

# North Dakota

# Dry Bean

## Performance Testing

## 2011

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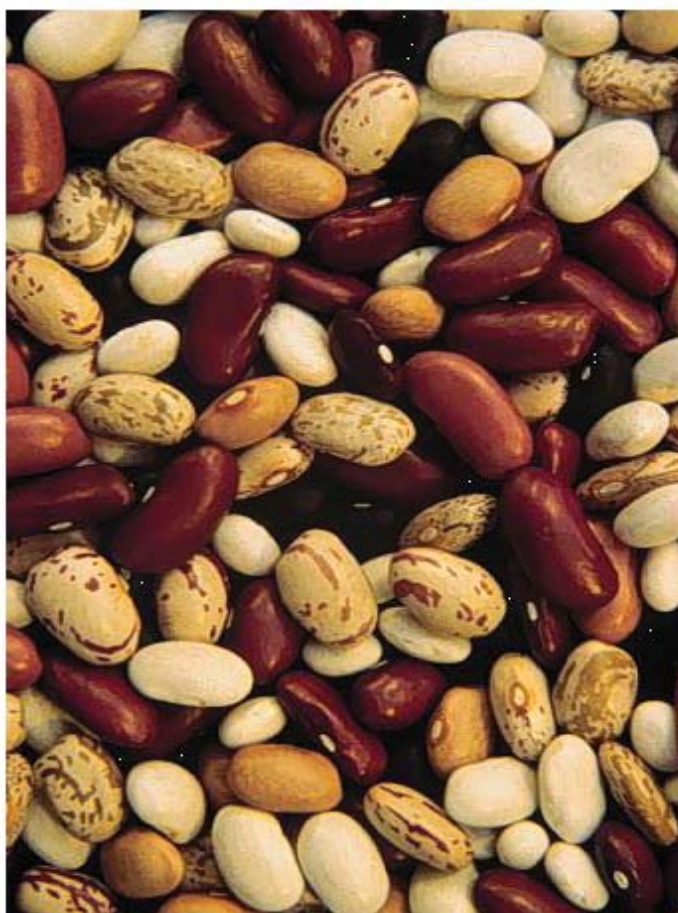
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## Introduction

Dry edible beans have been a significant crop in eastern and east-central North Dakota during the past decade. Acreage for the past 12 years is shown in Table 1, with production by classes in Table 2. The 414,000 dry bean acres planted in 2011 reflect a decrease of 386,000 acres, compared with 2010.

**Table 1. North Dakota Dry Edible Bean Planted Acreage, 2000 to 2011.**

Year	Acreage
2000	610,000
2001	440,000
2002	790,000
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	414,000

Source: North Dakota Agricultural Statistics Service – USDA.

**Table 2. North Dakota Dry Edible Bean Production by Commercial Class, 2000 to 2011.**

Year	Pinto (Cwt)	Navy (Cwt)
2000	5,294,000	1,620,000
2001	4,050,000	1,327,000
2002	7,184,000	2,340,000
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	2,683,000	1,142,000

Source: North Dakota Agricultural Statistics Service – USDA.

## Dry Edible Bean Production in North Dakota and the United States

Dry edible bean production in the United States was forecasted at 19.7 million hundredweight (cwt) for 2011, compared with the 31.8 million cwt production in 2010. Harvested acreage was forecasted at 1.15 million acres. The average U.S. yield was forecasted at 1,719 pounds per acre. Production in 2011 in North Dakota decreased for navy, great northern, pinto and black market classes compared with 2010 (see Table 3).

**Table 3. Dry Edible Bean and Chickpea Acreage and Production.**

Market Class	Acres Planted		Acres Harvested		Yield Per Acre		Production	
	2010	2011	2010	2011	2010	2011	2010	2011
	----- (1,000s) -----		----- (1,000s) -----		----- (lb) -----		----- (1,000 cwt) -----	
<b>North Dakota</b>								
Navy	132.0	94.0	128.0	84.0	1,530	1,360	1,958	1,142
Great Northern	5.6	1.8	5.3	1.7	1,530	700	81	12
Pinto	530.0	225.0	509.0	208.0	1,480	1,290	7,534	2,683
Dark Red Kidney	0.9	1.5	0.8	1.4	1,880	1,300	15	18
Pink	12.5	10.0	11.9	9.5	1,330	1,670	158	159
Small Red	1.2	2.5	1.1	2.4	1,550	1,250	17	30
Black	101.0	69.0	98.0	62.0	1,480	1,250	1,450	775
Chickpeas, All (Garbanzo)	16.0	4.7	15.2	4.5	1,640	980	250	44
- Small	2.0	3.0	1.9	2.9	1,740	1,000	33	29
- Large	14.0	1.7	13.3	1.6	1,630	950	217	15
Other	0.8	1.5	0.7	1.5	1,430	800	10	12
<b>Total</b>	<b>816</b>	<b>414.7</b>	<b>785.2</b>	<b>379.5</b>	<b>1,565</b>	<b>1,141</b>	<b>11,723</b>	<b>4,919</b>
<b>United States</b>								
Navy	279.5	203.7	271.7	190.0	1,754	1,708	4,766	3,245
Great Northern	78.5	62.0	69.9	60.9	2,007	1,974	1,403	1,202
Pinto	842.7	386.1	809.7	362.2	1,706	1,632	13,814	5,911
Dark Red Kidney	48.5	48.9	45.7	47.8	1,823	1,632	833	780
Pink	33.0	21.1	32.2	20.5	1,820	1,990	586	408
Small Red	22.9	35.5	22.8	34.8	2,096	2,121	478	738
Black	284.0	183.9	278.3	174.8	1,675	1,713	4,661	2,994
Chickpeas, All (Garbanzo)	146.0	127.1	144.1	125.6	1,346	1,617	1,939	2,031
- Small	25.1	36.4	24.5	36.0	1,408	1,608	345	579
- Large	120.9	90.7	119.6	89.6	1,333	1,621	1,594	1,452
Other	51.7	48.3	49.6	46.7	1,875	1,912	930	893
<b>Total</b>	<b>1,932.8</b>	<b>1,243.7</b>	<b>1,868.1</b>	<b>1,188.9</b>	<b>1,713</b>	<b>1,775</b>	<b>31,349</b>	<b>20,233</b>

Source: North Dakota Agricultural Statistics Service – USDA.

## 2011 Growing Season Weather Summary for North Dakota

**Table 4. April-September 2011 Average Temperature and Precipitation Rankings for Selected North Dakota Locations.**

City	Temperature Ranking	Precipitation Ranking
Bowman	25th Warmest	6th Wettest
Bismarck	40th Coolest	12th Wettest
Carrington	22nd Warmest	4th Wettest
Fargo	29th Warmest	33rd Wettest
Minot Exp. Station	21st Warmest	3rd Wettest
Williston Exp. Station	53rd Coolest	11th Wettest
North Dakota Average	<b>57th Coolest (117 years)</b>	<b>12th Wettest (117 years)</b>

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

## 2011 Dry Bean Performance Trials

Information about dry bean variety performance can be accessed on the Web at [www.ag.ndsu.edu/varietytrials/](http://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 95 percent probability, 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. Variety trials were planted at Prosper but had to be abandoned due to flooding, and no data is reported from this site in this publication. Navy bean trial at Hatton was also lost due to flooding.

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.

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Presentation of data for the entries 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 these trials.

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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 5. 2011 Pinto Bean Variety Trial, NDSU - Authors, J. Osorno, J. VanderWal and S. Gegner.**

Variety	Days to Flowering	Plant Height	Days to Maturity	100 Seed Weight	Yield
<b>Forest River (Walsh County)</b>	(DAP) <sup>1</sup>	(inch)	(DAP) <sup>1</sup>	(gram)	(lb/a)
AC Island	43	16.5	96	36.4	2,230
Buster	44	13.4	95	35.4	2,420
COB-2824-99	44	15.4	95	37.5	2,450
COB-816-03	47	17.7	101	38.8	2,870
GTS-900	46	15.0	100	35.5	2,450
GTS-904	46	15.0	100	35.1	2,640
GTS-907	45	15.7	95	36.0	2,350
La Paz	52	15.0	103	36.3	2,830
Lariat	48	17.3	100	37.8	2,240
Long's Peak	49	16.1	102	37.0	2,220
Mariah	46	15.7	96	33.4	2,150
Maverick	46	14.6	97	39.5	2,310
Medicine Hat	45	15.0	96	39.3	2,670
ND-307	47	14.6	98	37.8	2,340
Santa Fe	45	15.0	100	41.4	2,980
Sonora	46	16.1	97	33.6	2,490
Stampede	46	18.9	97	38.1	2,470
Windbreaker	45	14.2	98	39.4	2,680
Mean	46	15.6	98	37.1	2,488
CV %	4	10	2	5.6	11.8
LSD 0.05	2	6	3	2.9	420
<b>Hatton (Traill County)</b>					
Apache	44	18.5	98	37.3	3,730
Buster	45	17.3	94	38.7	3,870
COB-2824-99	45	19.7	95	37.2	3,720
COB-816-03	47	24.4	95	36.1	3,610
GTS-900	47	20.1	95	36.8	3,680
GTS-904	46	21.3	95	38.1	3,810
GTS-907	46	17.7	95	38.1	3,810
La Paz	50	17.3	99	36.9	3,690
Lariat	47	20.1	98	41.8	4,180
Long's Peak	50	20.9	102	35.3	3,530
Mariah	45	21.3	90	34.9	3,490
Maverick	47	18.1	94	37.7	3,770
Max	45	18.5	95	40.1	4,010
Medicine Hat	44	17.7	92	38.8	3,880
ND-307	46	20.1	98	38.1	3,810
Odyssey	46	18.1	98	37.5	3,750
Othello	44	16.1	95	36.9	3,690
Santa Fe	44	16.9	94	43.2	4,320
Sequoia	54	22.0	100	32.4	3,240
Sonora	46	18.1	97	31.8	3,180
Stampede	45	20.9	95	36.8	3,680
Windbreaker	44	18.1	97	39.8	3,980
Mean	46	19.2	96	37.5	3,747
CV %	6	13	2	4.7	26.9
LSD 0.05	5	NS	3	2.8	NS

<sup>1</sup>Days after planting.

**Table 6. 2011 Navy Bean Variety Trial, NDSU - Authors, J. Osorno, J. VanderWal and S. Gegner.**

<b>Variety</b>	<b>Days to Flowering</b> (DAP) <sup>1</sup>	<b>Plant Height</b> (inch)	<b>Days to Maturity</b> (DAP) <sup>1</sup>	<b>100 Seed Weight</b> (gram)	<b>Yield</b> (lb/a)
<b>Forest River (Walsh County)</b>					
Avalanche	45	17.7	94	20.2	2,530
Ensign	45	17.7	94	22.0	2,610
GTS-544	46	18.1	96	20.3	2,590
GTS-564	48	18.9	96	16.6	2,370
HMS Medalist	46	18.1	96	18.3	2,910
Indi	47	18.5	96	18.8	2,570
Mayflower	46	18.1	96	19.3	2,800
Navigator	46	18.1	94	19.7	2,500
Norstar	44	17.3	94	18.4	2,380
OB-1419-06	46	18.1	95	17.0	2,310
OB-5551-99	47	18.5	101	21.5	2,440
Octane	48	18.9	102	17.3	2,050
Skyline	44	17.3	93	17.7	1,610
T9905	47	18.5	95	20.1	2,960
Viscount	47	18.5	97	17.9	2,920
Vista	47	18.5	97	17.9	2,670
Mean	46	18.2	96	18.9	2,514
CV %	3	9	2	3.7	10.0
LSD 0.05	2	5	3	1.0	360

<sup>1</sup>Days after planting.

**Table 7. 2011 Dry Bean Variety Trial, NDSU - Authors, J. Osorno, J. VanderWal and S. Gegner.**

Variety	Market Class	Days to Flowering (DAP) <sup>1</sup>	Plant Height (inch)	Days to Maturity (DAP) <sup>1</sup>	100 Seed Weight (gram)	Yield (lb/a)
<b>Forest River (Walsh County)</b>						
GTS-1103	Black	49	16.5	97	20.9	2,920
Eclipse	Black	47	17.3	93	19.3	2,900
Loreto	Black	46	17.3	96	20.2	2,440
Shania	Black	46	16.5	96	18.0	2,530
T-39	Black	48	15.4	95	19.2	2,110
Zorro	Black	46	18.9	93	19.8	2,310
Mean		47	17.0	95	19.6	2,535
CV %		2	12	1.0	4.5	14.3
LSD 0.05		1	NS	1	1.4	500
<b>Hatton (Traill County)</b>						
CDC Jet	Black	48	20.9	93	20.4	1,950
CDC Super Jet	Black	46	19.7	93	20.4	2,260
Eclipse	Black	46	22.4	88	20.5	2,190
GTS-1103	Black	51	18.1	98	20.1	2,100
Loreto	Black	46	20.1	94	20.3	2,190
Shania	Black	47	20.9	95	18.9	2,430
T-39	Black	49	20.1	95	19.6	2,460
Zorro	Black	48	22.4	94	20.8	2,510
Coyne	Great Northern	48	22.4	98	35.6	1,980
Gemini	Great Northern	41	23.6	90	37.4	1,750
Matterhorn	Great Northern	45	18.9	88	31.9	1,720
Orion	Great Northern	45	13.4	91	33.9	2,290
Sedona	Pink	53	18.5	100	35.5	1,980
Mean		47	20.1	94	25.8	2,139
CV %		6	10	2.0	7.6	22.6
LSD 0.05		5	9.0	4	3.5	NS

<sup>1</sup>Days after planting.

**Table 8. 2011 Dry Bean Variety Trial, NDSU - Authors, J. Osorno, J. VanderWal and S. Gegner.**

Variety	Market Class	Days to Flowering	Plant Height	Days to Maturity	100 Seed Weight	Yield
<b>Park Rapids (Hubbard County)</b>		(DAP) <sup>1</sup>	(inch)	(DAP) <sup>1</sup>	(gram)	(lb/a)
GTS-1103	Black	49	16.9	96	20.8	1,820
Loreto	Black	48	16.1	98	18.7	1,820
Bellagio	Cranberry	45	15.0	102	49.1	910
GTS-104	Dark Red Kidney	43	16.1	99	42.1	1,330
GTS-106	Dark Red Kidney	43	15.7	96	40.2	1,530
Majesty	Dark Red Kidney	47	15.0	94	46.9	1,180
Montcalm	Dark Red Kidney	43	13.8	91	39.4	980
Redhawk	Dark Red Kidney	41	16.9	94	42.7	1,540
Red Rover	Dark Red Kidney	42	20.1	93	48.3	1,580
Blush	Light Red Kidney	50	18.1	106	48.0	790
Celrk	Light Red Kidney	41	13.0	86	38.2	910
Clouseau	Light Red Kidney	42	20.9	91	47.7	1,690
Foxfire	Light Red Kidney	40	13.4	83	40.4	920
OAC Inferno	Light Red Kidney	42	18.5	95	43.0	1,820
Pink Panther	Light Red Kidney	41	12.6	85	28.7	370
GTS-544	Navy	48	16.5	98	19.3	1,650
GTS-564	Navy	51	13.4	97	17.1	1,820
HMS Medalist	Navy	48	18.5	95	17.0	1,930
OB-1419-06	Navy	50	16.5	100	17.2	2,080
OB-5551-99	Navy	47	15.4	102	26.8	1,500
Octane	Navy	44	13.8	100	14.8	1,130
Skyline	Navy	47	11.0	90	17.7	830
Viscount	Navy	52	17.3	100	12.5	1,870
Silvercloud	White Kidney	49	15.4	106	52.6	830
Mean		46	16	96	33	1,368
CV %		5	11	3	15.3	29.8
LSD 0.05		3	6	4	8.1	530
<b>Staples (Todd County)</b>						
Erimo <sup>2</sup>	Adzuki	58	19.3	107	12.8	2,510
GTS-1103	Black	55	22.4	98	19.4	1,680
Loreto	Black	52	22.0	98	17.4	1,740
GTS-104	Dark Red Kidney	51	21.3	101	42.3	950
GTS-106	Dark Red Kidney	50	21.3	103	43.0	990
Montcalm	Dark Red Kidney	48	18.5	103	46.1	1,050
Redhawk	Dark Red Kidney	49	20.5	99	45.4	1,250
Red Rover	Dark Red Kidney	49	21.3	96	44.8	1,370
Blush	Light Red Kidney	52	21.3	103	49.0	770
Celrk	Light Red Kidney	48	15.4	92	47.2	840
Clouseau	Light Red Kidney	48	18.9	99	50.7	1,350
Foxfire	Light Red Kidney	48	18.1	88	40.3	1,080
Pink Panther	Light Red Kidney	49	19.3	90	45.2	990
GTS-544	Navy	53	20.9	97	18.3	1,240
GTS-564	Navy	54	21.3	94	15.5	1,760
HMS Medalist	Navy	53	22.8	96	16.9	1,440
OB-1419-06	Navy	54	20.1	97	16.9	1,660
OB-5551-99	Navy	53	22.8	101	21.3	1,640
Octane	Navy	51	18.9	103	17.1	1,570
Skyline	Navy	48	15.7	89	14.8	810
Viscount	Navy	54	22.8	101	17.4	1,640
Hime	Otebo	51	17.7	95	22.9	660
Silvercloud	White Kidney	52	22.8	103	49.9	670
Mean		51	20.2	98	31.1	1,290
CV %		4	8	2.0	8.7	24.1
LSD 0.05		3	6.0	3	4.6	430

<sup>1</sup>Days after planting.<sup>2</sup>Erimo (*Vigna angularis*) from SK Foods.

**Table 9. 2011 Dry Bean Variety Trial - Dryland - Carrington - Authors, B. Schatz, S. Schaubert and T. Indergaard.**

Variety	Market Class	Maturity (DAP) <sup>2</sup>	Growth Habit <sup>1</sup> (1-9)	100 Seed Weight (gram)	Seeds/Pound (seeds)	Test Weight (lb/bu)	Seed Yield	
							2011	3-yr. Avg.
Erimo <sup>3</sup>	Adzuki	115	8.0	13.1	3,473	62.8	1,773	--
Eclipse	Black	107	6.0	22.8	1,988	61.3	1,393	2,139
GTS-1103	Black	113	5.8	25.1	1,811	62.8	2,169	--
Jaguar	Black	110	5.5	21.6	2,100	61.9	1,398	2,053
Loreto	Black	116	5.5	22.7	1,999	61.2	1,532	--
Shania	Black	113	6.3	22.2	2,048	61.8	1,426	--
Zorro	Black	107	4.5	22.5	2,018	60.9	934	--
Avalanche	Navy	112	6.0	24.5	1,856	64.0	1,356	2,126
Ensign	Navy	113	4.3	24.9	1,823	63.2	1,707	2,339
GTS-544	Navy	116	4.8	23.9	1,899	63.4	2,163	--
GTS-564	Navy	111	4.8	21.3	2,150	64.3	1,403	--
HMS Medalist	Navy	112	7.0	20.1	2,262	63.5	1,619	--
Lightning	Navy	111	5.5	22.6	2,005	62.3	1,000	2,042
OB-5551-99	Navy	118	6.8	23.9	1,902	63.6	1,724	--
Octane	Navy	117	6.5	20.5	2,216	65.5	1,596	1,829
Rexeter	Navy	116	6.5	21.6	2,107	64.4	1,543	--
Skyline	Navy	105	3.8	20.3	2,245	64.8	898	1,600
Viscount	Navy	114	5.5	21.0	2,160	64.4	1,617	--
Vista	Navy	114	5.5	21.6	2,101	63.6	1,558	2,297
Hime	Otebo	108	2.3	28.9	1,574	64.0	886	1,837
Sedona	Pink	114	3.8	45.1	1,008	58.3	1,934	2,312
AC Island	Pinto	106	2.8	45.3	1,003	59.8	1,767	--
COB-2824-99	Pinto	103	4.3	40.8	1,119	57.2	1,193	--
COB-816-03	Pinto	109	4.5	41.6	1,094	60.1	1,876	--
Galeena	Pinto	115	4.8	35.7	1,278	60.4	2,055	--
GTS-904	Pinto	109	4.5	45.9	994	57.3	1,694	--
GTS-907	Pinto	104	4.5	43.6	1,045	57.5	1,336	--
La Paz	Pinto	110	5.3	41.5	1,094	60.9	1,772	2,730
Lariat	Pinto	115	5.5	47.7	952	58.7	2,242	2,757
Maverick	Pinto	107	2.8	40.9	1,119	57.8	1,660	2,548
Medicine Hat	Pinto	103	3.3	40.5	1,123	56.5	1,095	2,279
ND-307	Pinto	112	5.5	47.7	953	57.4	2,038	2,573
Santa Fe	Pinto	108	2.0	38.5	1,207	55.6	923	2,040
Sonora	Pinto	110	5.0	35.5	1,278	59.7	1,718	--
Stampede	Pinto	107	4.0	45.5	999	57.0	1,665	2,370
Windbreaker	Pinto	106	4.5	46.0	989	57.9	1,707	2,592
Merlot	Small Red	117	4.5	41.8	1,088	60.2	1,578	2,304
Mean		111	4.9	31.6	1,624	61	1,566	2,251
CV %		1.4	16.6	6.0	5.3	0.9	14.8	--
LSD 0.05		2.1	1.1	2.7	119	0.8	327	--

Planted: May 25. Harvested: Sept. 27. Previous crop: spring wheat. Trial was impacted by a hail storm on July 24, plant damage and subsequent yield loss was influenced by plant stature and growth stage.

<sup>1</sup>Growth Habit : Scored on scale of 1 to 9, with 1 = a vining plant type, pods low to ground, short stature; 9 = very upright plant structure, pods held off ground.

<sup>2</sup>Days after planting.

<sup>3</sup>Erimo (*Vigna angularis*) from SK Foods.

**Table 10. 2011 Dry Bean Variety Trial - Irrigated - Carrington - Authors, B. Schatz, P. Hendrickson and T. Ingebretson.**

Variety	Market Class	Days to Maturity (DAP) <sup>1</sup>	Growth Habit (1-9) <sup>2</sup>	Seeds/Pound (seeds)	100 Seed Weight (gram)	Test Weight (lb/bu)	Seed Yield	
							2011	3-yr. Avg.
Ermo <sup>3</sup>	Adzuki	117	5.5	5,211	8.8	60.5	234	--
Eclipse	Black	106	6.5	2,539	17.9	60.8	1,386	2,021
GTS-1103	Black	111	5.0	2,363	19.2	62.2	1,945	--
Jaguar	Black	107	5.5	2,707	16.8	61.2	1,148	1,644
Loreto	Black	113	6.0	2,504	18.1	61.2	1,555	--
Shania	Black	109	6.5	2,651	17.1	60.7	1,433	--
Zorro	Black	105	5.3	2,623	17.3	60.0	886	1,679
Avalanche	Navy	109	5.0	2,394	19.0	63.1	1,365	2,092
Ensign	Navy	107	4.8	2,282	19.9	62.1	1,252	2,069
GTS-544	Navy	114	5.0	2,350	19.3	64.4	2,043	--
GTS-564	Navy	111	5.0	2,909	15.6	63.6	1,232	--
HMS Medalist	Navy	110	6.0	2,904	15.7	63.0	1,287	--
Lightning	Navy	108	4.8	2,628	17.3	62.5	1,016	--
OB-5551-99	Navy	117	7.0	2,304	19.7	63.0	1,949	--
Octane	Navy	114	6.5	2,853	15.9	65.3	1,879	1,936
Rexeter	Navy	114	6.3	2,712	16.8	63.8	1,209	--
Skyline	Navy	104	3.3	2,744	16.7	64.5	940	1,527
Viscount	Navy	113	5.5	2,761	16.5	65.1	1,687	--
Vista	Navy	114	6.0	2,567	17.7	63.5	1,997	2,273
Hime	Otebo	104	2.3	2,252	20.3	63.3	814	1,598
Sedona	Pink	110	4.3	1,246	36.5	58.9	1,507	2,074
AC Island	Pinto	106	2.5	1,386	32.8	57.6	1,061	--
COB-2824-99	Pinto	103	3.8	1,398	32.5	56.7	1,221	--
COB-816-03	Pinto	105	5.3	1,323	34.4	59.6	1,451	--
Galeena	Pinto	115	3.8	1,437	31.6	60.9	2,596	--
GTS-904	Pinto	106	4.8	1,259	36.2	57.4	1,571	--
GTS-907	Pinto	103	4.0	1,373	33.2	57.0	1,194	--
La Paz	Pinto	106	6.3	1,359	33.4	60.3	1,830	2,443
Lariat	Pinto	112	6.5	1,191	38.2	58.6	2,144	2,696
Maverick	Pinto	104	2.8	1,306	34.8	59.2	1,389	2,277
Medicine Hat	Pinto	102	3.3	1,398	32.5	56.7	1,000	2,076
ND-307	Pinto	107	5.5	1,294	35.2	56.3	1,464	2,160
Santa Fe	Pinto	107	3.3	1,268	36.0	55.2	1,097	2,063
Sonora	Pinto	105	4.5	1,587	28.6	58.2	1,478	--
Stampede	Pinto	107	5.3	1,211	37.5	56.9	1,592	2,174
Windbreaker	Pinto	105	3.5	1,194	38.1	58.0	1,620	2,349
Merlot	Small Red	113	3.8	1,391	32.9	60.9	1,359	2,129
Mean		109	4.9	2,078	25.1	60.6	1,428	2,067
CV %		1.8	17.2	6.2	5.3	1.7	19.6	--
LSD 0.05		2.6	1.2	177	1.9	1.4	397	--

Planted: May 25. Harvested: Sept. 27. Previous crop: spring wheat. This trial was impacted by a hail storm on July 24, plant damage and subsequent yield loss was influenced by plant stature and growth stage.

<sup>1</sup>Days after planting.

<sup>2</sup>Growth Habit : Scored on scale of 1 to 9. 1 = vining plant, pods low to ground, short stature; to 9 = very upright plant stature, pods held off ground.

<sup>3</sup>Ermo (*Vigna angularis*) from SK Foods.

**Table 11. 2011 Dry Bean Variety Trial - Hettinger - Authors, E. Eriksmoen and R. Olson.**

Variety	Market Class	Days to Flowering (DAP) <sup>1</sup>	Plant Height (inch)	100 Seed Weight (gram)	Test Weight (lb/bu)	Seed Yield		
						2010	2011	3-yr. Avg.
Eclipse	Black	60	22	14.4	57.5	1,784	1,707	1,611
Jaguar	Black	60	23	15.4	50.7	1,768	1,833	1,647
Loreto	Black	60	25	18.0	48.4	1,227	1,502	--
Zorro	Black	60	24	18.0	56.0	2,043	1,573	1,676
Avalanche	Navy	55	25	17.4	55.8	1,556	1,549	1,526
Ensign	Navy	55	25	16.4	55.1	1,380	1,401	1,329
HMS Medalist	Navy	55	23	15.0	59.0	1,447	1,253	--
Skyline	Navy	57	22	16.6	56.8	--	1,326	--
Vista	Navy	60	20	19.0	57.0	1,611	1,370	1,461
Sedona	Pink	60	22	26.8	--	838	612	751
Galeena	Pinto	55	25	22.4	56.8	--	1,958	--
La Paz	Pinto	60	23	25.1	53.9	1,995	1,916	1,933
Lariat	Pinto	55	18	24.0	54.8	2,122	2,068	1,910
Maverick	Pinto	53	21	22.9	52.2	1,987	1,791	1,862
Medicine Hat	Pinto	53	26	20.8	53.7	1,532	1,799	--
Santa Fe	Pinto	55	24	20.8	53.7	1,295	2,150	--
Sonora	Pinto	54	23	19.9	53.9	2,076	1,999	--
Stampede	Pinto	55	22	25.1	53.7	1,559	1,914	1,739
Windbreaker	Pinto	54	27	27.5	52.2	1,942	1,645	--
Merlot	Small Red	56	21	21.7	48.5	1,589	1,496	1,253
Mean		57	23	20.4	54.2	1653	1643	1558
CV %		1.6	23	9.7	3.3	6.1	7.5	--
LSD 0.05		1	NS	28	2.5	165	177	--

Planted: May 26. Harvested: Sept. 12. Previous crop: oat. Seeding Rate: 100,000 live seeds/acre (approx. 60 lb/a).

<sup>1</sup>Days after planting.

**Table 12. 2011 Dry Bean Variety Trial - Langdon - Authors, B. Hanson and R. Wilhelm.**

Variety	Market Class	Maturity (DAP) <sup>1</sup>	100 Seed		Seed Yield				
			Weight (gram)	Disease (1-9) <sup>2</sup>	2009	2010	2011	2-yr. Avg.	3-yr. Avg.
GTS-907	Pinto	95	39.2	3	--	2,780	3,120	2,950	--
La Paz	Pinto	100	36.2	5	3,213	3,100	3,172	3,136	3,162
Lariat	Pinto	97	39.4	4	2,607	3,208	3,124	3,166	2,980
Medicine Hat	Pinto	95	39.7	4	--	2,804	3,024	2,914	--
ND-307	Pinto	97	41.3	1	2,465	2,520	2,428	2,474	2,471
Sante Fe	Pinto	99	47.1	4	--	2,384	3,461	2,923	--
Stampede	Pinto	96	39.2	2	2,408	2,384	3,032	2,708	2,608
Windbreaker	Pinto	95	38.7	3	2,894	2,880	3,076	2,978	2,950
Avalanche	Navy	97	22.3	5	1,824	3,020	2,868	2,944	2,571
Ensign	Navy	99	23.9	2	2,001	2,816	3,472	3,144	2,763
HMS Medalist	Navy	100	18.8	1	--	3,512	3,268	3,390	--
Lightning	Navy	99	24.0	5	--	3,172	3,168	3,170	--
Vista	Navy	98	19.3	4	2,142	3,052	2,564	2,808	2,586
Eclipse	Black	98	22.2	4	1,819	3,016	3,664	3,340	2,833
Zorro	Black	98	22.2	7	--	3,336	3,080	3,208	--
Merlot	Small Red	98	34.8	7	2,402	2,896	2,700	2,798	2,666
Sedona	Pink	100	40.3	5	2,394	2,856	2,628	2,742	2,626
Mean		98	32.3	4	2,379	2,926	3,050	2,988	2,747
CV %		1.2	4.3	76.3	11.1	8.2	14.3	--	--
LSD 0.05		2.0	2.3	NS	429	385	NS	--	--

Planted: June 2. Harvested: Sept. 22.

<sup>1</sup>Days after planting.<sup>2</sup>Disease: White Mold, 1 = no disease, 9 = most disease.**Table 13. 2011 Dry Bean Variety Trial - McLean County (NCREC) - Authors, M. Halvorson, A. Sebelius and J. Tarasenko.**

Variety	Market Class	100 Seed Weight (gram)	Seeds/ Pound (seeds)	Seed Yield		
				2010	2011 <sup>1</sup>	2-yr. Avg.
La Paz	Pinto	29.6	1,533	1,640	913	1,277
Medicine Hat	Pinto	36.0	1,263	1,310	970	1,140
Stampede	Pinto	31.4	1,449	1,270	1,039	1,154
Avalanche	Navy	16.4	2,776	1,378	767	1,072
HMS Medalist	Navy	13.7	3,326	1,104	816	960
Vista	Navy	14.7	3,107	1,268	843	1,056
Eclipse	Black	17.3	2,619	1,210	532	871
Zorro	Black	17.1	2,654	1,327	700	1,013
Mean		22.0	2,341	1,313	822	1,068
CV %		4.2	5.4	15.2	25.8	--
LSD 0.05		1.4	185	302	NS	--

Planted: June 6. Harvested: Sept 27.

<sup>1</sup>High CV for yield. Data should be interpreted with caution.

**Table 14. 2011 Dry Bean Variety Trial - Pembina Co. - Cavalier - (Langdon REC) -  
Authors, B. Hanson and R. Wilhelmi.**

<b>Variety</b>	<b>Market Class</b>	<b>Maturity (DAP)<sup>1</sup></b>	<b>100 Seed Weight (gram)</b>	<b>Yield 2,011 (lb/a)</b>
Avalanche	Navy	94	22.5	2,514
Ensign	Navy	92	24.0	2,544
GTS-544	Navy	93	22.1	3,137
GTS-564	Navy	93	18.3	2,696
HMS Medalist	Navy	93	20.0	2,760
Lightning	Navy	92	22.7	2,351
OB-5551-99	Navy	95	27.0	2,820
Rexeter	Navy	94	20.6	2,806
Skyline	Navy	93	21.9	2,266
Viscount	Navy	94	18.4	2,733
Vista	Navy	94	20.2	2,641
Eclipse	Black	92	20.5	2,458
GTS-1103	Black	93	23.0	2,419
Jaguar	Black	92	20.9	2,768
Loreto	Black	94	21.8	2,878
Zorro	Black	92	21.6	2,559
Mean		93	21.6	2,647
C.V. %		1.6	4.9	12.0
LSD 5%		NS	1.8	NS
COB-2824-99	Pinto	90	40.7	2,751
COB-816-03	Pinto	94	38.8	2,836
Galeena	Pinto	93	34.7	2,516
GTS-904	Pinto	92	43.5	2,981
GTS-907	Pinto	93	40.9	2,829
La Paz	Pinto	91	38.8	2,505
Lariat	Pinto	93	40.8	3,112
Maverick	Pinto	91	40.3	2,902
Medicine Hat	Pinto	91	41.5	2,815
ND-307	Pinto	93	41.1	2,990
Santa Fe	Pinto	91	43.3	2,996
Sonora	Pinto	92	35.5	2,629
Stampede	Pinto	93	40.8	2,983
Windbreaker	Pinto	91	44.6	2,883
Merlot	Small Red	92	39.0	2,260
Sedona	Pink	93	36.6	2,672
Mean		92	40.1	2,791
C.V. %		2.0	5.4	17.0
LSD 5%		NS	3.6	NS

Planted: June 3. Harvested: Sept. 27.

<sup>1</sup>Days after planting.

**Table 15. 2011 Pinto Bean Variety Trial - Irrigated - Oakes - Authors, W. Albus and L. Besemann.**

Variety	Maturity (DAP) <sup>2</sup>	100 Seed Weight (gram)	Test Weight (lb/bu)	Seed Yield		
				2011 <sup>1</sup>	2-yr. Avg.	3-yr. Avg.
				------(lb/a)-----		
AC Island	97	34.6	60.6	1,776	--	--
COB-2824-99	79	32.5	59.5	1,193	--	--
COB-816-03	95	35.2	61.5	1,405	--	--
Galeena	103	29.8	60.7	1,391	--	--
GTS-904	87	36.8	59.5	878	--	--
GTS-907	76	29.3	59.5	765	--	--
La Paz	97	34.3	61.7	1,119	2,747	2,264
Lariat	102	38.2	56.1	1,744	2,403	2,355
Maverick	90	37.1	58.9	1,970	2,326	2,475
Medicine Hat	78	34.1	58.8	1,312	2,137	2,438
ND-307	89	34.7	57.8	1,066	--	--
Santa Fe	89	38.9	58.2	1,205	2,149	--
Sonora	89	28.7	60.5	1,117	1,956	2,287
Stampede	92	36.3	58.0	1,461	2,141	2,524
Windbreaker	82	36.7	58.7	1,532	2,511	2,829
Mean	90	34.5	59.3	1,329	2,296	2,453
CV %	6.6	7.7	1.2	38.3	--	--
LSD 0.05	8.5	4	1.0	NS	--	--

<sup>1</sup>High CV for yield. Data should be interpreted with caution.<sup>2</sup>Days after planting.**Table 16. 2011 Navy Bean Variety Trial - Irrigated - Oakes - Authors, W. Albus and L. Besemann.**

Variety	Maturity (DAP) <sup>2</sup>	100 Seed Weight (gram)	Test Weight (lb/bu)	Seed Yield		
				2011 <sup>1</sup>	2-yr. Avg.	3-yr. Avg.
				------(lb/a)-----		
Avalanche	90	17.4	61.4	529	1,850	1,987
Ensign	83	16.8	64.1	945	2,075	2,174
GTS-544	104	19.5	62.8	1,701	--	--
GTS-564	99	17.6	65.3	1,472	--	--
Medalist	102	16.7	63.4	1,089	--	--
OB-5551-99	104	21.8	63.7	1,531	--	--
Skyline	84	16.2	63.0	412	--	--
Viscount	101	16.5	64.7	1,503	--	--
Vista	103	17.4	64.8	1,062	2,312	2,426
Mean	97	17.8	63.7	1,138	2,079	2,196
CV %	3.9	6.0	3.3	43.3	--	--
LSD 0.05	5.4	2	NS	719	--	--

<sup>1</sup>High CV for yield. Data should be interpreted with caution.<sup>2</sup>Days after planting.

**Table 17. 2011 Dry Bean Variety Trial - Irrigated - Oakes - Authors, W. Albus and L. Besemann.**

Variety	Market Class	Maturity (DAP) <sup>2</sup>	100 Seed Weight (gram)	Test Weight (lb/bu)	Seed Yield	
					2011 <sup>1</sup>	3-yr. Avg.
Erimo <sup>3</sup>	Adzuki	105	11.0	66.4	1,808	--
Eclipse	Black	92	18.9	63.6	1,175	2,336
GTS-1103	Black	101	20.9	65.1	2,307	--
Jaguar	Black	91	16.1	62.1	975	--
Loreto	Black	101	17.5	64.3	1,451	--
Zorro	Black	90	18.6	63.8	1,138	2,491
Hime	Otebo	96	24.1	59.5	559	--
Sedona	Pink	100	35.3	60.5	1,435	2,497
Merlot	Small Red	101	34.4	62.2	1,174	2,452
MEAN		97	21.9	63.1	1,336	2,444
CV %		3.7	5.9	5.4	32.9	--
LSD 0.05		5	1.9	NS	641	--

Planted: May 31. Harvested: Sept. 9. Previous crop: corn. Yields significantly reduced by bacterial brown spot and common blight.

<sup>1</sup>High CV for yield. Data should be interpreted with caution.

<sup>2</sup>Days after planting.

<sup>3</sup>Erimo (*Vigna angularis*) from SK Foods.

**Table 18. 2011 Pinto Bean Variety Trial - Dryland - Williston - Authors, G. Bradbury and S. Loomer.**

Variety	Days to Flowering (DAP) <sup>1</sup>	Plant Height (inch)	Test Weight (lb/bu)	Seed Yield		
				2009	2011	3-yr. Avg.
La Paz	46	18.3	60.0	--	834	--
Lariat	44	16.1	59.0	643	870	756
Maverick	43	15.6	59.5	617	703	660
Medicine Hat	42	14.9	58.3	--	699	--
ND-307	44	15.7	57.0	474	659	567
Santa Fe	44	15.4	58.4	--	671	--
Stampede	45	16.4	57.8	615	812	713
Windbreaker	43	16.8	56.9	--	584	--
Mean	44	16.2	58.4	587	729	674
CV %	1.9	10.5	1.5	24	13	--
LSD 0.05	1.2	NS	NS	NS	141	--

Planted May 2 into tilled soybean cover crop stubble. Harvested Sept. 22. Data from 2010 not included due to hail damage to plots.

<sup>1</sup>Days after planting.

**Table 19. 2011 Navy and Black Bean Variety Trial - Dryland - Williston - Authors, G. Bradbury and S. Loomer.**

Variety	Market Class	Days to Flowering (DAP) <sup>1</sup>	Plant Height (inch)	Test Weight (lb/bu)	Seed Yield		
					2009	2011	2-yr. Avg.
Eclipse	Black	46	16.8	62.2	--	750	--
Zorro	Black	44	12.8	62.3	--	776	--
Avalanche	Navy	46	13.8	62.3	559	642	600
HMS Medalist	Navy	46	16.0	62.3	--	789	--
Lightning	Navy	45	12.9	62.2	--	729	--
Vista	Navy	46	17.5	62.0	432	758	595
Mean		45	15.0	62.2	495	741	598
CV %		1.4	10.6	0.5	20.3	13.5	--
LSD 0.05		1.0	2.4	NS	NS	NS	--

Planted: May 2. Harvested: Sept. 22. Previous crop: soybean cover crop. 2010 yields not available due to hail damage.

<sup>1</sup>Days after planting.

**Table 20. 2011 Pinto Bean Variety Trial - Irrigated - Williston - Authors, T. Tjelde and C. Wahlstrom.**

Variety	Days to Flowering	Plant Height	100 Seed Weight	Seeds/Pound	Test Weight	Yield 2011
	(DAP) <sup>1</sup>	(inch)	(gms)	(seeds)	(lb/bu)	(lb/a)
COB-2824-99	42	14.2	34.9	1,302	61.2	2,292
COB-816-03	45	15.5	32.9	1,379	62.5	2,812
Galeena	44	14.1	32.3	1,405	62.4	2,466
GTS-904	44	14.3	36.5	1,244	61.1	2,753
GTS-907	42	14.2	33.9	1,340	61.4	2,180
La Paz	45	16.7	32.8	1,384	62.6	2,293
Lariat	42	14.2	36.0	1,260	61.3	2,697
Maverick	45	11.7	37.3	1,218	60.7	2,531
Medicine Hat	42	15.7	36.8	1,234	61.0	1,795
ND-307	42	14.6	37.2	1,219	59.1	2,471
Santa Fe	42	15.3	36.6	1,240	59.9	1,795
Sonora	44	15.2	29.3	1,552	62.2	2,026
Stampede	44	18.2	33.5	1,355	61.2	2,371
Windbreaker	42	13.8	36.4	1,248	60.3	2,348
Mean	43	14.8	34.7	1,313	61.2	2,345
CV %	--	11.0	3.2	--	0.5	16
LSD 0.05	--	2.3	2.4	--	0.7	536

Planted: June 6. Harvested: Sept. 22. Previous crop: barley.

<sup>1</sup>Days after planting.**Table 21. 2011 Navy Bean Variety Trial - Irrigated - Williston - Authors, T. Tjelde and C. Wahlstrom.**

Variety	Days to Flowering	Plant Height	100 Seed Weight	Seeds/Pound	Test Weight	Yield 2011
	(DAP) <sup>1</sup>	(inch)	(gms)	(seeds)	(lb/bu)	(lb/a)
Avalanche	44	17.3	18.6	2,442	64.6	1,958
Ensign	45	16.6	23.4	1,941	64.5	2,058
GTS-544	44	14.9	17.4	2,609	65.0	1,946
GTS-564	45	16.0	14.8	3,058	65.1	1,791
HMS Medalist	44	19.3	16.9	2,694	64.5	1,800
OB-5551-99	44	16.6	19.8	2,297	65.1	1,892
Octane	45	17.5	17.0	2,668	64.3	1,606
Skyline	45	14.3	17.6	2,575	65.9	1,308
Viscount	45	18.0	15.4	2,950	65.5	1,943
Vista	44	17.3	15.7	2,892	64.8	1,500
Mean	45	16.8	17.7	2,613	64.9	1,780
CV %	--	5.5	7.3	--	0.5	11
LSD 0.05	--	1.3	2.9	--	0.8	278

Planted: June 6. Harvested: Sept. 22. Previous crop: barley.

<sup>1</sup>Days after planting.**Table 22. 2011 Dry Bean Variety Trial - Irrigated - Williston - Authors, T. Tjelde and C. Wahlstrom.**

Variety	Market Class	Days to Flowering	Plant Height	100 Seed Weight	Seeds/Pound	Test Weight	Yield 2011
		(DAP) <sup>1</sup>	(inch)	(gms)	(seeds)	(lb/bu)	(lb/a)
Eclipse	Black	45	17.7	17.4	2,603	63.7	2,423
GTS-1103	Black	47	16.5	18.1	2,510	65.4	2,267
Jaguar	Black	45	17.7	15.7	2,893	64.9	1,893
Loreto	Black	47	15.8	16.6	2,740	65.2	2,284
Zorro	Black	45	18.9	17.1	2,659	64.3	2,226
Sedona	Pink	45	14.8	27.6	1,649	60.2	2,390
Merlot	Small Red	48	15.2	33.5	1,355	61.5	2,035
Mean		46	16.7	20.8	2,344	63.6	2,217
CV %		0.7	10.1	17.6	--	0.2	13
LSD 0.05		0.5	2.5	9.0	--	0.3	414

Planted: June 6. Harvested: Sept. 22. Previous crop: barley.

<sup>1</sup>Days after planting.

**Table 23. Pinto Bean Variety Descriptions.**

Class and Cultivar	Origin	RM <sup>1</sup>	Plant Type <sup>2</sup>	-----Blight-----		-----BCMV-----		Fusarium Root Rot	White Mold
				Common	Halo <sup>3</sup>	Type	NY15 <sup>4</sup>		
<b>PINTO</b>									
AC Island	Ag. Can	ME	V	-	-	-	-	-	-
Apache	Idaho Seed Bean	-	-	-	-	-	-	-	-
Baja	Provita	E	V	-	-	-	-	-	-
Bill-Z	CSU	M	V	-	T	R	R	-	S
Buster	Seminis	ME	UV	S	T	R	R	-	S
Croissant	CSU	L	V	-	-	-	-	-	-
Durango	Provita	E	V	-	-	-	-	-	-
Galeena	Provita	L	V	-	-	-	-	-	-
GTS-900	GenTec	L	UV	S	T	-	-	-	A
GTS-903	GenTec	L	UV	-	-	-	-	-	-
GTS-904	GenTec	L	UV	-	-	-	-	-	-
GTS-907	GenTec	M	UV	-	-	-	-	-	-
Kimberly	U. Idaho	M	V	-	-	-	-	-	-
La Paz	Rogers	L	USV	-	-	-	-	-	-
Lariat	NDSU	L	USV	-	-	R	R	-	A
Long's Peak	CSU	-	-	-	-	-	-	-	-
Mariah	Seminis	ME	UV	-	-	-	-	-	-
Maverick	NDSU	ME	V	S	T	S	S	-	A
Max	Idaho Seed Bean	E	V	-	-	-	-	-	-
Medicine Hat	Seminis	ME	UV	-	-	-	-	-	-
Montrose	CSU	E	V	-	T	R	R	-	S
ND-307	NDSU	M	UV	-	-	R	R	-	-
Odyssey	Idaho Seed Bean	ME	V	-	-	-	-	-	-
Othello	USDA-Prosser	E	V	S	T	R	R	-	S
Pinata	Idaho Seed Bean	VE	V	-	-	R	R	-	A
Quincy	WSU/USDA	M	V	-	-	-	-	-	-
Rally	GenTec	L	UV	-	-	-	-	-	A
Remington	Rogers	ME	UV	S	T	-	-	-	A
Santa Fe	MSU	M	USV	-	-	-	-	-	A
Sequoia	Idaho Seed Bean	ML	USV	-	-	-	-	-	-
Shoshone	U. Idaho	ML	V	S	-	-	-	-	S
Sinaloa	Provita	-	-	-	-	-	-	-	-
Sonora	Provita	E	V	S	-	-	-	-	S
Stampede	NDSU	M	USV	-	-	R	R	-	A
Topaz	Rogers	E	V	S	T	R	R	-	S
Topaz R	Rogers	E	V	S	-	-	-	-	S
Winchester	Rogers	ME	UV	VS	-	-	-	-	A
Windbreaker	Seminis	M	UV	-	-	-	-	-	-

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

<sup>1</sup>RM = Relative Maturity; E = Early; ME = Medium Early; M = Medium; ML = Medium Late; L = Late.

<sup>2</sup>V = Vine; UV = Upright Vine; USV = Upright Short Vine.

<sup>3</sup>Disease reactions based upon field observations in North Dakota. VS = Very Susceptible; S = Susceptible; T = Tolerant; R = Resistant; MS = Moderately Susceptible; MR = Moderately Resistant; A = Avoidance.

<sup>4</sup>BCMV = Bean Common Mosaic Virus reaction with two strains (Type and NY15).

**Table 24. Navy Bean Variety Descriptions.**

Class and Cultivar	Origin	RM <sup>1</sup>	Plant Type <sup>2</sup>	-----Blight-----		-----BCMV-----		Fusarium Root Rot	White Mold
				Common	Halo <sup>3</sup>	Type	NY15 <sup>4</sup>		
<b>NAVY</b>									
Avalanche	NDSU	ME	USV	-	-	R	R	-	A
CDC Whitecap	U. Sask	M	USV	S	-	-	-	-	S
Cirrus	Hyland	ME	USV	-	-	-	-	-	S
Envoy	GenTec	M	B	-	-	R	R	-	S
Ensign	Roger	M	USV	-	-	R	R	-	-
GTS-544	GenTec	M	USV	-	-	-	-	-	-
GTS-564	GenTec	M	USV	-	-	-	-	-	-
HMS Medalist	Provita	M	UV	-	-	-	-	-	-
HY 4181	Hyland	-	-	-	-	-	-	-	-
Indi	ADM-Seedwest	M	USV	-	-	-	-	-	-
Lightning	U. of Guelph	M	UV	-	-	-	-	-	-
Mayflower	MSU	ML	USV	-	T	R	R	T	T
Navigator	Rogers	M	USV	-	-	R	R	-	T
Norstar	NDSU	ME	USV	S	T	R	R	-	T
Octane	United Pulse	-	-	-	-	-	-	-	-
Premiere	Ag. Can.	M	UV	S	-	R	R	-	-
Regent	Ag. Can.	ME	UV	S	-	R	R	-	-
Reliant	GenTec	-	-	-	-	-	-	-	-
Rexeter	U. of Guelph	-	USV	-	-	-	-	-	-
ROG 331	Rogers	M	UV	S	-	R	R	-	A
Schooner	Rogers	ML	USV	-	-	R	R	-	S
Seabiskit	ADM	ME	USV	-	-	-	-	-	-
Seahawk	MSU	ML	USV	S	-	R	R	-	T
Skyline	United Pulse	-	-	-	-	-	-	-	-
T9903	Hyland	ME	USV	-	-	-	-	-	-
T9905	Hyland	ME	USV	-	-	-	-	-	-
Viscount	GenTec	-	-	-	-	-	-	-	-
Vista	Ag. Can.	ML	USV	-	-	R	R	-	T

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

<sup>1</sup>RM = Relative Maturity; E = Early; ME = Medium Early; M = Medium; ML = Medium Late; L = Late.

<sup>2</sup>V = Vine; B = Bush; UV = Upright Vine; USV = Upright Short Vine.

<sup>3</sup>Disease reactions based upon field observations in North Dakota. A = Avoidance; S = Susceptible; T = Tolerant; R = Resistant;

<sup>4</sup>BCMV = Bean Common Mosaic Virus reaction with two strains (Type and NY15).

**Table 25. Small Red, Black and Pink Bean Variety Descriptions.**

Class and Cultivar	Origin	RM <sup>1</sup>	Plant Type <sup>2</sup>	-----Blight-----		-----BCMV-----		Fusarium Root Rot	White Mold
				Common	Halo <sup>3</sup>	Type	NY15 <sup>4</sup>		
<b><u>SMALL RED</u></b>									
AC Earlired	Ag. Can	E	V	S	-	-	-	-	S
AC Scarlet	Ag. Can	ME	USV	S	S	-	-	S	S
Cajun	Rogers	E	UV	-	-	-	-	-	-
Carman	Idaho Seed Bean	E	V	-	-	R	-	-	S
Garnet	Rogers	M	V	-	-	R	R	-	S
Merlot	MSU	ME	USV	S	S	R	R	T	S
Ryder	Rogers	M	USV	-	-	MR	-	-	-
UI-259	U. Idaho	M	V	-	-	-	-	-	S
<b><u>BLACK</u></b>									
Black Jack	GenTec	ML	USV	-	-	R	R	-	-
Black Magic	GenTec	L	USV	S	T	R	R	T	T
Black Velvet	Seminis	-	USV	-	-	-	-	-	-
Blackhawk	MSU	L	USV	S	T	R	R	T	T
CDC Jet	U. Sask.	ME	USV	R	-	-	-	T	T
CDC Super Jet	U. Sask.	ME	USV	-	-	-	-	-	-
Condor	MSU	ML	USV	S	S	-	R	R	T
Domino	MSU	L	USV	S	T	R	R	T	T
Eclipse	NDSU	M	USV	-	-	R	R	T	T
GTS-1103	GenTec	-	USV	-	-	-	-	-	-
Jaguar	MSU	M	USV	-	-	R	R	-	T
Loreto	Provita	M	USV	-	-	-	-	-	-
Shania	ADM-Seed West	-	-	-	-	-	-	-	-
T-39	U. Calif.	M	USV	S	T	R	R	T	T
Zorro	MSU	L	USV	-	-	-	-	-	-
<b><u>PINK</u></b>									
Alberta Pink	U. Alberta	E	V	S	-	S	S	-	S
Flamingo	Idaho Seed Bean	E	V	-	-	-	-	-	S
Floyd	Rogers	ML	V	-	-	-	-	-	S
ROG 922	Rogers	M	V	-	-	R	R	-	S
Rosalee	U. Sask.	E	V	S	-	-	-	-	S
Sedona	MSU/ARS	M	USV	S	-	R	-	R	A
UI-537	U. Idaho	E	V	-	-	R	R	-	S
Viva	USDA-Prosser	M	V	-	-	-	-	R	S

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

<sup>1</sup>RM = Relative Maturity; E = Early; ME = Medium Early; M = Medium; ML = Medium Late; L = Late.

<sup>2</sup>V = Vine; UV = Upright Vine; USV = Upright Short Vine.

<sup>3</sup>Disease reactions based upon field observations in North Dakota. A = Avoidance; S = Susceptible; T = Tolerant; R = Resistant; MS = Moderately Susceptible; MR = Moderately Resistant.

<sup>4</sup>BCMV = Bean Common Mosaic Virus reaction with two strains (Type and NY15).

**Table 26. Light Red, Dark Red, and White Kidney, Great Northern, Cranberry and Otebo Bean Variety Descriptions.**

Class and Cultivar	Origin	RM <sup>1</sup>	Plant Type <sup>2</sup>	-----Blight-----		-----BCMV-----		Fusarium Root Rot	White Mold
				Common	Halo <sup>3</sup>	Type	NY15 <sup>4</sup>		
<b><u>LT RED KIDNEY</u></b>									
Blush	WSU/USDA	ML	B	-	-	-	-	-	-
California Early (Celrk)	U. Calif.	E	B	S	S	R	R	S	S
Chinook 2000	MSU	M	B	-	T	R	R	S	-
Clouseau	Seminis	M	B	-	-	-	-	-	-
Foxfire	Rogers	ME	B	T	R	R	R	T	T
OAC Inferno	U. of Guelph	-	-	-	-	-	-	-	-
OAC Lyrik	U. of Guelph	ME	B	-	-	-	-	-	-
Pink Panther	Seminis	M	B	-	-	-	-	-	-
Sacramento	Agri-Sales	E	B	S	S	S	S	S	S
<b><u>DK RED KIDNEY</u></b>									
Cabernet	Rogers	ML	B	VS	S	R	R	MR	S
Drake	Seminis	M	B	S	S	R	R	S	T
GTS-104	GenTec	M	B	-	-	-	-	-	-
GTS-106	GenTec	M	B	-	-	-	-	-	-
Majesty	Ag. Can.	-	-	-	-	-	-	-	-
Montcalm	MSU	ML	B	TV	TV	R	R	S	T
Redhawk	MSU	M	B	S	T	R	R	-	T
Red Rover	Seminis	ME	B	-	-	-	-	-	-
<b><u>WHITE KIDNEY</u></b>									
Beluga	MSU	M	B	S	T	R	R	S	S
Lassen	Agri-Sales	E	B	S	S	R	R	S	S
Silvercloud	WSU/USDA	-	-	-	-	-	-	-	-
<b><u>GREAT NORTHERN</u></b>									
Beryl	Rogers	M	V	S	S	-	-	-	S
Gemini	Provita	E	-	-	-	-	-	-	-
Hungerford	U. Idaho	M	V	-	-	-	-	-	-
Matterhorn	MSU	ME	USV	S	T	R	R	-	A
Orion	Provita	E	V	-	-	-	-	-	-
Sawtooth	U. Idaho	L	V	-	-	-	-	-	-
UI-465	U. Idaho	M	V	S	-	R	R	T	S
<b><u>CRANBERRY</u></b>									
Bellagio	-	-	-	-	-	-	-	-	-
<b><u>OTEBO</u></b>									
Fuji	MSU	E	B	-	-	R	R	-	-
Hime	SK Foods	ME	B	-	-	S	S	-	-

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

<sup>1</sup>RM = Relative Maturity; E = Early; ME = Medium Early; M = Medium; ML = Medium Late; L = Late.

<sup>2</sup>V = Vine; B = Bush; UV = Upright Vine; USV = Upright Short Vine.

<sup>3</sup>Disease reactions based upon field observations in North Dakota. A = Avoidance; S = Susceptible; T = Tolerant; R = Resistant; MS = Moderately Susceptible; MR = Moderately Resistant.

<sup>4</sup>BCMV = Bean Common Mosaic Virus reaction with two strains (Type and NY15).

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