

2011 Dry Bean Performance Evaluation

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In 2010, Wyoming ranked ninth nationally in dry bean (*Phaseolus vulgaris* L.) production, and fifth in the nation in the production of pinto beans. In the same year, Wyoming growers produced 1,024,000 hundred-weight of pinto beans on 47,000 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 Sonalan and 14 ounces Establish, which was applied on April 15. The plots received 65 units of N, and 50 units of P on April 15th. The plots were planted on June 3rd 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 8th (preplant), July 5th, July 15th, July 23rd, July 30th, August 10th, and August 25th. 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 reasonable, with timely planting and reasonable soil temperatures. Moderate summer temperatures and limited summer precipitation, followed by an exceptional fall allowed all entries to reach maturity. A hail event when some of the later maturing varieties were still in the field resulted in shattering loss for those lines. Yields across entries averaged 2,725 lbs. per acre, and ranged from 2,036 pounds per acre for 'T-9903' navy bean to 3,505 pounds per acre for 'ND307' pinto bean.

Acknowledgements

This nursery is possible only with significant assistance from the staff at the Powell Research and Extension Center. R & E Center staff manage the plots, and Randal Violet takes the growing season notes and harvests the plots. Their efforts are greatly appreciated.

Table 1. Agronomic Data, 2011 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	3078	2094	58	95
Eclipse	black	2589	2329	57	96
T-39	black	2266	2432	57	96
UCD 0801	cranberry	2417	877	55	98
Bellagio	cranberry	2229	875	54	94
Majesty	DRK	2753	700	55	93
Coyne	great northern	2947	1190	54	83
OAC Inferno	lt. red kidney	2709	788	55	98
CELRK	lt. red kidney	2465	799	53	86
Avalanche	navy	2961	2294	57	94
Rexeter	navy	2679	2425	57	99
Indie	navy	2405	2472	58	91
T-9903	navy	2036	2090	55	93
ND307	pinto	3506	1138	56	96
Lariat	pinto	3484	1118	59	96
ND020351-R	pinto	3286	1244	56	92
Max	pinto	3223	1060	54	79
PT9-6	pinto	3193	1305	55	95
PT8-6	pinto	3167	1092	54	90
Lucas	pinto	3148	1153	55	86
Maverick	pinto	2962	1226	56	93
Stampede	pinto	2922	1165	58	96
Quincy	pinto	2777	1086	54	83
CO55646	pinto	2625	1143	56	86
Odyssey	pinto	2563	1145	53	85
IP08-2	pinto	2493	1383	56	91
Croisant	pinto	2472	1336	55	90
IP09-3	pinto	2447	1065	56	94
Sequoia	pinto	2398	1306	54	89
Othello	pinto	2388	1168	53	78
PT8-15	pinto	2182	996	54	83
Apache	pinto	2127	1210	54	83
Mean		2725	1366	55	91
CV		19.25	5.09	2.71	2.99
LSD		737	98	2	4