

2018 Dry Bean Performance Evaluation

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In 2016, Wyoming ranked tenth nationally in dry bean (*Phaseolus vulgaris* L.) production, and fourth in the production of pinto beans. In the same year, Wyoming growers produced 733,000 hundred-weight of pinto beans on 31,100 harvested acres, averaging 23.6 hundred-weight per acre. The University of Wyoming Seed Certification Service 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, a wide range of germplasm is evaluated each year, assisting producers in selecting varieties best suited for Wyoming soils and climate. Please note that this report represents only the Powell CDBN. The Lingle CDBN data are presented separately.

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 Outlook applied on May 17. The plots received 20 units of N, 30 units of P and 5 units of Zn per acre on May 18. The plots were planted on May 22 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 occurred during the growing season when appropriate. Furrow irrigation was applied on June 4, July 2, July 14, July 31, August 12, and August 24. 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 good, with warm soil and good moisture at planting. Summer temperatures and precipitation were reasonable, and all entries matured prior to the first frost. Flowering dates, maturity dates, and yield components are presented in the table below (page 2).

Acknowledgements

This nursery was possible only with significant assistance. The Powell R & E Center staff, Brad May and Keith Schaefer, managed the plots.

Budget Update

The account for this project was established after harvest. We expect to spend the allocated funds during the next three months to cover lingering invoices, wages, and replace supplies that were paid by other funds during the 2018 planting and growing.

2018 Powell, WY Cooperative Dry Bean Nursery Data

| Name | Market Class | Bloom Days after Planting | Buckskin Days after Planting | Yield lbs/A | Seeds per Pound |
|------------------|--------------|---------------------------|------------------------------|-------------|-----------------|
| ACUG 16-NDP1 | NDP | 55 | 84 | 1920 | 1226 |
| La Paz | Pinto | 58 | 88 | 2800 | 1255 |
| Othello | Pinto | 56 | 76 | 1960 | 1204 |
| PT16-18 | Pinto | 56 | 86 | 2190 | 1231 |
| PT11-13B | Pinto | 57 | 85 | 2266 | 1077 |
| NE2-17-18 | SLD | 54 | 86 | 2219 | 1048 |
| NE2-17-39 | SLD | 53 | 87 | 2197 | 1110 |
| ND Palomino | SLD | 55 | 81 | 2435 | 1116 |
| NE1-17-10 | GN | 57 | 85 | 2751 | 1184 |
| ACUG-15-B4 | Black | 56 | 88 | 2963 | 2053 |
| Eclipse | Black | 58 | 84 | 2654 | 2074 |
| AAC Shock (14-1) | Navy | 54 | 82 | 2026 | 2046 |
| AAC Argosy | Navy | 53 | 84 | 2458 | 1870 |
| Yeti | WK | 53 | 85 | 1333 | 971 |
| Dynasty | DRK | 53 | 84 | 2067 | 901 |
| Inferno | LRK | 53 | 85 | 1800 | 870 |
| CELRK | LRK | 53 | 77 | 1478 | 987 |
| LRK 6 | LRK | 53 | 81 | 2280 | 1099 |
| OAC Rosito | Sm Dark Red | 56 | 85 | 2375 | 2120 |
| SR10-2-1 | Small Red | 54 | 86 | 2627 | 1183 |
| PK7-4 | Pink | 54 | 83 | 2519 | 1330 |
| B8006282 | Black | 58 | 84 | 3014 | 2207 |
| Y2033307 | Yellow | 56 | 83 | 1659 | 1163 |
| Ruby | Small Red | 57 | 86 | 3064 | 1525 |
| Black Tail | Black | 57 | 85 | 2879 | 2086 |
| | Mean | 55 | 84 | 2317 | 1398 |
| | LSD | 2.8 | 2.6 | 611 | 106 |
| | CV | 3.6 | 2.2 | 19 | 5.4 |

NDP - Non-darkening pinto
SLD - Slow darkening pinto

GN - Great Northern
DRK - Dark red kidney

LRK - Light red kidney
WK - White kidney