

Final Report for Wyoming Bean Commission

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2024 Dry Bean Performance Evaluation

The University of Wyoming coordinates the dry bean variety performance evaluation at the Powell location in a continuous and on-going program. In cooperation with the National Cooperative Dry Bean Nursery, and with funding from the Wyoming Bean Commission, a wide range of germplasm is evaluated each year, assisting producers in selecting varieties best suited for Wyoming soils and climate. This year, 20 varieties from the CDBN were submitted, 11 other checks were submitted by local handlers, and UW added 23 of our own progeny lines, totaling 54 entries total.

Materials and Methods

The experiment was located at the University of Wyoming Research and Extension Center in Powell, Wyoming. The soil, a Garland clay loam, (fine, mixed, mesic: Typic Haplarid), was prepared by roller harrow and leveled in the spring. The entire plot area received 0 units of N, 75 units of P, 80 units of K, 50 units S, and 50 units humic acid per acre on 21 May. Chemical weed control consisted of a preplant incorporated chemical treatment of 2 pints of Sonalan, 3 pints Eptam, 1 pint Orvale, and 36 oz/acre Roundup applied on 28 May. The plots were planted on 31 May in three-row plots that were 5.5 feet wide by 15 feet long at a population of 90,000 seeds/acre. A Kincaid planter was used, set on 22-inch row spacing. Outlook herbicide with Orvale was applied postemergence at 1 pint/acre each on 25 June. The experimental design was a randomized block with 4 replications. Furrow irrigation was applied on 31 May, 4 July, 14 July, 23 July, 31 July, and 12 Aug. Visual estimates for days to 50 percent bloom (50 percent of plants at second bloom) and days to maturity (50 percent of the plants with one buckskin pod) were made. Subplots of one row by 10 feet were pulled by hand, and those plants were threshed with a Haldrup stationary plot thresher. The seed was hand-picked to remove dirt clods, bean chaff, and seed mixtures. Samples were then weighed for clean seed yield per plot and seeds per pound.

Results and Discussion

Stand establishment was good, with excellent soil and weather conditions. The growing season can be described as dry and warm compared to previous years. Cumulative rainfall was .94", .30", 1.15", and .45" for June, July, August, and September, respectively. Flowering, maturity, seed size (i.e., number of seed per pound) and yield data are presented in Table 1 on page 2.

Acknowledgments:

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Table 1. Powell R&E Center, Cooperative Dry Bean Nursery Data, 2024

Variety	Seed supplier	Market Class	DTB	DTM	Avg. Height	Seeds/lb	Yield (lbs/acre)
R1-2023-179	UW	GN	47	92	57	1782	3217
Cowboy	Check	PTO	52	94	83	1318	3161
NE2-23-35	CDBN	PTO	51	101	97	1128	3157
NE1-22-19	CDBN	GN	48	99	78	1215	3145
NTL1-2023-133	UW	PTO	52	98	87	1307	3103
J3-2023-222	UW	PTO	53	101	86	1426	3068
SV6139GR	Check	PTO	48	95	73	1270	3041
J2-2023-242	UW	PTO	52	102	72	1366	3016
Black Pearl	CDBN	BLK	52	100	54	2251	3003
NTL1-2023-151	UW	PTO	52	100	80	1253	2984
S2-2023-148	UW	PTO/BEIGE	47	95	70	1298	2922
SR20-11-3	CDBN	RED	47	94	51	1156	2913
B1-2023-154	UW	PTO	52	100	79	1421	2910
H1-2023-246	UW	PTO	52	102	76	1333	2898
NTL1-2023-226	UW	PTO	51	100	79	1275	2897
PK10-3-6	CDBN	PK	50	92	77	1257	2896
M3-2023-195	UW	PK PTO	53	102	80	1300	2891
R1-2023-294	UW	GN	47	92	59	1826	2867
BlackTails	Check	BLK	51	101	62	2238	2859
PK20-7-2	CDBN	PK	51	95	71	1314	2839
G3-2023-144	UW	GN	48	97	70	1542	2836
AuSable	CDBN	GN	53	102	53	2007	2832
R5-2023-286	UW	GN	47	92	51	1722	2816
A5-2023-181	UW	PTO	55	102	74	1553	2808
Rattler	Check	PTO	52	99	72	1255	2799
R2-2023-123	UW	PTO	47	94	74	1131	2793
Diamondback	Check	PTO	51	101	92	1338	2788
S2-2023-226	UW	PTO	48	100	75	1191	2780
LaPaz	CDBN	PTO	52	96	73	1422	2773
NTL1-2023-124	UW	PTO	51	95	84	1393	2755
Monterrey	Check	PTO	53	94	85	1355	2739
Lariat	Check	PTO	52	102	128	1116	2736
LPID-3-2023-122	UW	PTO	48	100	79	1125	2708
Othello	CDBN	PTO	48	81	58	1219	2704
R1-2023-173	UW	GN	47	88	55	1744	2697
Eclipse	CDBN	BLK	55	100	62	2227	2696
ClaimJumper	Check	YELLOW	52	>102	48	1066	2673
NE2-23-40	CDBN	PTO	48	98	84	1158	2667

Eiger	CDBN	GN	52	102	60	1437	2659
ND151355	CDBN	BLK	53	98	41	2416	2655
Charro	CDBN	PTO	54	102	89	1425	2653
Yel0863Per	Check	YELLOW	47	102	52	1079	2575
NE2-23-21	CDBN	PTO	47	98	93	1045	2537
Zorro	Check	BLK	52	101	62	2191	2536
B3-2023-150	UW	GN	52	102	80	1712	2515
SR20-11-6	CDBN	RED	50	92	56	1167	2511
Bronco	Check	PTO	47	92	84	1182	2502
Coral	CDBN	PK	52	102	75	1295	2493
Kona	CDBN	BLK	53	102	62	2101	2446
NE2-23-53	CDBN	PTO	52	102	80	1328	2247
O2-2023-282	UW	GN	47	91	36	1789	2166
LPID-3-2023-230	UW	PTO	48	99	62	1144	2106
CLERK	CDBN	LRK	41	87	33	789	2036
R5-2023-194	UW	GN	48	94	55	2084	1806

	LSD (0.05)	2.86	4.56	14.06	149.94	604.55
	CV (%)	3.81	2.88	13.38	6.70	14.49
	Mean	50.21	96.74	70.14	1471.11	2734.84