

2022 Nebraska Dry Edible Bean Variety Trials

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In 2022, the Panhandle Research, Extension, and Education Center (PREEC) Dry Edible Bean Breeding Program conducted 12 replicated field trials at two locations, the Scottsbluff Ag Lab (Scotts80-Field-7) at PREEC, and the Mitchell Ag Lab (Field J2) five miles to the north. The purpose was to evaluate which dry bean entries (varieties/experimental lines) are best suited for western Nebraska. These trials have been ongoing for 41 years to assist the Nebraska dry bean industry in selecting varieties. Information about dry edible bean variety performance is available at <https://cropwatch.unl.edu/varietytest/othercrops>

Locations and Germplasm

Twelve replicated trials were planted at the Scottsbluff and Mitchell agricultural labs on June 8 and 3, respectively. These included two great northern (22 entries), two pinto (48 entries), two light red kidney (LRK, 12 entries), two black (13 entries), two navy (14 entries), and two yellow (7 entries).

The soil at the Scottsbluff site (41°53.6' N, 103°40.7' W; 3,937 ft elevation) is a Tripp, very fine sandy loam (coarse-silty, mixed, superactive, mesic Aridic Haplustolls). The soil at the Mitchell site (41°56.6' N, 103°41.9' W; 44,068 ft elevation) is a silt loam (Typic Ustorthents).

Agronomic Management

Scottsbluff Ag Lab

The field at the Scottsbluff Ag Lab was disked on April 6, plowed on June 3, and sprayed/roller harrowed with Eptam® @ 2.5 pts/acre and Sonalan® @ 2 pts/acre on June 6.

The field had 82 lb residual nitrogen (N) in a 36-inch depth and no manure credit, so no additional N was applied.

The field was irrigated 15 times (9.35 inches) using sprinkler irrigation. It received an additional 2.22 inches of precipitation.

Mitchell Ag Lab

The field at the Mitchell Ag Lab was disked on May 7 and 27, plowed on May 20, and sprayed/roller harrowed with Eptam @ 2.5 pts/acre and Sonalan @ 2 pts/acre on May 26.

The field had 33 lb residual N in a 36-inch depth and 85 lb N in a manure credit, so no additional nitrogen was applied.

The field was irrigated 8 times (16.0 inches) using furrow irrigation. It received an additional 2.02 inches of precipitation and a slight hail damage on July 3.

Experimental Design

The entries were assigned to experimental units using a randomized complete block design with four replications. Each plot consisted of four 22-foot rows spaced 22 inches apart. The target plant population was 80,000 plants/acre for all market classes except the LRK, which had a target population of 100,000 plants/acre. The trials were planted with a Hege cone planter. At the end of the growing season, a plot combine (Wintersteiger Classic) was used to harvest 20 feet of the middle two rows of each plot. Variety/line trials at the Scottsbluff and Mitchell agricultural labs were undercut and combined on September 19 and October 9–10, 2022, respectively.

Response Variables

Data collected were:

- yield (lbs/acre adjusted to 14% moisture);
- DTF (days to flowering, actual number of days from planting to when 50% of the plants had at least one flower opened);
- DTM (days to harvest maturity, actual number of days from planting to when 80% of the plants were ready to be harvested);
- 100-seed counts (weight of 100 seeds in grams adjusted to 14% moisture);
- test weight (lbs/bushel adjusted to 14% moisture);
- growth habit (1 = determinate upright; 2a = indeterminate upright short vine; 2b = indeterminate upright long vine; 3a = indeterminate prostrate short vine; 3b = indeterminate prostrate long vine);
- plant height in inches; and
- common bacterial blight incidence (where 1, 2, 3 = Resistant; 4, 5, 6 = Intermediate; 7, 8, 9 = Susceptible).
- Pinto beans were exposed to UV light for 48 hours to verify the slow-darkening trait (yes = slow-darkening; no = regular pintos).

Results are presented in Tables 1 to 12.

Statistical Analysis

Data were analyzed using PROC MIXED (SAS, 2004). Means were separated using an F-protected least significant difference (LSD). All tests were considered significant at $p \leq 0.05$.

The GRAND MEAN (bottom of each table) refers to the average of the experiment. The coefficient of variation, expressed as a percentage (CV %), measures the variability of the experiment; large CVs indicate that a large amount of variation cannot be attributed to differences among entries. The LSD was used to evaluate differences among entries. If the difference between two entries exceeds the LSD value for a particular response variable, the higher value is significantly greater with 95% probability (0.05 level). If the difference between two entries is less than the LSD value, the values are considered similar.

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Table 1. 2022 Great Northern Variety Trial—Scottsbluff Ag Lab.

Ent no	PEDIGREE	Yield at 14% lbs/acre	Flowering days	Maturity days	Plant Height inches	Test Weight lbs/bu	Moisture %	100-SeedWeight gr	Growth Habit†	Common Bacterial Blight (1–9)‡
15	White Pearl	3633	47	83	17.1	59.2	10.6	34.1	2b	4.3
2	Hydra	3454	46	87	10.0	60.6	11.6	41.3	3a	6.5
11	18215	3419	43	87	17.4	59.8	11.6	35.1	2b	6.0
17	NE1-17-36	3376	44	87	15.9	59.9	11.3	37.7	2b	5.5
18	NE1-17-41	3327	44	84	17.5	58.4	10.7	34.3	2b	5.5
5	Virgo (13172)	3207	44	90	15.9	59.2	11.0	33.9	2b	5.8
8	15215	3174	46	90	18.7	61.3	11.3	36.1	2b	5.8
20	NE1-20-31	3134	41	86	15.1	58.5	10.7	34.7	2b	6.5
12	Filler	3057	43	83	14.2	58.3	10.7	40.8	2b	6.8
22	NE1-17-31	3046	46	87	17.0	57.0	10.9	41.3	2b	4.5
10	17227	3027	41	83	12.0	57.7	10.8	34.3	2b/3	7.0
9	17215	2991	41	86	9.4	61.2	11.1	45.0	3a	6.8
13	Powderhorn	2989	41	84	16.7	57.7	10.8	34.9	2b	5.3
19	NE1-20-21	2987	46	91	14.0	59.3	10.9	36.5	2b	6.8
1	Aries	2978	41	85	12.4	59.5	11.1	32.7	2b	6.8
6	Lyra (14164)	2921	43	85	17.2	57.6	10.7	39.2	2b	6.5
4	Andromeda (13151)	2892	32	84	13.6	58.5	11.2	38.7	2b	6.8
16	NE1-17-29	2850	43	86	16.8	58.0	10.8	36.7	2b	5.5
21	NE1-17-9	2848	47	86	17.2	58.5	10.7	35.3	2b	4.3
3	Draco	2665	47	88	16.9	59.0	11.1	35.0	2b/3	6.5
14	Panhandle Pride	2263	43	88	11.7	59.8	11.0	35.9	3a	6.0
	GRAND MEAN	3059	43	86	15.1	59.0	11.0	36.8		6.0
	LSD 0.05	614	7	4	4.0	1.4	0.3	3.2		1.3
	CV %	10.0	7.7	2.3	13.4	1.2	1.5	4.4		1.5

† 2b= Indeterminate, bush habit, long guides; 3, 3a= Indeterminate, with weak and prostrate stem, and long and short guides, respectively.

‡ Common bacterial blight incidence: 1, 2, 3 = Resistant; 4, 5, 6 = Intermediate; 7, 8, 9 = Susceptible.

Table 2. 2022 Great Northern Variety Trial—Mitchell Ag Lab.

Ent no	PEDIGREE	Yield at 14% lbs/acre	Flowering days	Maturity days	Plant Height inches	Test Weight lbs/bu	Moisture %	100-SeedWeight gr
8	15215	5522	51	103	22.2	61.0	12.6	42.5
4	Andromeda (13151)	5323	46	103	12.9	60.0	12.6	48.6
11	18215	5308	45	103	15.1	60.1	12.1	40.4
22	NE1-17-31	5288	45	103	18.1	57.4	10.8	47.1
20	NE1-20-31	5241	45	105	15.7	59.2	11.3	41.3
19	NE1-20-21	5096	47	105	18.2	59.7	11.9	43.3
15	White Pearl	5057	50	103	16.9	59.4	11.6	40.8
10	17227	4945	45	102	16.0	58.1	12.2	42.1
1	Aries	4913	45	100	16.8	60.0	11.6	42.0
2	Hydra	4898	51	104	15.0	60.7	13.3	51.1
5	Virgo (13172)	4864	49	104	18.2	59.9	11.4	39.3
13	Powderhorn	4809	45	95	19.1	58.6	11.1	39.1
6	Lyra (14164)	4704	49	102	18.6	60.8	11.2	43.5
18	NE1-17-41	4702	49	102	15.6	59.4	11.3	40.0
16	NE1-17-29	4699	45	103	14.7	57.2	11.5	42.8
17	NE1-17-36	4693	47	103	16.4	59.5	12.6	43.4
12	Filler	4633	48	105	18.7	58.9	13.0	48.7
9	17215	4603	46	104	13.9	61.7	11.9	55.4
21	NE1-17-9	4500	48	102	15.0	59.8	11.4	40.3
3	Draco	4394	52	103	19.3	60.5	11.7	40.0
14	Panhandle Pride	4079	49	104	15.7	61.1	12.1	40.2
	GRAND MEAN	4870	47	103	16.8	59.7	11.9	43.4
	LSD 0.05	455	3	3	2.9	1.6	1.3	1.9
	CV %	4.7	3.5	1.3	8.7	1.4	5.4	2.2

Table 3. 2022 Pinto Variety Trial—Scottsbluff Ag Lab.

Ent no	PEDIGREE	Yield at 14% lbs/acre	Flowering days	Maturity days	Plant Height inches	Test Weight lbs/bu	Moisture %	100-SeedWeight gr	Growth Habit†	Common Bacterial Blight (1-9)‡	Slow Darkening
2	Monterrey	3747	47	86	20.5	59.6	11.3	33.3	2b	6.5	no
34	SV6139GR	3490	46	85	16.4	59.4	11.1	33.7	2b	6.3	no
32	USDA-Rattler (PT11-13-31)	3416	47	89	19.6	58.2	11.1	38.4	2b	6.0	no
48	NE2-21-26	3340	41	90	14.8	57.0	10.7	36.5	3a	5.5	yes
22	52646-14	3332	47	87	19.3	52.3	10.7	40.6	2b	5.3	no
18	Staybright	3322	44	92	16.7	59.9	12.2	36.1	2b	5.8	yes
13	Rustler (16400)	3274	43	84	14.3	58.4	11.3	37.5	3a	7.8	no
38	NE2-20-3	3233	43	95	16.6	57.4	12.4	34.3	2b	5.0	yes
40	NE4-17-6	3216	44	88	18.0	55.8	10.8	41.1	2b	4.5	yes
1	La Paz	3186	49	88	20.9	59.6	11.2	34.8	2b	7.0	no
12	Cancun (14411)	3114	47	88	23.1	57.7	11.1	41.9	2a	4.5	no

Table 3. (CONTINUED) 2022 Pinto Variety Trial—Scottsbluff Ag Lab.

Ent no	PEDIGREE	Yield	Flowering	Maturity	Plant	Test	Moisture	100-SeedWeight	Growth	Common	Slow
		at 14%	days	days	Height	Weight		Habit†	Bacterial	Darkening	
		lbs/acre			inches	lbs/bu	%	gr		(1–9)‡	
31	Winbreaker	3100	46	87	14.3	56.0	10.8	39.1	3a	6.3	no
3	Torreon	3049	47	82	20.2	59.5	10.7	35.5	2b	7.5	no
37	NE2-21-3	3040	47	93	21.8	56.4	11.2	36.9	2b	4.8	yes
20	ND-Palomino	3031	46	93	17.7	57.0	11.0	37.9	3a	6.5	yes
14	Mystic (17454)	3017	47	86	19.5	60.8	11.5	36.2	2b	7.0	yes
11	Santa Maria (13431)	3010	47	82	20.5	57.9	11.2	38.7	2b	7.0	no
42	NE2-20-12	3005	41	82	14.4	55.4	10.7	36.2	2b	5.5	no
10	Gaucha (13396)	2992	41	81	19.2	58.1	10.5	34.2	2b	7.8	no
45	NE2-21-7	2971	41	84	17.5	60.3	11.1	33.9	2b	4.5	yes
35	Filler	2969	46	91	13.2	59.4	11.5	38.0	2b/3	6.0	yes
8	Gleam (14455)	2965	47	89	19.9	60.8	11.3	32.4	2b	5.5	yes
7	Lumen (14451)	2958	47	85	19.5	62.8	10.9	30.7	2b	7.8	yes
41	NE4-17-10	2941	41	91	16.1	55.7	11.5	37.9	2b/3	4.5	yes
17	Bronco (41767–15)	2920	41	89	17.8	60.4	11.3	40.8	2b	5.5	yes
23	30837	2908	47	89	13.8	57.7	11.5	38.1	3a	6.0	yes
43	NE2-20-14	2886	46	85	18.1	56.6	10.3	37.8	2b	4.8	no
15	20–308	2855	47	90	20.7	59.7	10.9	36.2	2b	6.5	yes
29	EX2146-P	2825	47	87	18.7	60.4	11.3	30.2	2b	7.8	no
28	EX2143-P	2808	47	87	19.3	60.6	11.1	29.7	2b	7.3	no
5	Radiant	2800	47	84	19.3	58.6	11.9	33.7	2b	6.5	yes
27	EX2147-P	2716	47	86	18.6	60.3	11.1	30.4	2a	7.3	no
44	NE2-21-25	2701	47	88	17.7	56.3	11.4	39.5	2b	4.8	yes
33	USDA-Diamondback (PT16–9)	2666	47	91	20.6	58.8	11.4	35.6	2b	7.3	yes
21	32330–14	2662	54	92	22.2	55.8	11.6	38.9	2b	5.0	no
47	NE2-21-38	2640	43	86	14.6	59.2	11.3	37.3	2b	6.0	yes
36	NE4-18-55	2600	44	93	17.0	57.9	11.7	46.6	2b	5.5	yes
16	20–310	2591	47	85	14.9	58.7	10.7	40.3	2a	7.3	yes
25	EX1844-P	2520	47	84	18.4	56.7	10.9	35.0	2b	8.0	no
19	33503–5	2498	49	91	19.1	57.5	11.3	38.0	2b	5.5	no
26	EX1845-P	2496	47	81	20.0	57.2	10.5	28.8	2b	6.0	no
9	20–250	2435	47	91	17.2	53.5	12.1	49.5	2b	5.5	no
39	NE2-17-37	2378	47	92	18.3	56.2	10.6	34.7	2b	4.5	yes
30	EX1947-P	2288	47	86	16.6	55.7	10.9	35.8	2b	7.5	no
4	Vibrant B	2281	44	85	18.3	56.2	10.8	32.7	2b	7.0	yes
46	NE2-21-20	2277	43	85	18.7	55.6	11.2	35.9	2b	5.0	yes
	GRAND MEAN	2912	46	87	18.3	57.9	11.2	36.6		6.1	
	LSD 0.05	663	3	3	3.3	2.2	0.9	3.0		1.4	
	CV %	11.5	2.8	1.7	9.2	1.9	3.9	4.1		1.7	

† 2a, 2b= Indeterminate, bush habit, short and long guides, respectively; 3, 3a = Indeterminate, with weak prostrate stem, and long and short guides, respectively.

‡ Common bacterial blight incidence: 1, 2, 3 = Resistant; 4, 5, 6 = Intermediate; 7, 8, 9 = Susceptible.

Table 4. 2022 Pinto Variety Trial—Mitchell Ag Lab.

Ent no	PEDIGREE	Yield at 14% lbs/acre	Flowering days	Maturity days	Plant Height inches	Test Weight lbs/bu	Moisture %	100-SeedWeight gr	Slow Darkening
32	USDA-Rattler (PT11-13-31)	4904	52	103	19.8	58.6	12.1	46.8	no
2	Monterrey	4830	53	102	18.9	60.8	11.9	39.9	no
14	Mystic (17454)	4763	47	102	19.7	62.5	12.5	41.7	yes
34	SV6139GR	4729	47	102	17.0	60.2	12.8	39.1	no
17	Bronco (41767-15) SLD	4688	46	104	16.9	62.1	12.1	45.0	yes
1	La Paz	4684	53	99	19.2	61.2	12.2	37.9	no
13	Rustler (16400)	4641	45	100	12.9	59.1	11.7	43.8	no
31	Winbreaker	4572	45	102	12.7	57.4	11.2	43.1	no
6	Cowboy	4554	49	97	19.0	59.8	12.1	41.9	no
41	NE4-17-10	4529	47	104	18.1	57.5	12.6	42.7	yes
48	NE2-21-26	4509	50	104	16.7	59.2	12.4	42.1	yes
19	33503-5	4504	53	104	17.4	58.9	13.2	44.3	no
8	Gleam (14455)	4484	50	103	20.3	62.2	11.3	35.9	yes
10	Gacho (13396)	4459	46	100	18.2	60.3	11.1	40.5	no
22	52646-14	4422	52	102	20.1	57.7	12.0	47.6	no
24	91216-5	4417	51	102	15.6	58.1	12.0	46.9	no
20	ND-Palomino SLD	4381	54	106	17.3	58.3	13.1	39.3	yes
15	20-308	4361	52	102	18.6	60.0	11.8	41.7	yes
37	NE2-21-3	4293	56	106	20.6	59.7	11.8	43.6	yes
43	NE2-20-14	4283	46	103	18.3	58.9	11.9	44.3	no
9	20-250	4280	52	105	16.2	56.0	11.2	54.5	no
29	EX2146-P	4215	48	102	16.4	60.3	11.4	36.4	no
18	Staybright SLD	4207	59	106	19.3	61.5	13.4	38.7	yes
47	NE2-21-38	4168	45	102	16.0	61.3	12.0	41.8	yes
45	NE2-21-7	4148	45	76	14.6	60.6	11.9	39.4	yes
11	Santa Maria (13431)	4141	47	99	18.7	59.4	11.4	44.4	no
33	USDA-Diamondback (PT16-9)	4123	51	106	20.3	60.7	11.8	41.8	yes
27	EX2147-P	4101	47	102	16.7	60.9	11.4	35.3	no
5	Radiant	4090	47	102	19.1	60.2	13.1	38.9	yes
38	NE2-20-3	4083	51	106	20.7	60.2	15.9	39.2	yes
21	32330-14	4080	55	107	22.6	58.9	11.8	42.9	no
30	EX1947-P	4001	47	103	16.1	56.4	11.4	41.9	no
12	Cancun (14411)	3950	53	103	21.9	59.1	12.2	46.2	no
7	Lumen (14451)	3939	47	102	17.6	63.6	11.6	35.4	yes
35	Filler	3931	58	103	16.0	61.1	13.1	43.5	yes
23	30837 SLD	3918	50	104	18.5	61.3	13.3	42.6	yes
42	NE2-20-12	3866	49	100	16.5	57.2	11.3	40.7	no
28	EX2143-P	3861	47	102	17.8	60.2	12.0	36.9	no
44	NE2-21-25	3860	51	102	15.8	58.6	11.9	43.5	yes
39	NE2-17-37	3856	48	104	16.9	59.1	11.7	38.0	yes
3	Torreon	3797	47	96	18.9	59.7	11.4	38.2	no
46	NE2-21-20	3736	46	102	17.1	57.5	11.8	42.7	yes
40	NE4-17-6	3658	45	104	20.2	58.0	11.7	44.8	yes
25	EX1844-P	3649	49	103	18.6	56.6	11.3	41.8	no

Table 4. (CONTINUED) 2022 Pinto Variety Trial—Mitchell Ag Lab.

Ent no	PEDIGREE	Yield at 14% lbs/acre	Flowering days	Maturity days	Plant Height inches	Test Weight lbs/bu	Moisture %	100-SeedWeight gr	Slow Darkening
16	20-310	3549	52	103	16.6	59.1	11.8		
4	Vibrant B	3520	45	100	19.5	59.9	12.5	36.7	yes
26	EX1845-P	3491	47	97	17.1	57.6	10.9	35.7	no
36	NE4-18-55	3439	49	103	20.5	59.7	12.4	51.6	yes
	GRAND MEAN	4181	49	102	18.0	59.5	12.1	41.8	
	LSD 0.05	771	4	10	3.5	1.1	1.4	2.9	
	CV %	9.3	3.8	4.9	9.9	0.9	6.0	3.5	

Table 5. 2022 Light Red Kidney Variety Trial—Scottsbluff Ag Lab.

Ent no	PEDIGREE	Yield at 14% lbs/acre	Flowering days	Maturity days	Plant Height inches	Test Weight lbs/bu	Moisture %	100-SeedWeight gr	Growth Habit†	Common Bacterial Blight (1-9)‡
5	15923	2390	43	84	11.8	54.4	10.6	50.3	1	4.8
10	Clouseau	2307	43	85	15.1	55.8	10.7	47.4	1	4.8
3	Red Zone	2247	50	95	20.1	54.6	11.0	42.0	1	4.3
7	161041	2115	51	95	20.4	55.8	11.4	41.2	1	4.0
11	L1032326	2022	52	94	17.2	53.3	12.0	41.2	1	3.3
1	Big Red 1	1984	40	85	15.0	55.5	10.8	47.2	1	4.5
8	Pink Panther	1983	45	90	14.2	54.9	11.2	46.8	1	4.5
9	CELRK	1881	40	80	12.0	55.7	10.6	49.0	1	5.0
4	Red Dawn (09363)	1879	41	81	12.0	54.3	10.6	49.7	1	4.5
2	Ronnie's Red	1859	47	95	21.3	54.4	11.7	43.5	1	3.3
12	Panhandle Red	1794	47	90	14.6	56.4	10.6	45.0	1	4.5
6	161014	1772	48	91	19.6	53.9	10.9	40.5	1	4.3
	GRAND MEAN	2020	45	89	16.1	54.9	11.0	45.3		4.3
	LSD 0.05	434	4	3	2.6	1.1	0.6	2.2		1.3
	CV %	10.6	4.7	1.7	7.9	1.0	2.9	2.4		1.7

† 1 = Determinate bush habit.

‡ Common bacterial blight incidence: 1, 2, 3 = Resistant; 4, 5, 6 = Intermediate; 7, 8, 9 = Susceptible.

Table 6. 2022 Light Red Kidney Variety Trial—Mitchell Ag Lab.

Ent no	PEDIGREE	Yield at 14% lbs/acre	Flowering days	Maturity days	Plant Height inches	Test Weight lbs/bu	Moisture %	100-SeedWeight gr
7	161041	3842	61	108	20.7	57.0	13.2	54.9
8	Pink Panther	3712	46	106	17.1	56.2	13.5	58.5
3	Red Zone	3529	59	108	22.3	56.1	14.1	51.7
2	Ronnie's Red	3426	60	108	22.2	57.2	13.3	56.1
1	Big Red 1	3412	41	102	14.4	56.9	13.2	54.6
11	L1032326	3382	61	109	20.1	55.1	14.5	55.1
9	CELRK	3290	40	99	13.4	55.7	14.3	58.5
12	Panhandle Red	3241	46	105	15.6	57.2	13.2	53.4
4	Red Dawn (09363)	3228	40	99	11.4	55.2	13.3	60.5
5	15923	3162	40	103	12.6	55.7	12.6	58.5
10	Clouseau	2872	45	103	16.7	56.9	13.7	57.5
6	161014	2635	59	106	19.7	55.2	13.6	52.9
	GRAND MEAN	3311	50	104	17.2	56.2	13.5	56.0
	LSD 0.05	673	3	5	3.1	1.0	2.7	4.2
	CV %	10.0	3.1	2.2	9.0	0.9	9.9	3.7

Table 7. 2022 Black Variety Trial—Scottsbluff Ag Lab.

Ent no	PEDIGREE	Yield at 14% lbs/acre	Flowering days	Maturity days	Plant Height inches	Test Weight lbs/bu	Moisture %	100-SeedWeight gr	Growth Habit†	Common Bacterial Blight (1-9)‡
6	Nimbus (14500)	3945	51	93	22.2	62.2	12.2	21.7	2b/3	6.8
4	Spectre (14497)	3827	47	92	21.2	62.3	12.1	20.1	3a	7.0
7	17715	3816	52	91	15.3	62.5	12.8	19.4	3a	7.3
8	B3036381	3745	49	91	19.8	62.4	11.8	20.1	2b	6.8
12	NE14-20-6	3530	47	92	16.1	60.8	12.1	24.6	2b/3	5.5
2	Black Bear	3527	47	91	17.7	62.1	12.5	19.0	2a	7.3
11	Filler	3487	47	87	17.9	62.4	12.1	19.8	2a	6.0
10	Filler	3455	47	87	19.4	62.2	12.1	20.0	2a	5.8
9	B303350	3371	47	88	17.3	61.8	11.3	20.1	2b	6.3
1	Eclipse	3164	47	90	19.0	60.8	11.4	19.1	2b	6.3
13	NE14-20-8	2952	47	87	14.8	61.2	11.7	20.6	2b/3	6.3
5	BlackBeard (14506)	2942	49	91	23.4	60.8	11.5	21.0	2a	7.8
3	Black Tails (13489)	2437	47	85	15.8	63.0	34.1	18.5	2b	8.0
	GRAND MEAN	3400	48	89	18.5	61.9	13.7	20.3		6.7
	LSD 0.05	885	3	2	2.9	0.8	17.9	1.2		1.2
	CV %	12.9	3.0	1.2	7.8	0.6	64.6	3.0		1.3

† 2a, 2b= Indeterminate, bush habit, short and long guides, respectively; 3, 3a = Indeterminate, with weak prostrate stem, and long and short guides, respectively.

‡ Common bacterial blight incidence: 1, 2, 3 = Resistant; 4, 5, 6 = Intermediate; 7, 8, 9 = Susceptible.

Table 8. 2022 Black Variety Trial—Mitchell Ag Lab.

Ent no	PEDIGREE	Yield at 14% lbs/acre	Flowering days	Maturity days	Plant Height inches	Test Weight lbs/bu	Moisture %	100-SeedWeight gr
6	Nimbus (14500)	4963	54	104	20.6	63.4	12.6	23.6
2	Black Bear	4853	53	105	19.0	63.2	13.1	21.4
7	17715	4807	53	104	19.2	63.7	13.6	21.1
4	Spectre (14497)	4590	53	106	21.3	63.3	13.0	22.0
3	Black Tails (13489)	4455	53	100	19.8	62.6	11.7	21.3
11	Filler	4393	53	103	18.3	63.4	13.9	22.9
9	B303350	4380	51	103	17.0	62.2	12.7	21.5
5	BlackBeard (14506)	4281	54	103	22.9	62.2	12.1	22.7
8	B3036381	4274	53	104	20.1	63.3	12.9	22.9
12	NE14-20-6	4247	49	100	18.3	61.7	12.6	24.3
10	Filler	4089	53	100	18.6	63.4	12.3	22.1
13	NE14-20-8	3499	52	94	15.7	61.8	12.6	20.4
1	Eclipse	3474	51	97	19.0	61.6	11.4	19.1
	GRAND MEAN	4331	52	101	19.2	62.7	12.6	21.9
	LSD 0.05	460	2	6	2.6	0.8	2.8	1.0
	CV %	5.3	2.1	2.7	6.8	0.6	10.8	2.3

Table 9. 2022 Navy Variety Trial—Scottsbluff Ag Lab.

Ent no	PEDIGREE	Yield at 14% lbs/acre	Flowering days	Maturity days	Plant Height inches	Test Weight lbs/bu	Moisture %	100-SeedWeight gr	Growth Habit†	Common Bacterial Blight (1-9)‡
6	Liberty (15095)	3410	47	94	17.2	61.6	12.6	22.5	2b/3	6.5
1	HMS Medalist	3408	47	93	16.4	61.0	13.1	20.7	2b/3	6.3
14	Alpena	3408	49	92	20.0	62.5	10.6	19.2	2b	5.8
3	HMS Bounty (12047)	3388	47	93	20.9	61.3	12.6	16.9	2b	7.5
4	Armada (13068)	3262	47	91	20.3	60.8	12.7	22.0	2b	6.3
2	Blizzard	3212	47	90	18.1	61.2	13.5	20.8	2b/3	5.5
7	T9905	3014	47	92	17.8	61.4	12.1	21.5	3a	7.0
11	SV1893GH	3013	52	91	19.5	61.8	12.2	20.0	2b	6.3
13	Filler	2919	47	84	14.1	62.7	12.4	18.5	2b	7.8
5	HMS Victory (15094)	2873	47	88	18.9	61.3	13.0	21.5	2b	6.0
10	EX1804-N	2550	47	86	18.4	61.3	12.4	18.1	2b	7.3
9	EX1803-N	2384	47	84	15.6	60.9	12.9	19.3	2b	7.3
12	Filler	2354	47	84	12.4	62.1	12.6	18.6	2b	7.0
8	EX1802-N	1580	47	84	15.5	59.1	12.2	16.9	2b	7.3
	GRAND MEAN	2912	48	89	17.5	61.3	12.5	19.7		6.7
	LSD 0.05	607	2	2	3.7	0.7	2.5	1.3		1.3
	CV %	10.3	2.0	1.2	10.4	0.6	9.8	3.2		1.4

† 2b= Indeterminate, bush habit, long guides; 3 and 3a= Indeterminate, with weak and prostrate stem, and long and short guides, respectively.

‡ Common bacterial blight incidence: 1, 2, 3 = Resistant; 4, 5, 6 = Intermediate; 7, 8, 9 = Susceptible.

Table 10. 2022 Navy Variety Trial—Mitchell Ag Lab.

Ent	PEDIGREE	Yield at 14%	Flowering	Maturity	Plant Height	Test Weight	Moisture	100-SeedWeight
		lbs/acre	days	days	inches	lbs/bu	%	gr
3	HMS Bounty (12047)	4894	53	104	17.9	62.5	14.7	18.4
14	Alpena	4823	53	104	20.4	63.0	14.0	20.7
6	Liberty (15095)	4705	54	105	20.1	63.1	14.4	22.2
7	T9905	4699	53	103	17.6	62.3	14.1	23.2
1	HMS Medalist	4631	53	105	20.3	62.3	13.3	19.9
4	Armada (13068)	4622	54	104	19.4	62.0	13.6	23.4
2	Blizzard	4539	53	104	18.6	62.2	14.6	22.3
5	HMS Victory (15094)	4333	53	102	17.7	62.2	13.8	22.7
11	SV1893GH	4137	54	105	18.2	62.8	14.6	22.2
10	EX1804-N	4081	47	99	18.5	62.0	13.5	19.4
13	Filler	3962	48	94	13.3	62.3	13.6	20.9
12	Filler	3915	53	97	16.5	63.6	13.3	20.6
8	EX1802-N	3600	52	91	16.5	60.7	14.6	20.0
9	EX1803-N	3520	49	99	17.0	61.7	14.8	23.8
	GRAND MEAN	4319	52	101	18.0	62.3	14.1	21.4
	LSD 0.05	502	2	5	3.1	1.0	2.4	1.0
	CV %	5.8	1.8	2.3	8.6	0.8	8.4	2.3

Table 11. 2022 Yellow Variety Trial—Scottsbluff Ag Lab.

Ent no	PEDIGREE	Yield at 14% lbs/acre	Flowering days	Maturity days	Plant Height inches	Test Weight lbs/bu	Moisture %	100-SeedWeight gr	Growth	Common
									Habit†	Bacterial Blight (1-9)‡
5	Filler	2626	47	94	13.6	64.6	12.8	32.1	1	6.5
4	Filler	2559	49	94	19.5	65.4	11.9	37.1	1	6.0
7	Filler	2462	41	91	12.8	64.9	11.1	40.0	1	7.0
3	Claim Jumper	2392	51	94	16.1	64.2	13.1	34.5	1	6.0
6	Filler	2121	52	96	16.9	64.2	13.5	33.6	1	6.8
1	NE17-22-43	1650	51	97	15.5	64.8	12.6	32.1	1	6.8
2	NE17-22-44	1096	42	78	15.9	63.5	10.6	34.5	1	8.0
	GRAND MEAN	2130	47	92	15.8	64.5	12.2	34.8		6.7
	LSD 0.05	635	5	3	8.9	1.2	1.3	2.1		1.1
	CV %	14.3	4.7	1.8	27.2	0.9	5.1	2.9		1.2

† 1 = Determinate bush habit.

‡ Common bacterial blight incidence: 1, 2, 3 = Resistant; 4, 5, 6 = Intermediate; 7, 8, 9 = Susceptible.

Table 12. 2022 Yellow Variety Trial—Mitchell Ag Lab.

Ent no	PEDIGREE	Yield at 14% lbs/acre	Flowering days	Maturity days	Plant Height inches	Test Weight lbs/bu	Moisture %	100-Seed Weight gr
5	Filler	4070	53	108	15.7	64.9	14.5	38.4
4	Filler	3828	49	106	15.4	64.8	14.3	38.8
7	Filler	3535	41	104	13.8	64.9	13.8	46.3
6	Filler	3436	53	108	17.9	64.8	14.0	40.0
3	Claim Jumper	3207	53	107	18.2	64.8	14.0	39.5
1	NE17-22-43	2647	56	111	18.4	65.0	13.6	38.9
2	NE17-22-44	1053	40	90	12.4	63.8	12.1	39.9
	GRAND MEAN	3111	49	105	16.0	64.7	13.7	40.2
	LSD 0.05	622	3	3	2.8	0.4	1.4	1.9
	CV %	9.6	3.1	1.4	8.3	0.3	5.1	2.3

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