

# North Dakota Dry Bean Performance Testing 2007

Compiled by

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# NDSU

**N.D. Agricultural Experiment Station**  
**NDSU Extension Service**

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## INTRODUCTION

Dry edible beans have become a significant crop in eastern and east-central North Dakota during the past decade. Acreage for the past 13 years is shown in Table 1, with production by classes in Table 2. Data were obtained from the North Dakota Agricultural Statistics Service. The 690,000 dry bean acres planted in 2007 reflect a slight increase from 2006. Yields and total production in 2007 of pinto beans were considerably more than in 2006.

<b>Year</b>	<b>Acres planted</b>	<b>Pinto (cwt)</b>	<b>Navy (cwt)</b>
1995	600,000	4,704,000	2,086,000
1996	580,000	5,138,000	1,929,000
1997	600,000	4,480,000	1,878,000
1998	750,000	6,800,000	1,770,000
1999	630,000	4,860,000	2,555,000
2000	610,000	5,294,000	1,620,000
2001	440,000	4,050,000	1,327,000
2002	790,000	7,184,000	2,340,000
2003	540,000	5,864,000	1,164,000
2004	560,000	3,573,000	650,000
2005	620,000	6,584,000	1,343,000
2006	670,000	4,988,000	1,585,000
2007	690,000	7,606,000	1,611,000

Source: North Dakota Agricultural Statistics Service – USDA

### Dry Edible Bean Production

#### North Dakota

Dry edible bean production in North Dakota is forecasted at 10.57 million hundredweight (cwt) for 2007, which is 38 percent above last year, according to the North Dakota field office of the U.S. Department of Agriculture's National Agricultural Statistics Service. This is the highest production since the record high 2002 production of 10.63 million cwt. The large increase in production from last year is due mostly to improved yields as a result of favorable growing conditions, along with a modest increase in acreage.

Total planted area, at 690,000 acres, is up from 2006's 670,000 acres. Harvested area, at 665,000 acres, is above last year's 640,000 acres harvested. This is the largest harvested acreage since 2002, when 690,000 acres were harvested from 790,000 acres planted. The statewide average yield for 2007 is 1,590 pounds per harvested acre, which is 390 pounds above last year.

Pintos account for 71.9 percent of the total production, a record high pinto production of 7.61 million cwt.

Navies account for 15.2 percent of total production; blacks, 6 percent; all chickpeas, 2.3 percent; pinks, 2.2 percent; and great northern, 1.1 percent. All other dry edible bean classes represent 1.3 percent of the state's total production.

#### United States

Dry edible bean production is forecasted at 25.2 million cwt for 2007, which is 4 percent above the 2006 production. Harvested acreage is forecasted at 1.48 million acres and 4 percent below the previous year's acreage. The average U.S. yield is forecasted at 1,708 pounds per acre, which is 131 pounds above the 2006 yield. Production is up from a year ago for large lima, baby lima, pinto, light red kidney, black and large chickpeas. Production decreased from last year for navy, great northern, small white, dark red kidney, pink, small red, cranberry, blackeye and small chickpeas.

**Table 2. Dry edible beans, area planted, acres harvested, yield and total production for North Dakota and the United States for 2006-07 acres and production by class for North Dakota and the U.S.**

Class	Acres Planted		Acres Harvested		Yield Per Acre		Production	
	2006	2007	2006	2007	2006	2007	2006	2007
	-----1,000s-----		-----1,000s-----		-----Pounds-----		----- 1,000 Cwt.-----	
<b>North Dakota</b>								
Navy	120.0	96.0	113.0	89.0	1,400	1,810	1,585	1,611
Great Northern	7.5	8.0	6.5	7.7	1,080	1,470	70	113
Pinto	453.0	502.0	435.0	487.0	1,150	1,560	4,988	7,606
Dark red kidney	2.0	1.5	1.9	1.4	1,630	1,790	31	25
Pink	20.0	13.0	19.4	12.5	1,430	1,870	277	234
Small red	6.0	5.5	5.7	5.3	1,190	1,400	68	74
Black	46.0	45.0	44.0	43.5	1,180	1,460	520	635
Chickpeas, all (garbanzo)	13.0	17.0	12.2	16.8	910	1,470	111	247
- Small	7.5	4.5	7.0	4.4	690	1,390	48	61
- Large	5.5	12.5	5.2	12.4	1,210	1,500	63	186
Other	2.5	2.0	2.3	1.8	1,300	1,610	30	29
<b>Total</b>	<b>670.0</b>	<b>690.0</b>	<b>640.0</b>	<b>665.0</b>	<b>1,200</b>	<b>1,590</b>	<b>7,680</b>	<b>10,574</b>
<b>United States</b>								
Navy	280.7	221.8	263.9	211.1	1,649	1,786	4,353	3,771
Great Northern	69.7	59.0	59.3	56.5	2,007	2,080	1,190	1,175
Pinto	690.9	694.5	652.6	673.1	1,474	1,730	9,618	11,642
Dark red kidney	48.8	40.2	46.4	39.1	1,774	1,678	823	656
Pink	45.3	30.8	43.4	29.9	1,684	1,930	731	577
Small red	35.5	30.6	34.4	29.7	1,887	1,818	649	540
Black	167.4	175.7	159.3	171.6	1,670	1,583	2,661	2,717
Chickpeas, all (garbanzo)	136.8	125.5	132.9	123.5	1,158	1,245	1,539	1,537
- Small	17.4	10.5	16.3	10.2	914	1,196	149	122
- Large	119.4	115.0	116.6	113.3	1,192	1,249	1,390	1,415
Other	154.78	147.4	145.4	143.1	1,845	1,831	2,683	2,620
<b>Total</b>	<b>1,629.8</b>	<b>1,525.5</b>	<b>1,537.6</b>	<b>1,477.6</b>	<b>1,577</b>	<b>1,708</b>	<b>24,247</b>	<b>25,235</b>

Source: North Dakota Agricultural Statistics Service – USDA.

**Table 3. Pinto bean variety trial, Forest River, N.D. (Walsh County), 2007.**

Variety	Maturity	Plant Height	100 Seed Wt.	Seed Yield
	(days)	(cm)	(grams)	(lb/ac)
Buster	102	59	44.1	2,710
Windbreaker	103	62	44.7	2,650
Othello	104	57	42.2	2,590
Durango	104	60	40.8	2,480
Stampede	105	74	45.2	2,430
Lariat	108	72	47.4	2,420
Sonora	105	63	36.3	2,380
Floyd <sup>1</sup>	105	52	33.0	2,180
Baja	104	56	38.1	2,150
Maverick	105	59	42.3	2,080
Topaz R	96	51	41.8	2,050
GTS-900	109	60	46.5	1,510
<b>Trial Mean</b>	<b>105</b>	<b>62</b>	<b>41.9</b>	<b>2,320</b>
<b>C.V. %</b>	<b>1</b>	<b>6</b>	<b>4.6</b>	<b>12.4</b>
<b>LSD 0.05</b>	<b>2</b>	<b>5</b>	<b>2.7</b>	<b>400</b>

<sup>1</sup>Pink

**Table 4. Navy bean variety trial, Forest River, N.D. (Walsh County), 2007.**

Variety	Maturity (days)	Plant Height (cm)	100 Seed Wt. (grams)	Seed Yield (lb/ac)
01054	107	68	22.8	2,733
T9905	107	65	24.9	2,675
T10101	109	59	20.8	2,603
Ensign	105	62	25.7	2,578
Cirrus	106	57	21.9	2,393
Navigator	106	69	21.2	2,388
Mayflower	109	72	21.2	2,350
Norstar	106	64	22.8	2,190
T9903	107	61	27.5	2,140
T2003	109	57	22.2	2,115
Vista	110	69	23.2	2,028
Seahawk	110	58	26.8	1,865
GTS-549	109	60	17.5	1,448
Trial Mean	108	64	22.8	2,236
C.V. %	1	6	14.3	17.6
LSD 0.05	1	5	4.6	557

**Table 5. Pinto bean variety trial, Hatton, N.D. (Traill County), 2007.**

Variety	Maturity (days)	Plant Height (cm)	100 Seed Wt. (grams)	Seed Yield (lb/ac)
Buster	102	58	43.2	2,970
Shoshone	106	52	40.8	2,960
Maverick	106	58	43.1	2,950
Durango	107	58	41.8	2,910
Windbreaker	102	60	40.0	2,880
GTS-900	108	63	45.0	2,760
Sonora	105	56	36.2	2,710
Lariat	112	67	48.6	2,530
Stampede	105	66	46.9	2,510
Kimberly	108	56	39.8	2,500
Othello	102	49	38.7	2,380
Baja	103	53	30.5	2,050
Topaz R	96	47	39.7	2,040
Trial Mean	106	59	40.8	2,640
C.V. %	2	10	11.0	14.2
LSD 0.05	2	8	6.3	530

**Table 6. Navy bean variety trial, Hatton, N.D. (Traill County), 2007.**

Variety	Maturity (days)	Plant Height (cm)	100 Seed Wt. (grams)	Seed Yield (lb/ac)
T9905	109	68	23.7	3,240
01054	111	66	20.7	3,210
Ensign	108	64	23.5	3,120
T2003	118	53	22.4	2,960
ROG 331	113	55	20.2	2,950
T10101	110	62	19.5	2,940
Navigator	107	67	21.8	2,820
Mayflower	108	62	21.4	2,800
T9903	116	53	25.2	2,750
Norstar	108	55	21.7	2,730
Cirrus	107	56	21.4	2,730
Vista	115	64	20.3	2,720
GTS-544	113	64	24.5	2,630
Seahawk	119	54	24.6	2,550
Trial Mean	112	62	22.2	2,820
C.V. %	2	9	5.3	7.1
LSD 0.05	4	8	1.6	280

**Table 7. Miscellaneous dry edible bean variety trial, Hatton, N.D. (Traill County), 2007.**

Variety	Market Class	Maturity (days)	Plant Height (cm)	100 Seed Wt. (grams)	Seed Yield (lb/ac)
Jaguar	Black	118	68	22.6	3,140
Condor	Black	120	66	24.3	3,120
T-39	Black	117	54	23.5	3,120
Hime	Otebo	110	65	34.2	3,100
Loreto	Black	120	68	23.0	2,970
Matterhorn	Great Northern	102	58	37.0	2,920
Bandit	Black	119	67	22.6	2,730
Hungerford	Great Northern	109	53	46.6	2,670
Merlot	Small Red	107	64	39.7	2,630
Floyd	Pink	111	51	38.7	2,630
CDC Jet	Black	109	60	26.0	2,400
Sawtooth	Great Northern	123	61	46.3	1,760
Trial Mean		113	61	31.8	2,790
C.V. %		2	10	6.8	9.9
LSD 0.05		3	8	3.1	390

**Table 8. Pinto, navy and black bean variety trial, Oakes, N.D. (Dickey County), 2007.**

Variety	Market Class	Maturity (days)	100 Seed Wt. (grams)	Seed Yield (lb/ac)
Othello	Pinto	107	39.5	2,940
GTS-900	Pinto	107	42.5	2,440
Buster	Pinto	101	40.4	2,440
Maverick	Pinto	103	40.9	2,380
Trial Mean		105	40.8	2,550
C.V. %		1	4.5	9.6
LSD 0.05		2	NS	390
Vista	Navy	119	21.3	2,620
Seahawk	Navy	113	26.3	2,580
T-39	Black	119	22.1	2,300
Eclipse	Black	119	22.2	2,000
Norstar	Navy	104	19.7	1,930

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Trial Mean	115	22.3	2.290
C.V. %	3	3.3	32.4
LSD 0.05	5	1.1	NS

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**Table 9. Pinto bean variety trial, Prosper, N.D. (Cass County), 2007.**

Variety	Maturity (days)	Plant Height (cm)	100 Seed Wt. (grams)	Seed Yield (lb/ac)
GTS-900	117	57	36.9	2,850
Sonora	121	56	32.2	2,710
Stampede	117	60	38.3	2,670
Buster	116	51	35.2	2,540
Maverick	116	55	35.0	2,460
Lariat	118	62	37.3	2,440
Durango	121	47	34.2	2,440
Othello	122	54	35.8	2,400
Baja	123	56	34.2	2,100
Topaz R	108	45	36.8	1,550
Trial Mean	118	55	35.3	2,500
C.V. %	1	9	7.9	8.5
LSD 0.05	1	7	3.9	300

**Table 10. Navy bean variety trial, Prosper, N.D. (Cass County), 2007.**

Variety	Maturity (days)	Plant Height (cm)	100 Seed Wt. (grams)	Seed Yield (lb/ac)
GTS-544	117	61	20.3	2,773
01054	117	56	19.7	2,693
Ensign	117	58	22.0	2,430
Navigator	117	58	18.9	2,368
Mayflower	121	56	19.4	1,775
Seahawk	121	56	18.7	1,630
Norstar	116	45	17.1	1,343
Vista	120	55	18.9	1,183
Trial Mean	118	56	19.1	2,082
C.V. %	1	8	6.0	20.6
LSD 0.05	2	6	1.6	612

**Table 11. Miscellaneous dry edible bean variety trials, Prosper, N.D. (Cass County), 2007.**

Variety	Market Class	Maturity (days)	Plant Height (cm)	100 Seed Wt. (grams)	Seed Yield (lb/ac)
Merlot	Small Red	120	56	38.1	2,450
Condor	Black	120	53	21.5	2,360
Loreto	Black	122	54	21.1	2,360
Jaguar	Black	116	48	19.2	2,190
Eclipse	Black	117	51	19.6	2,090
T-39	Black	120	54	21.8	2,000
CDC Jet	Black	119	47	21.3	2,000
Matterhorn	Great Northern	114	52	32.7	1,880
Floyd	Pink	120	48	37.6	1,800
Trial Mean		118	51	25.0	2,140
C.V. %		1	12	12.8	13.1
LSD 0.05		1	NS	4.6	400

**Table 12. Miscellaneous dry edible bean variety trial, Perham, Minn. (Otter Tail County), 2007.**

Variety	Market Class	Maturity (days)	Plant Height (cm)	100 Seed Wt. (grams)	Seed Yield (lb/ac)
01054	Navy	101	61	22.3	2,505
Loreto	Black	104	62	23.5	2,433
T-39	Black	102	62	21.8	2,375
Baja	Pinto	97	54	38.5	2,270
Vista	Navy	100	63	21.4	2,130
Sonora	Pinto	98	63	32.2	2,035
GTS-549	Navy	101	55	23.5	2,023
Durango	Pinto	99	53	38.9	1,955
Foxfire	Light Red Kidney	100	56	52.4	1,808
Chinook 2000	Light Red Kidney	104	54	54.5	1,735
Celrk	Light Red Kidney	96	46	53.7	1,490
Redhawk	Dark Red Kidney	99	57	50.6	1,413
Montcalm	Dark Red Kidney	98	59	49.1	1,133
Trial Mean		100	59	38.0	1,943
C.V. %		2	7	12.2	18.7
LSD 0.05		3	6	6.6	514

**Table 13. Miscellaneous dry edible bean variety trial, Park Rapids, Minn. (Hubbard County), 2007.**

Variety	Market Class	Maturity (days)	Plant Height (cm)	100 Seed Wt. (grams)	Seed Yield (lb/ac)
Sonora	Pinto	93	65	35.9	3,030
01054	Navy	98	64	19.9	2,990
Durango	Pinto	98	58	42.6	2,920
Loreto	Black	103	64	21.7	2,730
Vista	Navy	103	66	19.9	2,720
T-39	Black	103	61	20.7	2,610
GTS-544	Navy	100	62	22.1	2,570
Baja	Pinto	93	57	41.3	2,560
CDC Jet	Black	98	62	21.8	2,400
Montcalm	Dark Red Kidney	98	60	52.0	2,260
Redhawk	Dark Red Kidney	96	61	50.9	2,070
Foxfire	Light Red Kidney	93	52	52.6	2,000
Chinook 2000	Light Red Kidney	106	63	49.1	1,950
Capri	Cranberry	90	52	51.8	1,710
Celrk	Light Red Kidney	88	45	64.8	1,430
Trial Mean			58	40.3	2,260
C.V. %			4	6.4	10.5
LSD 0.05			3	3.6	330

**Table 14. Dry edible bean trial (dryland), Carrington, N.D. (Foster County), 2007.**

Variety	Market Class	Maturity (days)	Seeds per Pound	100 Seed Wt. (grams)	Test Weight (lb/bu)	---Seed Yield---	
						2007	3-yr. Avg. (lb/ac)
Buster	Pinto	95.8	1,050	43.3	58.8	2,934	1,913
Eclipse	Black	94.5	2,393	19.1	63.1	2,972	1,930
GTS 900	Pinto	107.0	1,238	36.7	60.2	2,490	1,831
Hime	Otebo	96.8	1,457	31.2	64.5	2,960	--
Jaguar	Black	96.0	2,466	18.4	63.2	2,802	--
Lariat*	Pinto	103.0	1,005	45.3	60.3	3,424	--
Matterhorn	Great Northern	98.0	1,144	39.7	59.3	3,030	--
Maverick	Pinto	96.3	1,215	37.4	59.4	3,017	1,873
Mayflower	Navy	97.0	2,330	19.5	64.0	2,914	--
Merlot	Small Red	96.5	1,216	37.3	62.7	3,076	--
Norstar	Navy	97.3	2,549	17.8	64.9	1,975	1,535
Othello	Pinto	88.5	1,048	43.4	62.1	3,063	2,126
Seahawk	Navy	104.0	2,180	20.8	64.8	2,614	1,656
Sedona	Pink	92.5	1,154	39.4	59.7	2,804	--
Stampede*	Pinto	95.3	1,086	41.8	59.2	2,922	--
T-39	Black	98.3	2,165	21.0	63.5	2,856	1,958
Topaz R	Pinto	91.0	1,064	42.7	58.8	2,521	1,725
Vista	Navy	99.0	2,455	18.5	64.1	2,890	1,665
Trial Mean		96.9	31.6	1638	61.9	2,907	--
C.V.%		3.9	3.1	3.2	1.3	8.5	--
LSD 0.05		5.3	1.4	73	1.1	348	--

**Table 15. Dry edible bean trial (irrigated), Carrington, N.D. (Foster County), 2007.**

Variety	Market Class	Maturity (days)	---Seeds per Pound---		100 Seed Wt. (grams)	Test Weight (lb/bu)	---Seed Yield---	
			2007	3-yr. Avg.			2007	3-yr. Avg. (lb/ac)
Buster	Pinto	92.3	1,031	1,069	44.0	61.5	3,149	3,061
Eclipse	Black	94.8	1,878	2,151	24.2	63.5	3,177	2,849
GTS 900	Pinto	95.8	1,078	1,147	42.2	61.0	2,815	2,977
Hime	Otebo	93.3	1,432	--	31.8	64.7	2,866	--
Jaguar	Black	96.5	2,107	--	21.5	64.1	2,773	--
Lariat*	Pinto	94.3	985	--	46.1	61.7	3,931	--
Matterhorn	Great Northern	89.0	1,151	--	39.5	59.9	3,201	--
Maverick	Pinto	88.5	1,104	1,159	41.2	60.9	3,317	2,994
Mayflower	Navy	93.8	2,073	--	21.9	63.8	2,822	--
Merlot	Small Red	98.5	1,111	--	40.9	63.4	3,207	--
Norstar	Navy	93.5	2,287	2,425	19.9	65.2	2,450	2,339
Othello	Pinto	89.8	1,097	1,125	41.4	63.1	3,072	2,886
Seahawk	Navy	99.3	1,893	2,092	24.0	65.1	2,996	2,685
Sedona	Pink	91.3	1,029	--	44.1	60.8	3,144	--
Stampede*	Pinto	92.3	1,078	--	42.2	61.0	3,067	--
T-39	Black	98.3	1,998	2,249	22.7	63.2	2,610	2,535
Topaz R	Pinto	84.5	1,328	1,249	36.7	59.6	2,613	2,364
Vista	Navy	96.8	2,204	2,379	20.6	64.2	2,677	2,688
Trial Mean		93.3	1,506	--	33.4	62.6	2,982	--
C.V.%		2.4	10.1	--	9.1	1.7	11.0	--
LSD 0.05		3.2	214	--	4.3	1.5	465	--

Planting date: June 4, 2007; harvest date: Sept. 28, 2007; previous crop: spring wheat.

\*Lariat previously tested as ND020069. Stampede previously tested as ND020351.

**Table 16. Dry edible bean trial, Langdon, N.D. (Cavalier County), 2007.**

Variety	Market Class	100 Seed Wt. (grams)	Plant Height (cm)	Seed Yield				
				2005	2006	2007	2-yr. Avg.	3-yr. Avg.
Buster	Pinto	39.6	55	2,741	3,758	3,895	3,827	3,465
GTS 900	Pinto	37.6	63	2,145	3,610	3,643	3,627	3,133
Lariat	Pinto	46.0	65	--	4,250	3,933	4,092	--
Maverick	Pinto	40.0	56	2,691	3,706	3,843	3,774	3,413
Othello	Pinto	38.8	58	2,391	3,698	3,200	3,449	3,096
Stampede	Pinto	41.2	60	--	4,190	3,846	4,018	--
Topaz R	Pinto	38.8	58	--	3,210	3,113	3,162	--
Mayflower	Navy	20.0	55	--	--	3,298	--	--
Norstar	Navy	20.4	58	--	3,103	3,384	3,244	--
Seahawk	Navy	24.0	53	1,970	3,343	3,696	3,520	3,003
Vista	Navy	19.2	62	2,598	3,817	3,531	3,674	3,315
Eclipse	Black	21.6	49	2,379	3,610	3,428	3,519	3,139
Jaguar	Black	19.6	59	--	--	3,429	--	--
T-39	Black	22.4	56	2,159	3,094	3,174	3,134	2,809
Merlot	Small Red	36.0	69	--	--	3,527	--	--
Sedona	Pink	40.4	70	--	--	3,275	--	--
Matterhorn	Great Northern	39.2	55	--	--	4,012	--	--
Trial Mean			59	2,144	3,530	3,558	--	--
C.V.%			7	17.7	10.5	9.1	--	--
LSD 0.05			6	627	613	535	--	--

Planting date: June 1, 2007; harvest date: Sept. 28, 2007.

**Table 17. Dry edible bean trial, Cavalier, N.D. (Pembina County), 2007.**

Variety	Market Class	100 Seed Wt. (grams)	Days to Mature (days)	Seed Yield				
				2005	2006	2007	2-yr. Avg.	3-yr. Avg.
Buster	Pinto	48.4	101.0	2,023	3,322	3,752	3,537	3,032
GTS 900	Pinto	50.8	106.7	2,217	3,018	3,305	3,161	2,847
Lariat	Pinto	52.4	106.3	--	--	3,561	--	--
Maverick	Pinto	46.8	101.7	2,019	2,523	3,373	2,948	2,638
Othello	Pinto	43.2	100.3	2,162	2,678	2,839	2,759	2,560
Stampede	Pinto	48.0	101.0	--	--	3,418	--	--
Topaz R	Pinto	46.4	99.0	--	2,510	2,737	2,624	--
Mayflower	Navy	23.6	107.0	--	--	3,012	--	--
Norstar	Navy	20.8	102.3	1,859	2,007	2,895	2,451	2,254
Seahawk	Navy	26.4	107.3	1,651	3,182	2,760	2,971	2,531
Vista	Navy	23.2	108.3	2,526	3,226	2,982	3,104	2,911
Eclipse	Black	24.4	103.7	2,448	2,786	3,316	3,051	2,850
T-39	Black	25.2	107.0	2,103	2,850	2,888	2,869	2,614
Jaguar	Black	24.8	105.7	--	--	2,940	--	--
Sedona	Pink	48.0	102.7	--	--	2,918	--	--
Trial Mean			104.1	1,986	2,697	3,120	--	--
C.V.%			2.2	9.6	16.9	5.9	--	--
LSD 0.05			3.8	321	767	308	--	--

Planting date: May 30, 2007; harvest date: Sept. 27, 2007.

**Table 18. Dry edible bean variety trial, North Central Research Extension Center, Minot, N.D. (Ward County), 2007.**

Variety	Market Class	Maturity <sup>1</sup>	Plant		1,000 Seed Wt.	Test Weight	-----Seed Yield-----			2-yr. Avg.	3-yr. Avg.	
			Height (cm)	Lodge <sup>2</sup> (0-9)			Disease <sup>3</sup> (0-9)	2005	2006			2007
Eclipse	Black	M	66	0.0	1.3	196.8	61.4	2,168	2,404	1,882	2,143	2,151
Jaguar	Black	--	66	0.0	1.8	181.5	62.1	--	--	1,600	--	--
T-39	Black	M	64	4.8	1.5	188.4	61.5	2,198	2,204	1,747	1,975	2,050
Merlot	Red	--	76	5.5	1.3	342.5	61.6	--	--	1,989	--	--
Mayflower	Navy	ML	76	0.8	1.5	175.8	61.3	--	--	1,864	--	--
Vista	Navy	ML	79	2.5	1.0	175.4	62.6	1,954	2,262	1,813	2,037	2,010
Norstar	Navy	ME	69	3.3	1.3	172.1	63.6	--	1,734	1,511	1,623	--
Seahawk	Navy	ML	69	4.8	1.8	207.2	62.3	--	1,968	1,505	1,737	--
Topaz	Pinto	E	74	4.3	2.0	360.6	56.4	1,211	2,141	1,880	2,011	1,744
Othello	Pinto	E	79	4.0	1.5	354.7	59.8	1,827	229	2,367	1,298	1,474
Maverick	Pinto	ME	74	5.3	2.3	370.6	58.6	1,854	2,481	1,711	2,096	2,015
Buster	Pinto	ME	79	4.0	2.5	390.0	58.2	1,955	2,463	2,165	2,314	2,194
GTS 900	Pinto	L	86	5.5	1.0	361.3	59.1	1,506	2,270	1,261	1,765	1,679
Sedona	Pink	--	74	6.0	2.8	318.7	58.1	--	--	1,304	--	--
Matterhorn	Great Northern	--	76	3.8	2.3	351.5	57.4	--	--	1,543	--	--
			0									
Trial Mean			74	3.4	1.7	286.4	60.1	--	--	1,720	--	--
C.V. %			10	40.1	49.1	7.1	0.9	--	--	17.8	--	--
LSD 0.05			10	1.9	NS	28.7	0.8	--	--	433	--	--

<sup>1</sup>Maturity: E = early, ME = medium early, M = medium, ML = medium late, L = late.<sup>2</sup>Lodging score based on scale 0-9 (0 = upright, 9 = flat).<sup>3</sup>Disease score based on scale 0-9 (0 = no disease, 9 = high disease incidence).**Table 19. Dry edible bean trial (dryland) Williston Research Extension Center, Williston, N.D. (Williams County), 2007.**

Variety	Market Class	Days to Flower	Flower Duration	Plant Height	1,000 Seed Wt.	Seeds/ Pound	Test Weight	-----Seed Yield-----			3-yr. Avg.	
								2005	2006	2007		
Buster	Pinto	46	18	51	279	1,630	55.1	675	262	365	434	
GTS 900	Pinto	48	19	58	242	1,878	47.8	601	178	146	308	
Maverick	Pinto	47	15	43	234	1,940	53.3	581	278	273	377	
Othello	Pinto	45	17	46	189	2,404	60.3	651	510	413	525	
Topaz R	Pinto	45	16	51	279	1,630	55.1	675	262	365	434	
Mayflower	Navy	49	17	53	114	3,980	51.5	--	--	166	--	
Norstar	Navy	47	16	48	127	3,566	62.6	454	344	394	397	
Seahawk	Navy	47	16	56	138	3,284	52.1	912	323	143	459	
Vista	Navy	48	16	51	118	3,861	53.3	879	284	133	432	
Eclipse	Black	48	12	48	150	3,030	57.8	--	205	245	--	
Jaguar	Black	47	11	41	162	2,806	52.7	--	--	218	--	
T-39	Black	48	12	46	159	2,859	61.9	875	440	321	545	
Matterhorn	Great Northern	45	16	38	231	1,970	54.9	--	--	509	--	
Merlot	Small Red	48	11	43	237	1,915	59.7	--	--	394	--	
Sedona	Pink	48	15	53	224	2,021	49.0	--	--	116	--	
			0									
Trial Mean		47	15	19	48	2,605	55.0	748	319	288	--	
C.V.%		2	12	10	10	3	1.7	10	17	28	--	
LSD 0.05		2	3	3	8	195	2.1	214	84	114	--	

Planting date: May 29, 2007, into tilled durum stubble. Harvest date: Sept. 19, 2007.

**Table 20. Variety descriptions.**

Class and Cultivar	Origin	Mat <sup>1</sup>	Plant Type <sup>2</sup>	-----Common-----		-----BCMV-----		Fusarium Root Rot	White Mold	Rust <sup>3</sup>
				Blight	Halo	Type	NY15			
<b><u>PINTO</u></b>										
AC Pintoba	Ag. Can.	ML	UV	S	T	-	-	-	A	MS-S
Apache	Idaho Seed Bean	M	V	S	T	-	-	-	S	R
Arapaho	CSU	M	V	S	T	R	R	-	S	S
Bill-Z	CSU	M	V	S	T	R	R	-	S	MR
Buckskin	Rogers	ME	V	-	-	R	R	-	S	S
Burke	USDA-Prosser	M	V	S	T	R	R	-	S	R
Buster	Seminis	ME	UV	S	T	R	R	-	S	R
Chase	U. Neb.	L	V	MR	R	S	S	-	T	R
Fargo	Rogers	E	V	S	T	-	-	-	S	MS-S
Focus	Seminis	M	UV	S	-	-	-	-	A	R
Frontier	NDSU	L	UV	S	T	R	R	-	A	R
GTS 900	GenTec	L	UV	S	T	-	-	-	A	S
Grand Mesa	CSU	L	UV	S	S	R	R	-	A	R
Hatton	NDSU	E	V	S	T	R	R	-	S	S-MS
Kodiak	MSU	M	USV	-	T	R	R	-	A	R
Lariat	NDSU	M	UV	S		R	R	-	A	MR
Maverick	NDSU	ME	V	S	T	S	S	-	A	R
Montrose	CSU	E	V	-	T	R	R	-	S	R
Othello	USDA-Prosser	E	V	S	T	R	R	-	S	S
Pinata	Idaho Seed Bean	VE	V	-	-	R	R	-	A	-
Rally	GenTec	L	UV	-	-	-	-	-	A	R
Remington	Rogers	ME	UV	S	T	-	-	-	A	R
Sierra	MSU	ML	UV	S	S	S	S	-	A	R
Stampede	NDSU	ME	UV	S		R	R	-	A	MR
Topaz	Rogers	E	V	S	T	R	R	-	S	S-MS
UI-320	U. Idaho	ME	V	S	-	R	R	-	S	R
Winchester	Rogers	ME	UV	VS	-	-	-	-	A	R

<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.

**Table 21. Variety descriptions.**

Class and Cultivar	Origin	Mat <sup>1</sup>	Plant Type <sup>2</sup>	-----Blight-----		-----BCMV-----		Fusarium Root Rot	White Mold	Rust <sup>3</sup>
				Common	Halo	Type	NY15			
<b><u>NAVY</u></b>										
Agri-1	Agri-Sales	M	B	S	T	R	R	-	A	R
Arthur	NDSU	ME	USV	S	T	R	R	A	R	-
Avanti	Seminis	M	USV	-	-	R	R	-	-	R-MS
CDC Whitecap	U. Sask	M	USV	S	-	-	-	-	S	R
Cirrus	Hyland	ME	USV	-	-	-	-	-	S	-
Compass	Ag. Can.	E	B	S	-	-	-	-	-	-
Envoy	GenTec	M	B	-	-	R	R	-	S	R
Ensign	Roger	M	USV	-	-	R	R	-	-	R
Huron	MSU	M	USV	-	-	R	R	-	T	R
Laser	U. Ontario	VL*	UV	S	T	R	R	-	T	-
Mackinac	MSU	M	USV	S	T	R	R	-	T	R
Mayflower	MSU	ML	USV	-	T	R	R	T	T	R
McHale	Seminis	ME	B	S	T	R	R	-	-	R
Navigator	Rogers	M	USV	-	-	R	R	-	T	R
Norstar	NDSU	ME	USV	S	T	R	R	-	T	R
Premiere	Ag. Can.	M	UV	S	-	R	R	-	-	R
Regent	Ag. Can.	ME	UV	S	-	R	R	-	-	R
ROG 331	Rogers	M	UV	S	-	R	R	-	A	R
ROG 372	Rogers	M	UV	S	-	R	R	-	A	R
Sailor	Rogers	ME	USV	-	-	R	-	-	-	-
Schooner	Rogers	ML	USV	-	-	R	R	-	S	R
SeaHawk	MSU	ML	USV	S	-	R	R	-	T	S
Skipper	Ag. Can.	E	B	S	-	-	-	-	-	-
Stingray	W.G. Thompson	ML	UV	S	-	R	R	-	T	R
AC Trident	Ag. Can	ML	UV	S	-	R	R	-	T	R
Vista	Ag. Can.	ML	USV	-	-	R	R	-	T	R
Voyager	Rogers	ME	V	-	-	R	R	-	S	S-MS

\*Cultivar has a tendency to express a green stem trait that may lead to quality problems.

<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.

**Table 22. Variety descriptions.**

Class and Cultivar	Origin	Mat <sup>1</sup>	Plant Type <sup>2</sup>	-----Blight-----		-----BCMV-----		Fusarium Root Rot	White Mold	Rust <sup>3</sup>
				Common	Halo	Type	NY15			
<b>CRANBERRY</b>										
Capri	MSU/ARS	M	B	S	-	R	-	S	S	MR
Cran-09	GenTec	M	B	-	-	R	R	S	S	R
Hooter	Seminis	M	B	VS	S	R	R	MR	S	R
Mich. Imp	MSU	L	V	-	-	-	-	-	S	R
Taylor Hort.	Unknown	E	B	-	-	-	-	S	S	R
UI-50	U. Idaho	M	B	-	-	R	R	-	-	-
UI-686	U. Idaho	M	V	-	-	R	R	-	-	R
<b>SMALL RED</b>										
AC Earlired	Ag. Can	E	V	S	-	-	-	-	S	S
AC Scarlet	Ag. Can	ME	USV	S	S	-	-	S	S	S
Cajun	Rogers	E	UV	-	-	-	-	-	-	MR
Carman	Idaho Seed	E	V	-	-	R	-	-	S	-
Garnet	Rogers	M	V	-	-	R	R	-	S	S
Merlot	MSU	ME	USV	S	S	R	R	T	S	R
NW63	USDA-	ML	V	S	T	R	R	T	S	S
Ryder	Rogers	M	USV	-	-	MR	-	-	-	-
UI-239	U. Idaho	ME	V	-	-	-	-	-	S	S
UI-259	U. Idaho	M	V	-	-	-	-	-	S	S
<b>BLACK</b>										
Black Magic	GenTec	L	USV	S	T	R	R	T	T	R
Blackhawk	MSU	L	USV	S	T	R	R	T	T	R
Black Jack	GenTec	ML	USV	-	-	R	R	-	-	R
CDC Espresso	U. Sask.	E	USV	-	-	-	-	-	T	-
CDC Jet	U. Sask.	ME	USV	R	-	-	-	T	T	R
Condor	MSU	ML	USV	S	S	-	R	R	T	R
Domino	MSU	L	USV	S	T	R	R	T	T	R
Eclipse	NDSU	M	USV	-	-	R	R	T	T	R
Jaguar	MSU	M	USV	-	-	R	R	-	T	R
Onyx	Rogers	ME	USV	-	-	R	R	-	T	R
Panther	Rogers	M	USV	-	-	R	R	-	T	R
Phantom	MSU	E	UV	S	R	R	R	R	A	R
Raven	MSU	ME	-	-	-	R	R	-	S	R
Shadow	Rogers	ME	USV	-	-	R	R	-	T	R
Shiny Crow	CSU	M	V	-	-	R	R	-	S	R
T-39	U. Calif.	M	USV	S	T	R	R	T	T	R
UI-911	U. Idaho	M	V	-	-	R	R	-	-	R

**Table 23. Variety descriptions.**

Class and Cultivar	Origin	Mat <sup>1</sup>	Plant Type <sup>2</sup>	-----Blight-----		-----BCMV-----		Fusarium Root Rot	White Mold	Rust <sup>3</sup>
				Common	Halo	Type	NY15			
<b>PINK</b>										
Alberta Pink	U. Alberta	E	V	S	-	S	S	-	S	S
Flamingo	Idaho Seed Bean	E	V	-	-	-	-	-	S	S
Floyd	Rogers	ML	V	-	-	-	-	-	S	R
ROG 922	Rogers	M	V	-	-	R	R	-	S	S
Rosalee	U. Sask.	E	V	S	-	-	-	-	S	S
Sedona	MSU/ARS	M	USV	S	-	R	-	R	A	MR
UI-537	U. Idaho	E	V	-	-	R	R	-	S	S
Viva	USDA-Prosser	M	V	-	-	-	-	R	S	S
<b><u>LIGHT RED KIDNEY</u></b>										
California Early	U. Calif.	E	B	S	S	R	R	S	S	S
Chinook 2000	MSU	M	B	-	T	R	R	S	-	R
Foxfire	Rogers	ME	B	T	R	R	R	T	T	R
Redkanner	Cornell U.	ML	B	S	T	-	-	T	-	-
Sacramento	Agri-Sales	E	B	S	S	S	S	S	S	S
<b><u>DARK RED KIDNEY</u></b>										
AC Calmont	Ag. Can.	ML	B	S	S	R	R	S	S	R
Cabernet	Rogers	ML	B	VS	S	R	R	MR	S	R
Drake	Seminis	M	B	S	S	R	R	S	T	R
Isles	MSU	M	B	S	T	R	R	T	T	R
Montcalm	MSU	ML	B	TV	TV	R	R	S	T	R
Nichols	U. Calif.	L	B	VS	S	R	R	MR	S	R
Redhawk	MSU	M	B	S	T	R	R	-	T	R
ROG 802	Rogers	ME	B	S	T	R	R	T	T	MR
<b><u>WHITE KIDNEY</u></b>										
Beluga	MSU	M	B	S	T	R	R	S	S	R
Lassen	Agri-Sales	E	B	S	S	R	R	S	S	R
<b><u>GREAT NORTHERN</u></b>										
Matterhorn	MSU	ME	USV	S	T	R	R	-	A	R
Beryl	Rogers	M	V	S	S	-	-	-	S	-
UI 59	U. Idaho	E	V	S	R	R	R	-	S	S
UI 465	U. Idaho	M	V	S	-	R	R	T	S	R
US 1140	USDA-Prosser	E	V	S	R	R	-	-	S	S
Weihing	U. Neb.	ME	USV	T	T	R	R	-	A	R

<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.

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