

2012 Dry Bean Performance Evaluation

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In 2011, Wyoming ranked eighth nationally in dry bean (*Phaseolus vulgaris* L.) production, third in the production of pinto beans, and first in production of other bean market classes. In the same year, Wyoming growers produced 525,000 hundred-weight of pinto beans on 24,100 harvested acres, averaging 21.8 hundred-weight per acre.

The University of Wyoming Seed Certification Service coordinates the dry bean variety performance evaluation at this location in a continuous and on-going program. In cooperation with the National Cooperative Dry Bean Nursery, a wide range of germplasm is evaluated each year, including promising new lines and newly released varieties, assisting producers in selecting varieties best suited for Wyoming soils and climate. Public and private (proprietary) varieties are tested.

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. Chemical weed control consisted of a preplant incorporated chemical treatment of 2 pints of Sonalan and 14 ounces of Establish, which was applied on April 15. The plots received 65 units of N, 50 units of P and 5 units of Zn on April 15th. The plots were planted on May 18th in three row plots that were 5.5 feet wide by 20 feet long. IH 185 planter units with cone attachments were used, set on 22-inch row spacing. The experimental design was a randomized block with 4 replications. Cultivation controlled weed escapes during the growing season. Furrow irrigation was applied on May 4th (preplant), June 23rd, July 2nd, July 11th, July 11th, July 25th, August 3rd, and August 10th. 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 plots were threshed with an Almaco stationary small plot thresher. The seed was hand picked to remove dirt clods and seed mixtures. Samples were then weighed for clean seed yield per plot and seeds per pound.

Results and Discussion

Stand establishment was excellent, with timely planting and warm soil temperatures. High summer temperatures and limited summer precipitation, followed by an exceptional fall, allowed all entries to reach maturity. Yields across entries averaged 2,904 lbs. per acre, and ranged from 1,923 pounds per acre for 'T-39' black bean to 3,828 pounds per acre for 'Lapaz' pinto bean.

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Table 1. Agronomic Data, 2012 Cooperative Dry Bean Nursery, Powell, Wyoming

Name	Market class	Yield lbs./A	Seeds per pound	50% Bloom days after planting	Pod Maturity days after planting
Zorro	black	2593	2096	58	92
Eclipse	black	2438	2378	57	97
T-39	black	1923	2372	58	102
UCD 0801	cranberry	2288	940	52	103
Majesty	dk. red kidney	2483	768	54	92
SVS-0815	great northern	3097	1015	47	87
GN9-1	great northern	3027	1234	53	88
Coyne	great northern	2715	1219	52	87
CELRK	lt. red kidney	2011	860	44	82
T-9905	navy	2692	2111	57	96
T-9903	navy	2559	2058	54	91
Avalanche	navy	2486	2278	56	92
Rexeter	navy	2419	2379	51	98
UCD-9634	pink	3186	1357	48	89
PK9-4	pink	3077	1236	54	89
Rosetta	pink	2966	1328	56	95
Lapaz	pinto	3828	1338	59	95
6185	pinto	3583	1337	59	96
PT9-6	pinto	3477	1209	56	94
Windbreaker	pinto	3419	1126	53	95
Sinaloa	pinto	3308	1337	56	93
Lariat	pinto	3162	1142	57	100
Medicine Hat	pinto	3160	1166	52	88
Maverick	pinto	3136	1255	52	95
ISB-18	pinto	3089	1180	49	86
6189	pinto	3077	1292	58	94
ND-307	pinto	3071	1191	53	91
Othello	pinto	3042	1170	45	79
ND020351-R	pinto	2981	1283	55	93
ISB-16	pinto	2944	1172	48	90
Long's Peak	pinto	2863	1265	55	89
ISB-11	pinto	2842	1343	54	93
ISB-24	pinto	2780	1203	48	89
Rio Rojo	red	3225	1520	56	90
SR10-20	red	2547	1340	55	89
SVS-0863	yellow	3057	1269	57	104
Mean		2904	1410	53	92
CV		11.1	4.3	3.1	2.7
LSD		452	86	2.3	3.4