UNIVERSITY OF WYOMING
College of Agriculture
DEPARTMENT OF PLANT SCIENCES

Seed Certification Service

Cooperating with Wyoming
Crop Improvement Association

P.O. Box 983 • Powell, WY 82435
Ph. (307) 754-9815 • Fax (307) 754-9820
email: mdmoore@uwyo.edu

2017 Dry Bean Performance Evaluation

Mike Moore and Jolene Sweet, Wyoming Seed Certification Service; Camby Reynolds and Andi Pierson, Powell Research and Extension Center

In 2015, Wyoming ranked nineth nationally in dry bean (Phaseolus vulgaris L.) production, and fourth in the production of pinto beans. In the same year, Wyoming growers produced 542,000 hundred-weight of pinto beans on 31,000 harvested acres, averaging 23 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, assisting producers in selecting varieties best suited for Wyoming soils and climate.

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 40 ounces of Eptam and 2 pints of Sonalan applied on May 24. The plots received 60 units of N, 30 units of P and 5 units of Zn per acre on May 30. The plots were planted on June 2 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 June 6, July 10, July 20, and August 10, August 20, and August 31. 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 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 erratic due to a heavy rain after planting that created a thick soil crust. Summer temperatures and precipitation were reasonable, and while all entries matured prior to the first frost, precipitation delayed threshing.

Acknowledgements

This nursery was possible only with significant assistance. Powell R & E Center staff managed the plots and Andi Pierson assisted with statistical analysis.

Name	Market class	Bloom Days after Planting	Buckskin Days after Planting	Yield lbs/A	Seeds per Pound
PT10-12-1	**pinto**	53	88	3033	1299
NE2-16-33	**pinto**	51	88	2615	1107
Black Foot	**pinto**	51	81	2365	1274
Nez Perce	**pinto**	54	87	2335	1399
Twin Falls	**pinto**	56	90	2921	1339
La Paz	**Pinto**	56	90	3155	1210
Othello	**Pinto**	49	77	3096	1157
Staybright (COSD 35)	**SLD**	54	90	3403	1268
COSD 7	**SLD**	51	85	2780	1262
Palomino	**SLD**	49	85	3264	1175
SR10-2-1	**small red**	52	86	2344	1177
ACUG 13-SR1	**small red**	57	89	2161	2245
ACUG 15-B4	**black**	57	93	3019	2189
ACUG 14-1	**navy**	50	86	1918	2086
Eclipse	**Black**	57	88	3026	2326
Dynasty	**DRK**	49	91	2912	796
DRK 1	**DRK**	50	92	2592	980
Cornell 612	**LRK**	49	86	1984	845
CELRK	**LRK**	49	81	2137	788
CO 14790-3	**Pinto**	54	88	2989	1253
	Mean	52	87	2702	1359
	LSD	2	2	857	95
	CV	2.4	1.5	19.1	4.2