Navy	102	11	3	1,713	62.9	28.4	2,533
Rosetta	Pink	101	10	4	1,563	61.9	29.1	--
Cowboy	Pinto	101	10	3	1,914	61.7	26.2	--
La Paz	Pinto	100	11	3	1,783	63.3	27.7	4,259
Lariat	Pinto	101	12	3	1,639	63.4	29.4	3,579
Monterrey	Pinto	100	9	3	1,552	62.2	29.7	3,069
ND Falcon	Pinto	101	12	3	1,729	61.6	28.1	2,284
ND Palomino	Pinto	101	11	4	1,427	62.0	31.9	--
Stampede	Pinto	100	10	4	1,480	61.1	31.3	3,262
Torreon	Pinto	100	12	3	1,615	62.7	29.7	3,799
Vibrant	Pinto	102	10	4	1,613	61.9	29.8	2,708
Windbreaker	Pinto	102	10	4	2,175	63.0	22.8	2,120
Merlot	Small Red	100	14	3	2,224	62.1	22.6	2,287
Viper	Small Red	101	13	3	1,812	63.4	27.0	3,768
Mean		101	11	3.3	1,843	62.4	26.8	2,972
C.V. %		1.2	27.2	60	28.3	3.1	24.6	14.4
LSD 0.05		1.7	4.2	2.8	729	2.7	9.4	720
LSD 0.10		1.4	3.5	2.4	609	2.3	7.9	598

Planted: May 19. Harvested: Oct. 7. Previous crop: barley.

[1]0 = no lodging, 9 = lying flat on ground. Hail storm on July 22.

[2]No data for 2021 due to hail storm on July 22. Yield data is from 2020.

[3]Days after planting.

Table 16. Pinto Bean Variety Descriptions.

Class and Cultivar	Origin/owner	RM[1]	Plant Type[2]
PINTO			
Cancun	Provita/ADM	M	USV
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
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
Mystic	Provita/ADM	M	USV
ND Falcon	NDSU	L	USV
ND Palomino[3]	NDSU	ME	USV
Othello	USDA-Prosser	E	V
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
Torreon	Provita/ADM	M	USV
USDA-Rattler	USDA	E/ME	USV
Vibrant[3]	Provita/ADM	E	USV
Windbreaker	Seminis	M	UV

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

[2]V = Vine; UV = Upright Vine; USV = Upright Short Vine;

[3]Slow darkening cultivar.

[4]TVS = Treasure Valley Seed Company.

Table 17. 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
Apex	TVS[3]	L	USV
Armada	Provita/ADM	ML	USV
Blizzard	Provita/ADM	M	USV
HMS Medalist	AmeriSeed/ADM	M	UV
HMS Victory	Provita/ADM	M	USV
Liberty	Provita/ADM	M	USV
Nautica	Ag. Can.	ML	USV
Rogue	Ag. Can.	M	USV
SV1893GH	Seminis/Monsanto/Bayer	ML	USV
T9905	Hyland	M	USV
Valiant	Provita/ADM	M	USV

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

[2]UV = Upright Vine; USV = Upright Short Vine;

[3]TVS = Treasure Valley Seed Company.

Table 18. Small Red, Black and Pink Bean Variety Descriptions.

Class and Cultivar	Origin	RM[1]	Plant Type[2]
SMALL RED			
Merlot	MSU	ME	USV
Viper	Provita	M	USV
BLACK			
Black Tails	Provita	M	USV
Eclipse	NDSU	M	USV
ND Twilight	NDSU	ME	USV
Zorro	MSU	L	USV
PINK			
Rosetta	MSU/ARS	M	USV

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

[2]USV = Upright Short Vine;

Table 19. Light Red, Dark Red and White Kidney, Great Northern and Cranberry Bean Variety Descriptions.

Class and Cultivar	Origin	RM[1]	Plant Type[2]
LIGHT RED KIDNEY			
Big Red	Provita	ML	B
Clouseau	Seminis	ML	B
Foxfire	Rogers	ME	B
Pink Panther	Seminis	M	B
Red Dawn	Provita	M	B
Ronnie's Red	Provita	ML	B
Rosie	NDSU	L	B
DARK RED KIDNEY			
Chaparral	Provita	ML	B
Dynasty	U. of Guelph	ML	B
Epic	Provita	ML	B
Gallantry	U. of Guelph	M	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
WHITE KIDNEY			
Beluga	MSU	M	B
ND Whitetail	NDSU	M	B
Yeti	U. of Guelph	ML	B
GREAT NORTHERN			
Draco	Provita	M	USV
ND Pegasus	NDSU	ML	UV
Powderhorn	MSU	M	USV
CRANBERRY			
Amaranto	Seminis/Monsanto/Bayer	E	B
Etna	Seminis	E	B

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

[2]UV = Upright Vine; USV = Upright Short Vine; B = Bush.

For more information on this and other topics, see www.ag.ndsu.edu

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