**2020 Nebraska Dry Bean Variety Trials**

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In 2020, the PHREC Dry Bean Breeding program conducted twelve replicated field trials at two locations, the Scottsbluff Ag Lab (Scotts80-Field-6) and the Mitchell Ag lab (Field W6), to evaluate which dry bean entries (varieties/experimental lines) are best suited for western Nebraska. These trials have been ongoing for 39 years as a service to the Nebraska dry bean industry. Information about dry bean variety performance is available on the web at <http://cropwatch.unl./varietytest-Drybeans/2020>.

**Locations and Germplasm**

Twelve replicated trials [two great northern (28 entries), two pintos (50 entries), two light red kidney (LRK, 19 entries), two dark red kidney (DRK, 9 entries), two black (18 entries), and two navy (8 entries) were planted at the Scottsbluff and Mitchell Ag Lab on June 10, and 2nd, respectively.

Soil at the Scottsbluff site (41◦53.6′ N, 103◦40.7′ W, 1200 m elevation) is a Tripp very fine sandy loam (coarse-silty, mixed, superactive, mesic Aridic Haplustolls). Soil at the Mitchell site (41◦56.6′ N, 103◦41.9′ W, 1240 m elevation) is a silt loam (Typic Ustorthents).

**Agronomic Management**

*Scottsbluff Ag Lab*

The field at the Scottsbluff Ag Lab was shallow tillage (Landstar) on May 20 and it was plowed on May 27 and sprayed/roller harrowed with Eptam @ 2.5 pts/acre and Sonalan @ 2 pts/acre on May 28.

The field at the Scottsbluff Ag Lab had 26# residual and 65#N for a manure credit so no additional nitrogen was applied.

The field at the Scottsbluff Ag Lab was irrigated 16 times (12.7 inches) using sprinkler irrigation. It received an additional 2.18 inches of precipitation.

*Mitchell Ag Lab*

The field at the Mitchell Ag Lab was shallow tillage on May 18 and it plowed on May 19 and sprayed/roller harrowed with Eptam @ 2.5 pts/acre and Sonalan @ 2 pts/acre on May 24.

The field at the Mitchell Ag Lab had 45#N residual and 57#N for a manure credit so no additional nitrogen was applied

The field at the Mitchell Ag Lab was irrigated 19 times (14.9 inches) using sprinkler irrigation. It received an additional 1.90 inches of precipitation.

**Experimental Design**

The entries were assigned to experimental units using a randomized complete block design with four replications. Each plot consisted of four 22-foot rows spaced 22 inches apart. The target plant population was 80,000 plants/acre for all market classes except the LRK/DRK which had a target population of 100,000 plants/acre. The trials were planted with a Hege cone planter. At the end of the growing season, a plot combine (Wintersteiger Classic) was used to harvest 18 feet of the middle two rows of each plot. Variety/line trials at the Scottsbluff and Mitchell Ag lab were undercut and combined on September 24 and 15, respectively.

**Response Variables**

Data collected were: yield (lbs/acre adjusted to 14% Moisture), DTF (days to flowering, actual number of days from planting to when 50% of the plants had at least one flower opened), DTM (days to harvest maturity, actual days from planting to when 80% of the plants were ready to be harvested), 100-seed counts (weight of 100 seeds in grams, adjusted to 14% Moisture), and Test Weight (lbs/bushel) (test weight adjusted to 14% Moisture. Data are presented in Tables 1 to 12.

**Statistical Analysis**

Data were analyzed using PROC MIXED (SAS, 2004). Means were separated using a F-protected LSD. All tests were considered significant at *P* ≤ 0.05.

The GRAND MEAN (bottom of each table) refers to the mean of the experiment. The Coefficient of Variation expressed as a percentage (CV %), measures the variability of the experiment; large CVs indicate that a large amount of variation cannot be attributed to differences among entries. The LSD (Least Significance Difference) was used to evaluate differences among entries. If the difference between two entries exceeds the LSD value for a particular response variable, the higher value is significantly greater with 95% probability (0.05 level). If the difference between two entries is less than the LSD value, the values are considered similar.

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**Acknowledgments**

The authors express their gratitude to Gene Kizzire, his team, and the summer crew for help with agronomic management and Ann Koehler for editing the document. The financial support of the Dry Bean Commission is greatly appreciated.

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| **Table 1. 2020 Great Northern Variety Trial- Scottsbluff Ag Lab.** | | | | | | | |
| **Ent** | **ID** | **Yield** | **Flowering** | **Maturity** | **100-SeedWeight** | **Moisture** | **Test Weight** |
| **no** |  | **lbs/acre** | **days** | **days** | **gr** | **%** | **lbs/bu** |
|  |  |  |  |  |  |  |  |
| 1 | Aries | 3181 | 42 | 85 | 34.9 | 9.6 | 64.6 |
| 2 | Hydra | 3254 | 42 | 89 | 44.4 | 9.9 | 64.0 |
| 3 | Draco | 3186 | 45 | 90 | 35.1 | 9.8 | 63.6 |
| 4 | Andromeda (13151) | 2779 | 41 | 82 | 41.2 | 9.8 | 62.0 |
| 5 | Virgo (13172) | 2899 | 42 | 89 | 34.9 | 9.7 | 62.8 |
| 6 | 12134 | 2958 | 44 | 88 | 36.2 | 9.8 | 62.2 |
| 7 | 14164 | 3213 | 43 | 84 | 37.3 | 9.7 | 63.9 |
| 8 | 14172 | 3232 | 45 | 91 | 35.0 | 9.6 | 63.4 |
| 9 | 15215 | 3500 | 42 | 89 | 36.2 | 9.7 | 64.7 |
| 10 | 16208 | 3368 | 45 | 91 | 35.2 | 9.8 | 63.8 |
| 11 | 16209 | 3017 | 42 | 88 | 36.5 | 9.4 | 61.8 |
| 12 | 16213 | 3252 | 41 | 88 | 42.5 | 9.8 | 64.1 |
| 13 | 17205 | 3024 | 42 | 86 | 39.5 | 9.8 | 64.8 |
| 14 | 17227 | 4015 | 42 | 87 | 36.7 | 9.7 | 61.9 |
| 15 | Panhandle Pride | 3356 | 42 | 83 | 35.2 | 9.7 | 65.9 |
| 16 | NE1-17-9 | 3392 | 42 | 84 | 36.3 | 9.5 | 63.5 |
| 17 | NE1-17-19 | 2699 | 41 | 93 | 38.2 | 9.8 | 62.9 |
| 18 | NE1-17-27 | 3320 | 41 | 87 | 40.8 | 10.1 | 63.9 |
| 19 | NE1-17-29 | 3420 | 43 | 84 | 36.2 | 9.6 | 62.5 |
| 20 | NE1-17-45 | 3456 | 41 | 84 | 39.6 | 10.2 | 63.9 |
| 21 | NE1-17-10 | 3739 | 44 | 85 | 35.4 | 9.6 | 63.1 |
| 22 | NE1-17-36 | 3526 | 42 | 90 | 38.1 | 9.8 | 62.3 |
| 23 | NE1-17-41 | 3033 | 41 | 84 | 39.7 | 10.1 | 63.7 |
| 24 | NE1-17-43 | 3125 | 40 | 92 | 40.0 | 9.9 | 63.7 |
| 25 | NE1-17-22 | 3839 | 41 | 86 | 41.8 | 9.5 | 63.4 |
| 26 | NE1-17-31 | 3859 | 44 | 90 | 39.9 | 9.8 | 62.2 |
| 27 | NE3-17-18 | 3233 | 42 | 86 | 36.4 | 9.8 | 63.1 |
| 28 | Coyne | 3218 | 41 | 85 | 37.1 | 9.7 | 64.2 |
|  | **GRAND MEAN** | 3289 | 42 | 87 | 37.9 | 9.8 | 63.4 |
|  | **LSD 5 %** | 635 | 1 | 3 | 1.7 | 0.2 | 0.9 |
|  | **CV %** | 9.7 | 1.6 | 1.9 | 2.2 | 1.2 | 0.7 |

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| **Table 2. 2020 Great Northern Variety Trial- Mitchell Ag Lab.** | | | | | | | |
| **Ent** | **ID** | **Yield** | **Flowering** | **Maturity** | **100-SeedWeight** | **Moisture** | **Test Weight** |
| **no** |  | **lbs/acre** | **days** | **days** | **gr** | **%** | **lbs/bu** |
|  |  |  |  |  |  |  |  |
| 1 | Aries | 3543 | 44 | 84 | 34.7 | 9.5 | 64.8 |
| 2 | Hydra | 3262 | 44 | 86 | 43.5 | 9.9 | 64.5 |
| 3 | Draco | 3251 | 47 | 87 | 34.4 | 9.8 | 63.5 |
| 4 | Andromeda (13151) | 3567 | 43 | 84 | 43.1 | 9.5 | 63.6 |
| 5 | Virgo (13172) | 3736 | 44 | 87 | 36.6 | 9.7 | 63.9 |
| 6 | 12134 | 3334 | 46 | 87 | 38.7 | 9.8 | 62.6 |
| 7 | 14164 | 3496 | 45 | 83 | 37.1 | 9.7 | 64.0 |
| 8 | 14172 | 3011 | 47 | 87 | 34.3 | 9.5 | 63.9 |
| 9 | 15215 | 3649 | 45 | 87 | 37.7 | 9.7 | 64.7 |
| 10 | 16208 | 3610 | 47 | 89 | 35.3 | 9.7 | 64.4 |
| 11 | 16209 | 3502 | 45 | 88 | 36.1 | 9.6 | 63.2 |
| 12 | 16213 | 3422 | 44 | 87 | 43.3 | 9.7 | 64.2 |
| 13 | 17205 | 3530 | 43 | 85 | 37.4 | 9.7 | 65.2 |
| 14 | 17227 | 3949 | 45 | 86 | 37.4 | 9.7 | 63.1 |
| 15 | Panhandle Pride | 3508 | 43 | 85 | 35.0 | 9.6 | 65.6 |
| 16 | NE1-17-9 | 3654 | 44 | 85 | 37.1 | 9.5 | 63.9 |
| 17 | NE1-17-19 | 3435 | 43 | 88 | 39.3 | 9.7 | 63.2 |
| 18 | NE1-17-27 | 3525 | 43 | 85 | 40.6 | 10.1 | 63.8 |
| 19 | NE1-17-29 | 3459 | 44 | 85 | 37.1 | 9.6 | 63.6 |
| 20 | NE1-17-45 | 3522 | 43 | 84 | 41.3 | 9.9 | 64.9 |
| 21 | NE1-17-10 | 3582 | 45 | 83 | 33.9 | 9.4 | 63.5 |
| 22 | NE1-17-36 | 3610 | 45 | 85 | 39.2 | 9.8 | 63.1 |
| 23 | NE1-17-41 | 3309 | 42 | 83 | 40.3 | 9.8 | 64.9 |
| 24 | NE1-17-43 | 3214 | 42 | 86 | 40.1 | 9.8 | 64.0 |
| 25 | NE1-17-22 | 4006 | 43 | 85 | 40.5 | 9.6 | 64.5 |
| 26 | NE1-17-31 | 3790 | 45 | 86 | 39.5 | 9.6 | 61.9 |
| 27 | NE3-17-18 | 3361 | 45 | 85 | 37.0 | 9.8 | 63.8 |
| 28 | Coyne | 3487 | 43 | 84 | 37.7 | 9.9 | 64.4 |
|  | **GRAND MEAN** | 3512 | 44 | 85 | 38.2 | 9.7 | 63.9 |
|  | **LSD 5 %** | 470 | 1 | 1 | 1.9 | 0.2 | 0.7 |
|  | **CV %** | 6.7 | 1.2 | 0.8 | 2.5 | 1.3 | 0.5 |

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| **Table 3. 2020 Pinto Variety Trial- Scottsbluff Ag Lab.** | | | | | | | |
| **Ent** | **ID** | **Yield** | **Flowering** | **Maturity** | **100-SeedWeight** | **Moisture** | **Test Weight** |
| **no** |  | **lbs/acre** | **days** | **days** | **gr** | **%** | **lbs/bu** |
|  |  |  |  |  |  |  |  |
| 1 | GTS-904 | 3458 | 45 | 92 | 38.6 | 9.5 | 61.9 |
| 2 | GTS-907 | 3750 | 41 | 83 | 35.0 | 9.5 | 62.4 |
| 3 | La Paz | 3457 | 47 | 88 | 32.5 | 9.8 | 63.4 |
| 4 | Monterrey | 3276 | 47 | 89 | 31.6 | 9.7 | 64.1 |
| 5 | Torreon | 3963 | 44 | 84 | 35.5 | 9.7 | 64.1 |
| 6 | Vibrant | 3701 | 42 | 84 | 36.2 | 8.9 | 63.6 |
| 7 | Radiant | 3874 | 42 | 84 | 36.7 | 9.0 | 64.3 |
| 8 | Cowboy | 3631 | 44 | 83 | 34.8 | 9.8 | 63.9 |
| 9 | Lumen (14451) | 3353 | 45 | 90 | 34.0 | 10.1 | 66.3 |
| 10 | Gleam (14455) | 4124 | 45 | 87 | 32.8 | 9.6 | 65.3 |
| 11 | 18-453 | 3032 | 46 | 92 | 36.8 | 9.1 | 64.2 |
| 12 | 18-272 | 3347 | 42 | 83 | 35.4 | 9.3 | 63.3 |
| 13 | 18-274 | 3866 | 43 | 82 | 37.4 | 9.7 | 64.1 |
| 14 | 18-283 | 3522 | 47 | 89 | 41.7 | 9.6 | 61.0 |
| 15 | 18-376 | 3329 | 44 | 88 | 39.9 | 10.0 | 64.8 |
| 16 | 18-291 | 3166 | 44 | 94 | 53.1 | 8.7 | 60.0 |
| 17 | SV6139GR | 4120 | 44 | 84 | 34.5 | 9.6 | 64.1 |
| 18 | Windbreaker | 3952 | 42 | 84 | 38.4 | 9.5 | 61.1 |
| 19 | Staybright | 3157 | 42 | 88 | 36.1 | 9.5 | 64.1 |
| 20 | ND Palomino | 3883 | 40 | 88 | 37.9 | 8.8 | 62.7 |
| 21 | 41767-15 | 3017 | 41 | 82 | 41.7 | 9.0 | 65.2 |
| 22 | 30903-6 | 3361 | 41 | 79 | 34.4 | 9.3 | 63.9 |
| 23 | 30993-27 | 3486 | 43 | 89 | 36.6 | 9.5 | 64.4 |
| 24 | 33503-5 | 3181 | 44 | 92 | 39.5 | 9.1 | 61.3 |
| 25 | 34628-5 | 3361 | 44 | 91 | 40.7 | 9.6 | 62.0 |
| 26 | 52646-14 | 3008 | 44 | 88 | 42.9 | 9.5 | 60.8 |
| 27 | 43732-5 | 3171 | 45 | 94 | 40.7 | 9.6 | 62.4 |
| 28 | 53676-3 | 2355 | 49 | 92 | 35.1 | 9.3 | 59.6 |
| 29 | EX1843-P | 2996 | 42 | 83 | 32.4 | 9.3 | 61.1 |
| 30 | EX1844-P | 3492 | 43 | 82 | 37.7 | 9.4 | 61.2 |
| 31 | EX1846-P | 3433 | 43 | 82 | 35.8 | 9.2 | 60.9 |
| 32 | Croissant | 3609 | 43 | 88 | 37.4 | 9.2 | 62.7 |
| 33 | DR Wood | 3502 | 45 | 94 | 37.3 | 9.6 | 62.1 |
| 34 | Long's Peak | 3131 | 45 | 89 | 36.8 | 9.5 | 62.0 |
| 35 | Centennial | 3345 | 43 | 93 | 37.4 | 9.3 | 62.7 |
| 36 | NE2-17-18 | 3453 | 42 | 92 | 43.5 | 9.5 | 62.4 |
| 37 | NE2-17-20 | 3093 | 43 | 91 | 36.6 | 9.2 | 62.0 |
| 38 | NE2-17-37 | 3045 | 41 | 88 | 35.3 | 9.6 | 63.0 |
| 39 | NE2-17-38 | 3190 | 38 | 85 | 38.6 | 9.2 | 61.6 |
| 40 | NE2-17-40 | 3604 | 43 | 88 | 40.8 | 8.9 | 63.9 |
| 41 | NE2-17-41 | 3114 | 40 | 88 | 40.5 | 9.3 | 59.0 |
| 42 | NE4-17-10 | 3602 | 39 | 84 | 39.9 | 9.2 | 59.8 |
| 43 | NE4-17-6 | 3716 | 38 | 83 | 42.2 | 9.5 | 61.7 |
| 44 | NE4-18-16 | 3408 | 41 | 88 | 43.3 | 9.9 | 63.2 |
| 45 | NE4-18-45 | 3554 | 41 | 89 | 41.8 | 9.2 | 61.3 |
| 46 | NE4-18-55 | 3364 | 42 | 92 | 46.8 | 9.8 | 62.2 |
| 47 | NE4-18-40 | 2904 | 40 | 92 | 38.7 | 8.8 | 61.1 |
| 48 | NE2-17-44 | 3753 | 38 | 89 | 39.8 | 9.1 | 60.6 |
| 49 | USDA-Rattler | 3873 | 46 | 91 | 35.2 | 9.4 | 62.1 |
| 50 | PT16-9 | 2911 | 45 | 90 | 35.8 | 9.8 | 63.1 |
|  | **GRAND MEAN** | 3420 | 43 | 88 | 38.1 | 9.4 | 62.6 |
|  | **LSD 5 %** | 614 | 1 | 3 | 1.8 | 0.3 | 0.9 |
|  | **CV %** | 9.1 | 1.8 | 1.8 | 2.4 | 1.8 | 0.7 |

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| **Table 4. 2020 Pinto Variety Trial- Mitchell Ag Lab.** | | | | | | | |
| **Ent** | **ID** | **Yield** | **Flowering** | **Maturity** | **100-SeedWeight** | **Moisture** | **Test Weight** |
| **no** |  | **lbs/acre** | **days** | **days** | **gr** | **%** | **lbs/bu** |
|  |  |  |  |  |  |  |  |
| 1 | GTS-904 | 3864 | 47 | 89 | 39.9 | 9.8 | 61.9 |
| 2 | GTS-907 | 3856 | 44 | 83 | 37.7 | 9.5 | 63.2 |
| 3 | La Paz | 3696 | 48 | 88 | 34.2 | 9.8 | 64.5 |
| 4 | Monterrey | 3708 | 47 | 87 | 34.1 | 10.0 | 64.0 |
| 5 | Torreon | 3685 | 47 | 87 | 37.6 | 9.7 | 65.0 |
| 6 | Vibrant | 4113 | 44 | 85 | 37.3 | 9.6 | 65.1 |
| 7 | Radiant | 3666 | 45 | 83 | 36.8 | 9.1 | 64.7 |
| 8 | Cowboy | 3994 | 47 | 85 | 36.5 | 9.8 | 49.8 |
| 9 | Lumen (14451) | 3764 | 47 | 87 | 38.1 | 9.9 | 66.5 |
| 10 | Gleam (14455) | 3807 | 46 | 86 | 35.4 | 10.0 | 65.0 |
| 11 | 18-453 | 3988 | 47 | 89 | 39.2 | 9.7 | 64.3 |
| 12 | 18-272 | 4163 | 44 | 81 | 36.5 | 9.3 | 65.0 |
| 13 | 18-274 | 3750 | 46 | 83 | 39.2 | 9.6 | 64.4 |
| 14 | 18-283 | 3742 | 47 | 87 | 41.9 | 9.5 | 62.5 |
| 15 | 18-376 | 3468 | 46 | 85 | 39.6 | 9.9 | 66.2 |
| 16 | 18-291 | 3191 | 47 | 90 | 54.2 | 9.1 | 59.9 |
| 17 | SV6139GR | 4286 | 45 | 85 | 35.9 | 9.7 | 64.3 |
| 18 | Windbreaker | 4103 | 45 | 85 | 40.7 | 9.4 | 61.8 |
| 19 | Staybright | 3438 | 45 | 88 | 37.4 | 9.5 | 64.8 |
| 20 | ND Palomino | 4101 | 43 | 86 | 39.3 | 9.1 | 64.2 |
| 21 | 41767-15 | 3762 | 41 | 82 | 43.4 | 9.5 | 65.4 |
| 22 | 30903-6 | 3839 | 43 | 79 | 32.9 | 9.5 | 64.2 |
| 23 | 30993-27 | 3404 | 44 | 87 | 37.6 | 9.4 | 65.1 |
| 24 | 33503-5 | 3933 | 46 | 88 | 39.6 | 9.4 | 62.9 |
| 25 | 34628-5 | 3674 | 47 | 89 | 42.5 | 9.8 | 62.5 |
| 26 | 52646-14 | 3223 | 47 | 87 | 44.6 | 9.7 | 61.7 |
| 27 | 43732-5 | 3552 | 47 | 92 | 41.5 | 9.8 | 62.9 |
| 28 | 53676-3 | 3035 | 49 | 91 | 35.3 | 9.3 | 60.9 |
| 29 | EX1843-P | 3917 | 44 | 85 | 34.7 | 9.4 | 61.9 |
| 30 | EX1844-P | 4028 | 45 | 84 | 39.7 | 9.2 | 62.0 |
| 31 | EX1846-P | 3546 | 45 | 82 | 36.9 | 9.3 | 61.7 |
| 32 | Croissant | 4015 | 44 | 87 | 38.9 | 9.7 | 63.6 |
| 33 | DR Wood | 3656 | 46 | 90 | 38.4 | 9.9 | 63.0 |
| 34 | Long's Peak | 3454 | 45 | 86 | 39.2 | 9.2 | 62.7 |
| 35 | Centennial | 3568 | 45 | 89 | 38.3 | 9.7 | 63.8 |
| 36 | NE2-17-18 | 3904 | 44 | 87 | 47.3 | 9.3 | 62.9 |
| 37 | NE2-17-20 | 3791 | 45 | 86 | 39.2 | 9.4 | 63.3 |
| 38 | NE2-17-37 | 3483 | 43 | 85 | 35.5 | 9.4 | 63.2 |
| 39 | NE2-17-38 | 3884 | 42 | 85 | 39.7 | 9.4 | 62.3 |
| 40 | NE2-17-40 | 3995 | 44 | 87 | 43.4 | 9.2 | 64.0 |
| 41 | NE2-17-41 | 3855 | 44 | 87 | 42.2 | 9.3 | 60.1 |
| 42 | NE4-17-10 | 3667 | 43 | 82 | 39.8 | 9.3 | 60.3 |
| 43 | NE4-17-6 | 3946 | 42 | 83 | 43.0 | 9.2 | 62.6 |
| 44 | NE4-18-16 | 3401 | 43 | 84 | 43.2 | 9.6 | 63.6 |
| 45 | NE4-18-45 | 3504 | 45 | 86 | 42.0 | 9.2 | 61.1 |
| 46 | NE4-18-55 | 3745 | 45 | 90 | 49.5 | 9.9 | 62.3 |
| 47 | NE4-18-40 | 3490 | 45 | 89 | 39.7 | 9.1 | 61.0 |
| 48 | NE2-17-44 | 4018 | 42 | 88 | 41.6 | 9.2 | 60.9 |
| 49 | USDA-Rattler | 3928 | 47 | 87 | 36.9 | 9.6 | 63.4 |
| 50 | PT16-9 | 3424 | 47 | 88 | 35.4 | 9.7 | 63.6 |
|  | **GRAND MEAN** | 3741 | 45 | 86 | 39.5 | 9.5 | 62.9 |
|  | **LSD 5 %** | 551 | 1 | 2 | 2.1 | 0.5 | 5.8 |
|  | **CV %** | 7.5 | 1.2 | 1.3 | 2.7 | 2.8 | 4.7 |

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| **Table 5. 2020 Light Red Kidney Variety Trial- Scottsbluff Ag Lab.** | | | | | | | |
| **Ent** | **ID** | **Yield** | **Flowering** | **Maturity** | **100-SeedWeight** | **Moisture** | **Test Weight** |
| **no** |  | **lbs/acre** | **days** | **days** | **gr** | **%** | **lbs/bu** |
|  |  |  |  |  |  |  |  |
| 1 | Closeau | 1937 | 35 | 84 | 57.7 | 9.2 | 59.9 |
| 2 | Pink Panther | 2263 | 36 | 87 | 59.8 | 8.9 | 59.0 |
| 3 | Red Zone | 2507 | 42 | 92 | 53.3 | 9.0 | 58.1 |
| 4 | Big Red | 3226 | 35 | 84 | 57.6 | 8.7 | 60.6 |
| 5 | Ronnie's Red | 2687 | 40 | 91 | 62.3 | 8.8 | 59.6 |
| 6 | Red Dawn (09363) | 3316 | 36 | 79 | 59.7 | 8.8 | 60.3 |
| 7 | 15907 | 2579 | 42 | 92 | 53.9 | 8.8 | 57.2 |
| 8 | 15923 | 2261 | 36 | 84 | 62.0 | 9.0 | 58.9 |
| 9 | 161014 | 3005 | 40 | 89 | 57.6 | 8.9 | 59.7 |
| 10 | 161041 | 2704 | 42 | 91 | 55.3 | 8.9 | 58.6 |
| 11 | CELRK | 2949 | 34 | 80 | 58.6 | 9.0 | 60.6 |
| 12 | Panhandle Red | 2745 | 40 | 90 | 55.0 | 9.1 | 60.2 |
| 13 | L4063262 | 2335 | 41 | 93 | 58.5 | 9.1 | 58.7 |
| 14 | L1032326 | 3022 | 43 | 90 | 56.5 | 8.9 | 57.6 |
|  | **GRAND MEAN** | 2681 | 39 | 88 | 57.7 | 8.9 | 59.2 |
|  | **LSD 5 %** | 350 | 3 | 3 | 2.3 | 0.3 | 1.0 |
|  | **CV %** | 6.5 | 3.4 | 1.6 | 2.0 | 1.5 | 0.8 |

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| **Table 6. 2020 Light Red Kidney Variety Trial- Mitchell Ag Lab.** | | | | | | | |
| **Ent** | **ID** | **Yield** | **Flowering** | **Maturity** | **100-SeedWeight** | **Moisture** | **Test Weight** |
| **no** |  | **lbs/acre** | **days** | **days** | **gr** | **%** | **lbs/bu** |
|  |  |  |  |  |  |  |  |
| 1 | Closeau | 1968 | 37 | 84 | 60.6 | 9.2 | 60.5 |
| 2 | Pink Panther | 2519 | 38 | 86 | 58.8 | 9.2 | 59.9 |
| 3 | Red Zone | 2884 | 42 | 91 | 57.2 | 9.2 | 58.7 |
| 4 | Big Red | 3388 | 36 | 83 | 57.8 | 9.3 | 60.3 |
| 5 | Ronnie's Red | 2831 | 43 | 88 | 60.5 | 9.1 | 60.2 |
| 6 | Red Dawn (09363) | 3020 | 39 | 78 | 59.2 | 9.1 | 60.2 |
| 7 | 15907 | 2829 | 45 | 93 | 52.5 | 9.2 | 57.2 |
| 8 | 15923 | 2309 | 37 | 81 | 57.7 | 9.2 | 59.5 |
| 9 | 161014 | 2720 | 43 | 85 | 54.2 | 9.0 | 60.1 |
| 10 | 161041 | 3042 | 45 | 88 | 58.1 | 9.0 | 59.3 |
| 11 | CELRK | 2878 | 37 | 80 | 56.6 | 9.0 | 61.4 |
| 12 | Panhandle Red | 2579 | 41 | 86 | 55.7 | 9.4 | 60.5 |
|  | **GRAND MEAN** | 2747 | 40 | 85 | 57.4 | 9.2 | 59.8 |
|  | **LSD 5 %** | 395 | 2 | 2 | 2.8 | 0.4 | 1.0 |
|  | **CV %** | 7.1 | 2.1 | 1.1 | 2.4 | 2.0 | 0.8 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 7. 2020 Dark Red Kidney Variety Trial- Scottsbluff Ag Lab.** | | | | | | | |
| **Ent** | **ID** | **Yield** | **Flowering** | **Maturity** | **100-SeedWeight** | **Moisture** | **Test Weight** |
| **no** |  | **lbs/acre** | **days** | **days** | **gr** | **%** | **lbs/bu** |
|  |  |  |  |  |  |  |  |
| 1 | Chaparral | 3092 | 39 | 91 | 45.3 | 9.0 | 59.3 |
| 2 | Epic (09430) | 2268 | 39 | 91 | 57.8 | 8.7 | 59.9 |
| 3 | Spire (09431) | 2765 | 40 | 92 | 49.2 | 8.9 | 59.8 |
| 4 | Rampart (09434) | 2468 | 39 | 84 | 47.4 | 8.8 | 60.5 |
| 5 | 15978 | 2384 | 44 | 91 | 49.6 | 8.8 | 61.1 |
| 6 | 15981 | 2186 | 43 | 89 | 56.5 | 8.5 | 55.4 |
| 7 | 151011 | 3013 | 40 | 86 | 45.1 | 8.9 | 61.3 |
| 8 | 161156 | 2982 | 38 | 82 | 45.3 | 8.8 | 60.5 |
| 9 | 161164 | 2813 | 40 | 90 | 51.9 | 8.7 | 59.4 |
| 10 | Montcalm | 2416 | 41 | 92 | 52.8 | 8.8 | 59.2 |
| 11 | Red Hawk | 2786 | 37 | 83 | 52.1 | 8.7 | 59.2 |
|  | **GRAND MEAN** | 2652 | 40 | 88 | 50.3 | 8.8 | 59.6 |
|  | **LSD 5 %** | 300 | 2 | 2 | 2.6 | 0.3 | 1.0 |
|  | **CV %** | 5.6 | 2.7 | 1.1 | 2.5 | 1.5 | 0.8 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 8. 2020 Dark Red Kidney Variety Trial- Mitchell Ag Lab.** | | | | | | | |
| **Ent** | **ID** | **Yield** | **Flowering** | **Maturity** | **100-SeedWeight** | **Moisture** | **Test Weight** |
| **no** |  | **lbs/acre** | **days** | **days** | **gr** | **%** | **lbs/bu** |
|  |  |  |  |  |  |  |  |
| 1 | Chaparral | 3275 | 45 | 90 | 43.8 | 9.1 | 59.8 |
| 2 | Epic (09430) | 2162 | 44 | 88 | 56.3 | 9.0 | 59.7 |
| 3 | Spire (09431) | 3324 | 44 | 90 | 49.9 | 9.2 | 60.5 |
| 4 | Rampart (09434) | 2753 | 45 | 86 | 46.4 | 9.1 | 62.1 |
| 5 | 15978 | 2689 | 44 | 90 | 48.8 | 9.3 | 61.1 |
| 6 | 15981 | 2298 | 45 | 86 | 57.2 | 8.8 | 56.2 |
| 7 | 151011 | 2781 | 43 | 85 | 43.5 | 8.9 | 61.7 |
| 8 | 161156 | 3221 | 42 | 81 | 43.0 | 9.2 | 60.4 |
| 9 | 161164 | 2691 | 44 | 89 | 50.7 | 9.1 | 59.2 |
| 10 | Montcalm | 2832 | 44 | 90 | 54.3 | 8.8 | 59.4 |
| 11 | Red Hawk | 2678 | 43 | 84 | 47.2 | 8.9 | 58.7 |
|  | **GRAND MEAN** | 2791 | 44 | 87 | 49.2 | 9.0 | 59.9 |
|  | **LSD 5 %** | 243 | 1 | 2 | 2.0 | 0.3 | 0.9 |
|  | **CV %** | 4.3 | 1.6 | 1.2 | 2.0 | 1.5 | 0.8 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 9. 2020 Black Variety Trial- Scottsbluff Ag Lab.** | | | | | | | |
| **Ent** | **ID** | **Yield** | **Flowering** | **Maturity** | **100-SeedWeight** | **Moisture** | **Test Weight** |
| **no** |  | **lbs/acre** | **days** | **days** | **gr** | **%** | **lbs/bu** |
|  |  |  |  |  |  |  |  |
| 1 | B13SR1-1 | 3028 | 46 | 88 | 19.3 | 8.5 | 64.9 |
| 2 | Eclipse | 3513 | 48 | 90 | 18.6 | 8.3 | 65.2 |
| 3 | Black Bear | 3136 | 47 | 97 | 18.3 | 8.6 | 65.6 |
| 4 | Black Tails (14497) | 3099 | 48 | 91 | 18.9 | 8.4 | 65.6 |
| 5 | Spectre (14497) | 3666 | 48 | 97 | 20.3 | 8.9 | 65.4 |
| 6 | BlackBeard (14506) | 2916 | 47 | 95 | 21.2 | 8.3 | 64.9 |
| 7 | 13496 | 3172 | 47 | 90 | 19.4 | 8.1 | 64.4 |
| 8 | 13505 | 3340 | 48 | 91 | 18.7 | 8.5 | 64.5 |
| 9 | 14500 | 3426 | 48 | 96 | 21.8 | 8.3 | 65.5 |
| 10 | Ace | 3592 | 47 | 88 | 18.9 | 8.2 | 65.4 |
| 11 | NE14-18-3 | 3011 | 44 | 88 | 22.0 | 8.4 | 64.2 |
| 12 | NE14-18-4 | 3650 | 44 | 87 | 24.6 | 8.6 | 63.2 |
| 13 | GTS 1103 | 3303 | 52 | 99 | 19.3 | 8.5 | 66.5 |
|  | **GRAND MEAN** | 3296 | 47 | 92 | 20.1 | 8.4 | 65.0 |
|  | **LSD 5 %** | 439 | 1 | 4 | 1.0 | 0.2 | 0.6 |
|  | **CV %** | 6.6 | 1.5 | 2.0 | 2.5 | 1.4 | 0.5 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 10. 2020 Black Variety Trial- Mitchell Ag Lab.** | | | | | | | |
| **Ent** | **ID** | **Yield** | **Flowering** | **Maturity** | **100-SeedWeight** | **Moisture** | **Test Weight** |
| **no** |  | **lbs/acre** | **days** | **days** | **gr** | **%** | **lbs/bu** |
|  |  |  |  |  |  |  |  |
| 1 | B13SR1-1 | 3034 | 48 | 88 | 19.8 | 9.0 | 65.3 |
| 2 | Eclipse | 3804 | 48 | 92 | 20.7 | 9.3 | 65.7 |
| 10 | Ace | 3567 | 48 | 90 | 20.0 | 8.8 | 65.1 |
| 11 | NE14-18-3 | 2702 | 48 | 86 | 21.7 | 8.8 | 63.7 |
| 12 | NE14-18-4 | 3280 | 46 | 85 | 25.6 | 9.0 | 62.6 |
| 13 | GTS 1103 | 3572 | 53 | 97 | 20.7 | 9.6 | 65.7 |
|  | **GRAND MEAN** | 3326 | 48 | 90 | 21.4 | 9.1 | 64.7 |
|  | **LSD 5 %** | 369 | 0 | 2 | 0.9 | 1.1 | 0.9 |
|  | **CV %** | 5.3 | 0.3 | 1.3 | 2.0 | 5.9 | 0.7 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 11. 2020 Navy Variety Trial- Scottsbluff Ag Lab.** | | | | | | | |
| **Ent** | **ID** | **Yield** | **Flowering** | **Maturity** | **100-SeedWeight** | **Moisture** | **Test Weight** |
| **no** |  | **lbs/acre** | **days** | **days** | **gr** | **%** | **lbs/bu** |
|  |  |  |  |  |  |  |  |
| 1 | Apex | 3099 | 44 | 93 | 22.8 | 9.2 | 65.8 |
| 2 | SV1893GH | 2871 | 48 | 93 | 19.5 | 8.9 | 66.1 |
| 3 | HMS Medalist | 3131 | 46 | 93 | 17.2 | 9.5 | 65.2 |
| 4 | Blizzard | 3482 | 46 | 92 | 18.2 | 9.4 | 65.7 |
| 5 | HMS Bounty (12047) | 3468 | 47 | 92 | 17.8 | 9.5 | 65.5 |
| 6 | Amada (13068) | 3702 | 47 | 93 | 19.8 | 9.6 | 65.5 |
| 7 | 15094 | 3686 | 47 | 93 | 20.1 | 9.4 | 66.2 |
| 8 | 15095 | 3201 | 48 | 95 | 20.1 | 9.6 | 65.7 |
| 9 | EX1702-N | 3028 | 45 | 94 | 17.8 | 9.4 | 65.9 |
| 10 | EX1804-N | 3705 | 45 | 88 | 19.1 | 9.4 | 65.5 |
|  | **GRAND MEAN** | 3337 | 46 | 92 | 19.2 | 9.4 | 65.7 |
|  | **LSD 5 %** | 535 | 1 | 2 | 0.8 | 0.3 | 0.7 |
|  | **CV %** | 7.9 | 1.1 | 0.8 | 1.9 | 1.3 | 0.6 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 12. 2020 Navy Variety Trial- Mitchell Ag Lab.** | | | | | | | |
| **Ent** | **ID** | **Yield** | **Flowering** | **Maturity** | **100-SeedWeight** | **Moisture** | **Test Weight** |
| **no** |  | **lbs/acre** | **days** | **days** | **gr** | **%** | **lbs/bu** |
|  |  |  |  |  |  |  |  |
| 1 | Apex | 2407 | 45 | 90 | 21.6 | 9.2 | 64.6 |
| 2 | SV1893GH | 2494 | 49 | 89 | 17.6 | 9.0 | 64.2 |
| 3 | HMS Medalist | 3818 | 48 | 88 | 17.1 | 9.7 | 64.3 |
| 9 | EX1702-N | 2587 | 48 | 87 | 16.6 | 9.7 | 64.4 |
| 10 | EX1804-N | 3285 | 48 | 83 | 17.5 | 9.4 | 64.4 |
|  | **GRAND MEAN** | 2918 | 48 | 87 | 18.1 | 9.4 | 64.4 |
|  | **LSD 5 %** | 547 | 1 | 2 | 1.1 | 0.3 | 0.5 |
|  | **CV %** | 8.8 | 0.8 | 1.3 | 2.9 | 1.6 | 0.4 |