A654-14

North Dakota Dry Bean Variety Trial Results for 2014 and Selection Guide

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NDSU EXTENSION SERVICE
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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 decade. Acreage for the past 11 years is shown in Table 1, with production by classes in Table 2.

Table 1. North Dakota Dry Edible Bean Planted Acreage, 2003 to 2014.

Year	Acreage
2003	540,000
2004	560,000
2005	620,000
2006	670,000
2007	690,000
2008	660,000
2009	610,000
2010	800,000
2011	410,000
2012	700,000
2013	510,000
2014	650,000

Source: North Dakota Agricultural Statistics Service – USDA.

Table 2. North Dakota Dry Edible Bean Production by Commercial Class, 2003 to 2013.

Year	Pinto	Navy
	(Cwt)	(Cwt)
2003	5,864,000	1,164,000
2004	3,573,000	650,000
2005	6,584,000	1,343,000
2006	4,988,000	1,585,000
2007	7,606,000	1,611,000
2008	6,660,000	2,087,000
2009	5,950,000	1,255,000
2010	7,543,000	1,958,000
2011	2,709,000	1,125,000
2012	7,610,000	2,215,000
2013	4,765,000	1,299,000

Source: North Dakota Agricultural Statistics Service – USDA.

2014 Growing Season Weather Summary for North Dakota

Table 3. April-September 2014 Average Temperature and Precipitation Rankings for Selected North Dakota Locations.

City	Temperature Ranking	Precipitation Ranking
Bowman	57.1 F (15th Coolest Period Since 1915)	17.6 inches (6th Wettest Period Since 1915)
Bismarck	59.7 F (63rd Coolest Period Since 1875)	11.7 inches (63rd Driest Period Since 1875)
Cavalier	56.7 F (20th Coolest Period Since 1934)	16.2 inches (30st Wettest Period Since 1927)
Fargo	60.8 F (46th Warmest Period Since 1881)	17.3 inches (51st Wettest Period Since 1881)
Minot Exp. Station	57.4 F (41st Coolest Period Since 1905)	18.2 inches (10th wettest Period Since 1905)
Williston Exp. Station	58.9 F (50th Coolest Period Since 1894)	9.0 inches (34th Driest Period Since 1894)
North Dakota Average	**57.6 F (41st Coolest Period Since 1895)**	**16.4 inches (19th Wettest Period Since 1895)**

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

2014 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 Research Extension Centers 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 percent 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 want to express our thanks to dry bean growers who assisted with the on-farm variety testing.

Cooperators

Brian Schanilec	Forest River, N.D.
Mark Sletten and Tim Skjoiton	Hatton, N.D.
Jim Karley	Johnstown, N.D.
Paul Johannig	Park Rapids, Minn.
Mark Dombeck	Perham, Minn.

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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 is given to Lisa Johnson, Extension Plant Sciences secretary, for assisting in the compilation of this publication.

Table 4. 2014 Pinto Bean Variety Trial - Prosper and Hatton, N.D. (NDSU) - Authors, J. Osorno, J. VanderWal and M. Kloberdanz.

Variety	Days to Flowering	Plant Height	Days to Maturity	100 Seed Weight	Seed Yield
Prosper (Cass County)	(DAP)[1]	(inch)	(DAP)[1]	(gram)	(lb/a)
Buster		15	107	39.5	2,500
Eldorado		23	113	42.7	2,920
GTS-904		17	110	42.1	3,190
La Paz		21	108	38.2	3,060
Lariat		22	114	42.0	2,550
Mariah		20	109	39.5	3,370
Maverick		16	110	40.5	2,470
Medicine Hat		18	106	38.4	2,360
Monterrey		23	110	37.1	3,350
ND-307		20	111	40.9	2,860
Santa Cruz		22	109	37.0	2,760
Sequoia		19	110	37.8	2,410
Sinaloa		22	109	39.0	3,250
Stampede		21	112	36.9	2,640
Windbreaker		17	109	41.2	3,060
Mean		20	110	39.5	2,850
CV %		9.0	2.0	3.7	15.4
LSD 0.10		2.0	3	1.7	487
Hatton (Traill County)					
Buster	49	18	104	38.8	2,210
Eldorado	44	22	106	44.7	3,340
GTS-904	53	22	106	41.5	3,030
La Paz	54	24	102	35.6	3,530
Lariat	48	24	103	42.4	3,580
Mariah	45	20	97	35.9	2,660
Maverick	46	20	102	39.7	3,280
Medicine Hat	44	19	92	38.3	2,420
Monterrey	55	23	102	35.5	3,000
ND-307	49	21	103	40.5	3,240
Othello	41	18	94	38.6	2,140
PIN 1012	46	20	99	35.0	3,570
PIN 1314	48	17	100	38.8	2,580
Santa Cruz	55	22	103	34.2	2,970
Sequoia	43	23	103	36.1	2,600
Sinaloa	54	19	104	36.4	2,630
Stampede	46	21	101	38.9	2,860
Windbreaker	44	19	101	40.3	3,630
Mean	48	21	101	38.4	2,959
CV %	6.0	10.0	3.0	4.3	16.0
LSD 0.10	3	2.4	3	1.9	546

Prosper - Planted: May 28. Harvested: Sept. 30. Previous crop: small grain.

Hatton - Planted: June 9. Harvested: Oct. 6. Previous crop: corn.

[1]Days after planting.

Table 5. 2014 Pinto Bean Variety Trial - Forest River, N.D. (NDSU) - Authors, J. Osorno, J. VanderWal and M. Kloberdanz.

Variety	Plant Height	100 Seed Weight	Seed Yield
Forest River (Walsh County)	(inch)	(gram)	(lb/a)
Buster	21	35.8	2,240
Eldorado	24	39.5	2,050
GTS-904	24	38.8	2,770
La Paz	24	34.3	2,590
Lariat	24	40.8	2,320
Mariah	19	33.5	2,330
Maverick	20	37.4	2,250
Medicine Hat	20	38.7	2,320
Monterrey	25	34.8	2,780
ND-307	19	40.2	2,410
PIN 1012	19	35.9	2,500
PIN 1314	20	39.1	2,390
Santa Cruz	23	35.2	2,650
Sequoia	24	31.9	2,020
Sinaloa	24	34.7	2,870
Stampede	22	34.4	2,090
Windbreaker	19	39.4	2,420
Mean	22	36.7	2,412
CV %	11.0	4.8	18.7
LSD 0.10	2.7	2.0	521

Planted: June 4. Harvested: Sept. 23. Previous crop: small grain.

Table 6. 2014 Navy Bean Variety Trial - Prosper, N.D. (NDSU) - Authors, J. Osorno, J. VanderWal and M. Kloberdanz.

Variety	Plant Height	Days to Maturity	100 Seed Weight	Seed Yield
Prosper (Cass County)	(inch)	(DAP)[1]	(gram)	(lb/a)
Alpena	21	109	18.9	2,890
Avalanche	20	110	19.7	3,010
Cascade	20	110	17.9	2,210
Ensign	18	111	20.9	2,260
Medalist	21	112	18.4	2,610
Norstar	16	109	17.0	2,140
T9905	22	111	21.2	3,250
Teton	21	109	17.2	2,570
Vigilant	22	110	19.5	2,780
Vista	22	111	18.5	2,700
Mean	20	110	18.9	2,642
CV %	9.0	2	3.7	11.7
LSD 0.10	1.9	3	0.8	378

Planted: May 28. Harvested: Sept. 30. Previous crop: small grain.

[1]Days after planting.

Table 7. 2014 Navy Bean Variety Trial - Hatton and Forest River, N.D. (NDSU) - Authors, J. Osorno, J. VanderWal and M. Kloberdanz.

Variety	Days to Flowering	Plant Height	Days to Maturity	100 Seed Weight	Seed Yield
	(DAP)[1]	(inch)	(DAP)[1]	(gram)	(lb/a)
Hatton (Traill County)					
Alpena	47	20	103	18.0	2,770
Avalanche	49	21	103	19.1	3,110
Cascade	52	22	104	16.2	2,400
Ensign	51	20	103	20.7	3,310
Fathom	48	20	105	21.5	3,180
Medalist	49	21	102	17.0	2,870
NAV 1200	54	20	104	21.1	2,630
Norstar	46	19	102	16.8	2,560
T9905	52	20	104	20.8	3,270
Teton	51	20	104	15.6	2,240
Vigilant	48	23	102	19.7	3,320
Vista	52	20	104	17.3	2,520
Mean	50	21	103	18.7	2,848
CV %	7.0	10.0	1.0	4.1	13.1
LSD 0.10	4	NS	2	0.9	445
Forest River (Walsh County)					
Alpena		22	104	18.0	2,240
Avalanche		22	103	18.6	2,040
Cascade		22	103	15.9	1,880
Ensign		23	99	20.2	2,370
Medalist		22	106	17.6	2,380
NAV 1200		20	106	20.5	2,190
Norstar		22	101	16.2	1,920
T9905		20	103	20.1	2,280
Teton		20	102	15.6	1,960
Vigilant		23	101	19.3	2,400
Vista		21	106	16.3	2,000
Mean		22	103	18.0	2,151
CV %		9.0	2.0	4.0	10.9
LSD 0.10		2.4	3	0.8	277

Hatton - Planted: June 9. Harvested: Oct. 6. Previous crop: corn.

Forest River - Planted: June 4. Harvested: Sept. 23. Previous crop: small grain.

[1]Days after planting.

Table 8. 2014 Kidney Bean Variety Trial - Park Rapids, Minn. (NDSU) - Authors, J. Osorno, J. VanderWal and M. Kloberdanz.

Variety		Plant Height	Days to Maturity	100 Seed Weight	Seed Yield
Park Rapids (Hubbard County)		(inch)	(DAP)[1]	(gram)	(lb/a)
Beluga	White Kidney	21	111	50.4	1,690
Cabernet	Dark Red Kidney	20	100	48.2	1,500
CELRK	Light Red Kidney	14	93	57.7	810
Clouseau	Light Red Kidney	19	105	67.6	2,600
Dynasty	Dark Red Kidney	23	109	60.5	2,620
Foxfire	Light Red Kidney	17	96	51.1	1,900
Inferno	Light Red Kidney	24	112	58.3	2,450
KDD 1013	Dark Red Kidney	25	108	53.6	2,750
KDD 1030	Dark Red Kidney	22	101	46.8	1,680
Majesty	Dark Red Kidney	17	104	62.0	880
Montcalm	Dark Red Kidney	20	110	52.2	1,860
Pink Panther	Light Red Kidney	16	99	58.1	1,410
Red Rover	Dark Red Kidney	24	100	49.2	1,650
Redhawk	Dark Red Kidney	20	103	49.3	1,360
Rosie	Light Red Kidney	22	113	54.0	2,230
Snowdon	White Kidney	15	98	60.5	1,000
Talon	Dark Red Kidney	22	106	49.0	2,090
Yeti	White Kidney	21	111	53.2	1,560
Mean		17	103	54.9	1,790
CV %		8.0	3.0	4.7	18.4
LSD 0.10		5.0	3	3.0	386

Planted: May 30. Harvested: Sept. 22. Previous crop: corn.
[1]Days after planting.

Table 9. 2014 Kidney Bean Variety Trial - Perham, Minn. (NDSU) - Authors, J. Osorno, J. VanderWal and M. Kloberdanz.

Variety		Plant Height	Days to Maturity	100 Seed Weight	Seed Yield
Perham		(inch)	(DAP)[1]	(gram)	(lb/a)
Beluga	White Kidney	23	99	50.2	1,520
Cabernet	Dark Red Kidney	20	92	53.2	1,360
CELRK	Light Red Kidney	14	80	54.5	910
Clouseau	Light Red Kidney	19	90	63.0	1,880
Dynasty	Dark Red Kidney	20	97	57.7	1,600
Foxfire	Light Red Kidney	20	89	51.6	1,930
Inferno	Light Red Kidney	24	105	60.3	1,800
KDD 1013	Dark Red Kidney	23	95	54.6	1,980
KDD 1030	Dark Red Kidney	21	90	47.8	1,450
Montcalm	Dark Red Kidney	22	99	52.4	1,410
Pink Panther	Light Red Kidney	19	91	59.7	1,610
Red Rover	Dark Red Kidney	23	92	53.1	1,360
Redhawk	Dark Red Kidney	20	94	49.8	1,380
Rosie	Light Red Kidney	24	105	52.2	1,620
Snowdon	White Kidney	16	88	59.6	1,320
Talon	Dark Red Kidney	20	93	51.0	1,720
Mean		21	94	54.4	1,553
CV %		9.0	2.0	4.7	16.0
LSD 0.10		2.3	3	3.1	294

Planted: June 3. Harvested: Sept. 25. Previous crop: corn.
[1]Days after planting.

Table 10. 2014 Black Bean Variety Trial - Prosper, Hatton and Forest River, N.D. (NDSU) - Authors, J. Osorno, J. VanderWal and M. Kloberdanz.

Variety	Days to Flowering	Plant Height	Days to Maturity	100 Seed Weight	Seed Yield
Prosper (Cass County)	(DAP)[1]	(inch)	(DAP)[1]	(gram)	(lb/a)
Black Cat		20	111	17.8	2,110
COB-698-03		15	111	20.8	1,900
Eclipse		18	110	19.4	2,010
GTS-1103		20	111	21.0	2,640
Loreto		20	113	19.2	2,250
T-39		17	110	20.3	1,880
Zorro		19	112	19.7	1,800
Zenith		16	110	20.0	1,680
Mean		18	111	19.8	2,034
CV %		10.0	1.0	3.2	15.9
LSD 0.10		2.3	2	0.8	420
Hatton (Traill County)					
BKB 1312	53	22	105	21.5	2,860
Black Cat	54	24	103	18.8	2,870
COB-698-03	54	19	102	18.8	3,220
Eclipse	53	21	107	19.3	2,520
GTS-1103	55	20	106	18.4	2,980
Jet	54	21	105	20.5	2,780
Loreto	54	22	107	19.7	2,640
Super Jet	54	19	107	20.7	2,580
T-39	54	21	109	19.6	2,740
Zorro	55	21	109	20.2	2,330
Zenith	54	20	109	20.0	2,330
Mean	54	21	106	19.8	2,714
CV %	4.0	11.0	2.0	3.6	11.2
LSD 0.10	NS	NS	3	0.8	370
Forest River (Walsh County)					
BKB 1312		20	102	20.2	2,290
Black Cat		24	106	17.9	2,100
COB-698-03		19	102	19.1	2,220
Eclipse		22	103	19.5	2,220
GTS-1103		25	105	18.8	2,430
Jet		22	105	19.9	2,150
Loreto		22	103	18.9	2,080
Super Jet		21	106	20.2	1,900
T-39		24	108	18.6	2,200
Zorro		21	104	19.2	1,710
Zenith		21	103	19.1	1,870
Mean		22	104	19.2	2,106
CV %		9.0	1.0	4.5	11.9
LSD 0.10		2.4	2	1.0	311

Prosper - Planted: May 28. Harvested: Sept. 30. Previous crop: small grain.

Hatton - Planted: June 9. Harvested: Oct. 6. Previous crop: corn.

Forest River - Planted: June 4. Harvested: Sept. 23. Previous crop: small grain.

[1]Days after planting.

Table 11. 2014 Dry Bean Variety Trial - Prosper, Hatton and Forest River, N.D. (NDSU) - Authors, J. Osorno, J. VanderWal and M. Kloberdanz.

Variety	Market Class	Days to Flower	Plant Height	Days to Maturity	100 Seed Weight	Seed Yield
Prosper (Cass County)		(DAP[1])	(inch)	(DAP)[1]	(gram)	(lb/a)
Matterhorn	Great Northern		19	103	32.2	1,880
Powderhorn	Great Northern		17	103	33.9	1,450
Rosetta	Pink		20	110	34.6	1,840
Sedona	Pink		20	109	36.9	1,980
Merlot	Small Red		19	106	36.2	1,740
Rio Rojo	Small Red		20	107	31.7	2,080
Ruby	Small Red		19	109	33.0	2,100
Mean			19	107	34.1	1,867
CV %			10.0	2.0	6.3	23.5
LSD 0.10			NS	3	2.5	529
Hatton (Traill County)						
Gypsy Rose	Flor de Mayo	51	24	109	29.2	3,070
Aries	Great Northern	46	23	104	35.2	3,070
Draco	Great Northern	45	25	103	35.3	3,370
Matterhorn	Great Northern	46	20	101	29.9	2,430
Orion	Great Northern	47	20	105	36.3	3,310
Powderhorn	Great Northern	45	23	101	33.8	3,260
Taurus	Great Northern	52	22	108	39.2	3,670
Rosetta	Pink	47	24	106	33.8	3,030
Sedona	Pink	52	25	105	36.1	2,690
Merlot	Small Red	51	25	104	34.9	2,720
Rio Rojo	Small Red	48	24	103	29.7	2,990
Ruby	Small Red	52	23	106	29.4	2,940
Mean		48.5	23	105	33.6	3,046
CV %		4.0	9.0	2.0	4.7	11.2
LSD 0.10		3	2.4	2.5	1.9	403
Forest River (Walsh County)						
Matterhorn	Great Northern		23	98	33.0	2,380
Powderhorn	Great Northern		22	100	31.9	2,080
Rosetta	Pink		24	105	32.1	2,330
Sedona	Pink		24	103	37.1	1,950
Merlot	Small Red		28	103	36.0	2,390
Rio Rojo	Small Red		23	101	30.6	2,530
Ruby	Small Red		25	106	30.4	2,790
Mean			24	102	33.0	2,350
CV %			9.0	2.0	4.9	14.3
LSD 0.10			2.4	2	1.9	403

Prosper - Planted: May 28. Harvested: Sept. 30. Previous crop: small grain.

Hatton - Planted: June 9. Harvested: Oct. 6. Previous crop: corn.

Forest River - Planted: June 4. Harvested: Sept. 23. Previous crop: small grain.

[1]Days after planting.

Table 12. 2014 Dry Bean Variety Trial - Park Rapids and Perham, Minn. (NDSU) - Authors, J. Osorno, J. VanderWal and M. Kloberdanz.

Variety	Market Class	Plant Height	Days to Maturity	100 Seed Weight	Seed Yield
Park Rapids, Minn.		(inch)	(DAP)[1]	(gram)	(lb/a)
Eclipse	Black	24	109	19.2	3,370
Loreto	Black	24	110	19.4	2,750
Avalanche	Navy	23	108	18.5	2,720
Medalist	Navy	24	111	17.0	2,980
La Paz	Pinto	25	107	33.0	2,860
Lariat	Pinto	24	107	38.0	2,750
Monterrey	Pinto	24	105	33.8	2,700
Sinaloa	Pinto	24	103	34.1	2,740
Stampede	Pinto	22	109	36.5	2,240
Windbreaker	Pinto	21	106	38.4	2,910
Mean		24	108	28.8	2,800
CV %		7.0	2.0	3.9	9.6
LSD 0.10		NS	3	1.3	328
Perham, Minn.					
Eclipse	Black	23	97	19.2	2,380
Loreto	Black	22	105	18.1	2,480
Avalanche	Navy	21	100	19.3	1,900
Medalist	Navy	24	106	16.0	2,320
La Paz	Pinto	24	98	34.7	2,090
Lariat	Pinto	23	100	38.6	2,100
Monterrey	Pinto	20	99	34.9	2,320
Sinaloa	Pinto	24	96	36.1	2,590
Stampede	Pinto	19	99	35.8	1,840
Windbreaker	Pinto	18	95	37.8	2,250
Mean		22	99	29.0	2,230
CV %		13.0	4.0	5.7	23.3
LSD 0.10		8.4	NS	2.0	NS

Park Rapids - Planted: May 30. Harvested: Sept. 22. Previous crop: corn.
Perham - Planted: June 3. Harvested: Sept. 25. Previous crop: corn.
[1]Days after planting.

Table 13. 2014 Dry Bean Variety Trial - Irrigated - Oakes (Carrington REC) - Authors, L. Besemann and H. Eslinger

Variety	Market Class	Maturity	Seeds/ Pound	100 Seed Weight	Test Weight	Seed Yield	
						2014	3-yr. Avg.
		(DAP)[1]	(seeds)	(gram)	(lb/bu)	--------(lb/a)--------	
La Paz	Pinto	96	1,261	36.0	60.6	3,116	3,298
Lariat	Pinto	112	1,062	42.8	58.1	3,209	3,427
Stampede	Pinto	95	1,031	44.0	57.6	3,046	2,996
Maverick	Pinto	101	1,026	44.3	57.6	2,955	3,054
ND-307	Pinto	102	933	48.7	55.9	3,105	--
Windbreaker	Pinto	89	1,040	43.7	57.8	3,168	3,308
Sinaloa	Pinto	100	1,140	39.8	60.3	3,152	--
Mean		99	1,070	42.7	58.3	3,107	3,217
CV %		1	3.49	3.6	1.0	6.3	--
LSD 0.10		1	45	1.9	0.8	239	--
Avalanche	Navy	97	2,179	20.9	62.6	2,463	2,439
Ensign	Navy	95	2,136	21.3	62.1	2,936	2,851
HMS Medalist	Navy	101	2,496	18.2	63.0	2,874	2,800
Norstar	Navy	101	2,430	18.7	64.8	2,469	2,080
T9905	Navy	101	1,921	23.6	62.2	3,321	3,353
Vista	Navy	110	2,333	19.5	63.3	2,750	2,813
Mean		101	2,249	20.3	63.0	2,802	2,723
CV %		0.8	2.4	2.5	1.1	6.0	--
LSD 0.10		1	67	0.7	0.9	213	--
Eclipse	Black	95	2,269	20.0	61.5	2,682	3,192
Loreto	Black	98	2,264	20.1	61.6	2,576	--
Montcalm	Dark Red Kidney	94	826	55.0	54.3	1,891	--
Pink Panther	Light Red Kidney	85	809	56.1	50.7	1,132	--
Rosetta	Pink	92	1,213	37.4	60.1	2,707	--
Sedona	Pink	98	1,006	45.1	56.3	2,870	3,475
Merlot	Small Red	100	1,190	38.1	57.5	2,727	3,171
Rio Rojo	Small Red	100	1,340	33.9	65.0	3,186	--
Mean		95	1,365	38.2	58.4	2,471	3,279
CV %		1.2	2.3	2.5	1.5	6.5	--
LSD 0.10		1	35	1.3	1.0	193	--

Planted: May 30; Harvested: Sept. 15; Previous crop: potato.

[1]Days after planting.

Table 14. 2014 Dry Bean Variety Trial - Langdon - Authors, B. Hanson, T. Hakanson and L. Henry.

Variety	Market Class	Maturity	100 Seed Weight	Seed Yield 2012	2013	2014	2-yr. Avg.	3-yr. Avg.
		(DAP)[1]	(gram)	----------(lb/a)----------				
Eclipse	Black	103	19.8	2,503	2,568	2,415	2,491	2,495
Loreto	Black	f[2]	18.2	2,788	2,332	1,944	2,138	2,355
Zorro	Black	104	20.0	2,166	2,580	2,275	2,428	2,340
Montcalm	Dark Red Kidney	f	31.6	--	--	1,672	--	--
Talon	Dark Red Kidney	101	45.1	--	--	1,754	--	--
Pink Panther	Light Red Kidney	f	55.5	--	--	1,849	--	--
Rosie	Light Red Kidney	f	46.9	--	--	1,607	--	--
Avalanche	Navy	103	18.9	3,092	1,952	2,101	2,026	2,382
Ensign	Navy	f	20.5	3,524	2,852	2,703	2,777	3,026
HMS Medalist	Navy	f	17.8	2,996	2,292	2,286	2,289	2,525
Nautica	Navy	f	16.7	--	2,372	1,944	--	--
Norstar	Navy	103	16.7	--	1,612	1,941	--	--
Rexeter	Navy	f	18.8	2,224	2,424	1,995	2,210	2,214
T9905	Navy	f	20.6	3,208	2,616	2,571	2,593	2,798
Vista	Navy	f	16.4	2,094	2,584	2,513	2,548	2,397
Rosetta	Pink	104	32.9	--	--	2,547	--	--
Sedona	Pink	100	34.4	2,587	1,800	2,306	2,053	2,231
La Paz	Pinto	101	36.1	3,510	3,324	2,900	3,112	3,245
Lariat	Pinto	f	39.1	3,697	2,832	2,445	2,639	2,991
Maverick	Pinto	f	41.9	3,079	2,860	2,848	2,854	2,929
ND-307	Pinto	102	42.5	3,257	2,792	3,113	2,953	3,054
Sinaloa	Pinto	102	34.5	--	--	3,285	--	--
Stampede	Pinto	101	37.2	3,423	2,720	3,020	2,870	3,054
Windbreaker	Pinto	f	42.2	3,457	2,328	2,822	2,575	2,869
Merlot	Small Red	f	34.5	--	2,224	2,180	2,202	--
Rio Rojo	Small Red	103	29.8	--	2,252	2,656	2,454	--
Mean		103	30.9	2,975	2,466	2,375	2,512	2,682
C.V. %		1.3	--	10.1	11.9	9.3	--	--
LSD 0.10		2.3	--	381	398	388	--	--

Planted: May 30. Harvested: Sept. 24.

[1]Days after planting.

[2]A freeze occurred on Sept. 12, with temperatures ranging from 28 to 32 F for five hours.

A "f" indicates the variety did not reach the R9 stage prior to the freeze.

However, all varieties were harvestable and had no distinctly damaged kernels in the sample.

Table 15. 2014 Dry Bean Variety Trial - Cavalier - (Langdon REC) - Authors, B. Hanson, T. Hakanson and L. Henry.

Variety	Market Class	100 Seed Weight	Seed Yield				
			2012	2013	2014	2-yr. Avg.	3-yr. Avg.
		(gram)	----------(lb/a)----------				
Eclipse	Black	19.1	1,904	3,436	1,655	2,545	2,332
Loreto	Black	18.0	2,304	3,392	1,472	2,432	2,389
Zorro	Black	20.3	2,244	3,576	1,131	2,354	2,317
Montcalm	Dark Red Kidney	42.1	--	--	795	--	--
Talon	Dark Red Kidney	41.4	--	--	726	--	--
Pink Panther	Light Red Kidney	50.5	--	--	646	--	--
Rosie	Light Red Kidney	47.1	--	--	976	--	--
Avalanche	Navy	18.6	2,412	3,440	1,493	2,467	2,448
Ensign	Navy	18.7	2,164	3,728	1,426	2,577	2,439
HMS Medalist	Navy	17.5	2,696	3,420	1,793	2,607	2,636
Nautica	Navy	15.5	--	3,204	1,419	2,312	--
Norstar	Navy	16.5	--	3,092	1,295	2,194	--
Rexeter	Navy	18.7	1,760	3,516	1,655	2,585	2,310
T9905	Navy	22.3	2,220	3,484	1,697	2,590	2,467
Vista	Navy	18.1	2,164	3,432	1,773	2,603	2,456
Rosetta	Pink	32.8	--	--	1,858	--	--
Sedona	Pink	41.2	1,816	2,700	1,444	2,072	1,987
La Paz	Pinto	35.2	2,104	3,820	2,039	2,929	2,654
Lariat	Pinto	37.0	--	3,460	1,790	2,625	--
Maverick	Pinto	38.6	1,824	3,456	1,783	2,620	2,354
ND-307	Pinto	39.8	1,720	3,540	1,947	2,743	2,402
Sinaloa	Pinto	34.9	--	--	1,977	--	--
Stampede	Pinto	39.1	2,012	3,348	1,579	2,463	2,313
Windbreaker	Pinto	39.7	2,256	3,392	1,812	2,602	2,487
Merlot	Small Red	35.7	1,212	2,968	1,558	2,263	1,913
Rio Rojo	Small Red	27.8	--	2,972	1,890	2,431	--
Mean		30.7	2,051	3,369	1,517	2,501	2,369
CV %		--	9.6	6.9	12.3	--	--
LSD 0.10		--	280	319	262	--	--

Planted: May 29. Harvested: Sept. 23.

Table 16. 2014 Dry Bean Variety Trial - Hettinger - Authors, J. Rickertsen and R. Olson.

Variety	Type	Days to Flowering	Plant Height	Plant Lodge	Test Weight	Yield	
						2014	3-yr. Avg.
		(DAP)[1]	(inch)	(0-9)[2]	(lb/bu)	----------(lb/a)----------	
Eclipse	Black	50	18	4	60.7	2,098	2,017
Loreto	Black	51	18	5	60.2	1,855	1,849
Avalanche	Navy	51	18	3	62.4	1,583	1,901
Ensign	Navy	52	19	6	60.7	1,682	1,954
HMS Medalist	Navy	52	18	3	62.8	1,658	1,824
Norstar	Navy	51	15	5	64.0	1,701	--
T9905	Navy	51	18	4	61.7	1,913	--
Vista	Navy	51	19	3	61.8	1,809	1,724
Rosetta	Pink	51	20	4	61.0	1,839	--
Sedona	Pink	50	19	6	58.2	1,437	1,194
La Paz	Pinto	52	21	5	60.0	2,140	2,278
Lariat	Pinto	54	19	7	56.9	2,081	2,240
Maverick	Pinto	50	17	7	59.2	1,824	1,922
ND-307	Pinto	49	17	5	58.0	1,892	2,296
Sinaloa	Pinto	51	21	4	59.3	2,125	--
Stampede	Pinto	51	19	5	59.1	1,922	2,129
Windbreaker	Pinto	48	16	5	57.8	1,833	1,898
Merlot	Small Red	51	19	5	60.2	1,752	1,736
Rio Rojo	Small Red	49	18	6	61.8	2,075	--
Mean		51	18	5	60.5	1,854	1,926
C.V. %		--	7	16	1.2	8	--
LSD 0.10		--	2	1	0.8	180	--

Planted: June 4. Harvested: Sept. 26. Previous crop: winter wheat.

[1]Days after planting.

[2]0 = no lodging, 9 = lying flat on ground.

Table 17. 2014 Pinto Bean Variety Trial - Minot - Authors, E, Eriksmoen, J, Tarasenko and J, Effertz.

Variety	100 Seed Weight	Test Weight	Yield	
			2014	2-yr. Avg.
	(gram)	(lb/bu)	----------(lb/a)----------	
La Paz	35.0	63.2	1,574	2,291
Lariat	36.7	62.0	1,440	2,133
Maverick	35.5	62.0	1,085	1,785
Sinaloa	33.8	62.6	1,126	--
Stampede	32.3	61.9	1,416	2,024
Windbreaker	35.2	60.6	1,437	2,006
Mean	34.8	62.1	1,346	2,048
C.V. %	2.1	0.4	10.1	--
LSD 0.10	9.0	0.3	166	--

Planted: May 30. Harvested: Oct. 15. Previous crop: barley.

Table 18. 2014 Navy Bean Variety Trial - Minot - Authors, E. Eriksmoen, J. Tarasenko and J. Effertz.

Variety	100 Seed Weight	Test Weight	Yield	
			2014	2-yr. Avg.
	(gram)	(lb/bu)	----------(lb/a)----------	
Avalanche	16.9	62.9	1,696	2,460
Ensign	18.9	63.1	1,367	2,014
HMS Medalist	14.0	63.4	1,083	2,055
Norstar	15.9	63.7	1,199	1,828
T9905	17.4	63.1	1,153	--
Vista	14.1	62.2	1,185	2,151
Mean	16.2	63.1	1,281	2,102
C.V. %	2.2	0.3	13.1	--
LSD 0.10	4.0	0.2	209	--

Planted: May 30. Harvested: Oct. 15. Previous crop: barley.

Table 19. Pinto Bean Variety Descriptions.

Class and Cultivar	Origin	RM[1]	Plant Type[2]
PINTO			
AC Island	Ag. Can.	ME	V
Baja	Provita	E	V
Buster	Seminis	ME	UV
Croissant	CSU	L	V
Durango	Provita	E	V
Eldorado	MSU	L	USV
Galeena	Provita	L	V
GTS-903	GenTec	L	UV
GTS-904	GenTec	L	UV
GTS-907	GenTec	M	UV
La Paz	Provita	L	USV
Lariat	NDSU	L	USV
Long's Peak	CSU	L	USV
Mariah	Seminis	ME	UV
Maverick	NDSU	ME	V
Max	Idaho Seed Bean	E	V
Medicine Hat	Seminis	ME	UV
Monterrey	Provita	ME	USV
ND-307	NDSU	M	UV
Odyssey	Idaho Seed Bean	ME	V
Othello	USDA-Prosser	E	V
PIN 1012	Seminis	ME	--
PIN 1314	Seminis	ME	--
Santa Cruz	Provita	M	USV
Santa Fe	MSU	M	USV
Sequoia	Idaho Seed Bean	ML	USV
Sinaloa	Provita	ML	USV
Sonora	Provita	E	V
Stampede	NDSU	M	USV
Windbreaker	Seminis	M	UV

Table 20. Navy Bean Variety Descriptions.

Class and Cultivar	Origin	RM[1]	Plant Type[2]
NAVY			
Alpena	MSU	ME	USV
Avalanche	NDSU	ME	USV
Bolt	Ag. Can.	-	-
Cascade	Idaho Seed Bean	M	USV
CDC Whitecap	U. Sask	M	USV
Ensign	ADM-Seedwest	M	USV
Fathom	U of Guelph	--	--
GTS-544	GenTec	M	USV
GTS-564	GenTec	M	USV
HMS Medalist	Provita	M	UV
HY 4181	Hyland	E	USV
Indi	ADM-Seedwest	M	USV
Lightning	U. of Guelph	M	UV
Merlin	Provita	M	USV
Mist	Ag. Can.	-	-
Nautica	Ag. Can.	ML	USV
Nav 1200	Seminis	ML	USV
Nav 1246	Seminis	ML	USV
Norstar	NDSU	ME	USV
OB-1723-06	GenTec	M	UV
Portage	Ag. Can.	ME	USV
Regent	Ag. Can.	ME	UV
Reliant	GenTec	ME/M	-
Rexeter	U. of Guelph	-	USV
Seabiskit	ADM	ME	USV
T9903	Hyland	ME	USV
T9905	Hyland	ME	USV
Teton	Idaho Seed Bean	M	USV
Vigilant	Provita	ME	USV
Viscount	GenTec	L	USV
Vista	Ag. Can.	ML	USV

Not all entries appear in the table due to lack of information.

[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; B = Bush.

Table 21. Small Red, Black, Pink and Yellow Bean Variety Descriptions.

Class and Cultivar	Origin	RM[1]	Plant Type[2]
SMALL RED			
Carman	Idaho Seed Bean	E	V
Merlot	MSU	ME	USV
Rio Rojo	NDSU	ME	USV
Ruby	Provita	M	USV
Ryder	Rogers	M	USV
UI-259	U. Idaho	M	V
BLACK			
BKB 1312	Seminis	ME	USV
BKB 1313	Seminis	ME	USV
Black Cat	Provita	ME	USV
Blackhawk	MSU	L	USV
Carman Black	Ag. Can	E	USV
CDC Jet	U. Sask.	ME	USV
CDC Super Jet	U. Sask.	ME	USV
COB-698-03	GenTec	ME	USV
Condor	MSU	ML	USV
Eclipse	NDSU	M	USV
GTS-1103	GenTec	M	USV
Jaguar	MSU	M	USV
Loreto	Provita	M	USV
Shania	ADM-Seed West	M	UV
T-39	U. Calif.	M	USV
Zenith	MSU	M	USV
Zorro	MSU	L	USV
PINK			
Alberta Pink	U. Alberta	E	V
Floyd	Rogers	ML	V
ROG 922	Rogers	M	V
Rosalee	U. Sask.	E	V
Rosetta	MSU/ARS	M	USV
Sedona	MSU/ARS	M	USV
UI-537	U. Idaho	E	V
Viva	USDA-Prosser	M	V
YELLOW			
Canario 107	U.C. Davis	L	V
FLOR de MAYO			
Gypsy Rose	MSU	ML	V

Not all entries appear in the table due to lack of information.

[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; B = Bush.

Table 22. Light Red, Dark Red and White Kidney, Great Northern, Cranberry and Otebo Bean Variety Descriptions.

Class and Cultivar	Origin	RM[1]	Plant Type[2]
LIGHT RED KIDNEY			
Blush	WSU/USDA	ML	B
California Early (CELRK)	U. Calif.	E	B
Chinook 2000	MSU	M	B
Clouseau	Seminis	M	B
Foxfire	Rogers	ME	B
OAC Inferno	U. of Guelph	ML	B
OAC Lyrik	U. of Guelph	ME	B
Pink Panther	Seminis	M	B
Rosie	NDSU	ML	B
Sacramento	Agri-Sales	E	B
DARK RED KIDNEY			
Cabernet	Rogers	ML	B
Drake	Seminis	M	B
Dynasty	U. of Guelph	ML	B
GTS-104	GenTec	M	B
GTS-106	GenTec	M	B
KDD 1013	Seminis	M	B
KDD 1030	Seminis	ME	B
Majesty	Ag. Can.	ML	USV
Montcalm	MSU	ML	B
Red Rover	Seminis	ME	B
Redhawk	MSU	M	B
Talon	NDSU	M	B
WHITE KIDNEY			
Beluga	MSU	M	B
Lassen	Agri-Sales	E	B
Silvercloud	WSU/USDA	E	B
Snowdon	MSU	ME	B
Yeti	U. of Guelph	ML	B
GREAT NORTHERN			
Aries	Provita	ME	USV
Beryl	Rogers	M	V
Coyne	U. Nebraska	ML	V
Draco	Provita	M	USV
Gemini	Provita	E	V
Matterhorn	MSU	ME	USV
Orion	Provita	E	V
Powderhorn	MSU	M	USV
Taurus	Provita	ML	USV
CRANBERRY			
Bellagio	MSU	ML	V
OTEBO			
Fuji	MSU	E	B
Hime	MSU	ME	B

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

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