

TABLE 44_07YD: 2007 WSU SPRING BARLEY TRIAL SUMMARY

YIELD (LBS/ACRE)

| VARIETY NAME (6-ROW in <i>italics</i>) | ALMIRA | ANATONE | DAYTON | FAIRFIELD | FARMINGTON | LAMONT | MAYVIEW | PULLMAN | ST. JOHN | WALLA WALLA | AVERAGE YIELD |
|---|--------|---------|--------|-----------|------------|--------|---------|---------|----------|-------------|---------------|
| CHAMPION | 2948 | 1818 | 5522 | 3890 | 7578 | 2906 | 4983 | 5420 | 4852 | 3930 | 4385 |
| SPAULDING | 2976 | 1273 | 5475 | 4109 | 5525 | 2671 | 4521 | 5953 | 4945 | 3431 | 4088 |
| RADIANT | 2552 | 1328 | 5357 | 4048 | 6866 | 2519 | 4896 | 4537 | 4655 | 3445 | 4020 |
| 02WA-7028.9 | 2741 | 1457 | 5048 | 3847 | 6632 | 2429 | 4653 | 5371 | 4510 | 3468 | 4016 |
| BOULDER | 3072 | 1585 | 5150 | 3438 | 6848 | 2301 | 4506 | 4965 | 4600 | 3347 | 3981 |
| BOB | 3130 | 1259 | 5023 | 3873 | 6325 | 2434 | 4318 | 4559 | 4909 | 3750 | 3958 |
| 02WNZ-1095 | 2927 | 1170 | 4468 | 3913 | 5825 | 2765 | 4635 | 5379 | 4635 | 3381 | 3910 |
| HE-8805 | 2097 | 1253 | 4923 | 3587 | 6865 | 2713 | 4533 | 4820 | 4416 | 3536 | 3874 |
| 02WNZ-1015 | 2555 | 1292 | 5071 | 3715 | 5678 | 3127 | 4156 | 5163 | 4525 | 3401 | 3868 |
| HAXBY | 3037 | 1544 | 4096 | 3730 | 5541 | 2730 | 4440 | 5428 | 4815 | 3245 | 3861 |
| 04WNZ-90 | 2648 | 1332 | 5061 | 3499 | 6472 | 2711 | 4477 | 5009 | 4236 | 3048 | 3849 |
| BARONESSE | 2396 | 1106 | 4804 | 3618 | 5882 | 2770 | 4498 | 4758 | 4668 | 3803 | 3830 |
| 04WNZ-286 | 2636 | 1307 | 4875 | 3647 | 6602 | 2489 | 3958 | 4845 | 4452 | 3415 | 3823 |
| 02WA-7052.9 | 2548 | 1030 | 5339 | 3836 | 5779 | 2524 | 4398 | 5256 | 4643 | 2780 | 3813 |
| FARMINGTON | 2323 | 1166 | 4604 | 3576 | 6671 | 2496 | 4207 | 4900 | 4350 | 3095 | 3739 |
| BURTON | 2379 | 1257 | 5025 | 3437 | 6483 | 2865 | 4011 | 4313 | 4293 | 3294 | 3736 |
| <i>01NZ384</i> | 2570 | 1174 | 4930 | 2910 | 6404 | 2038 | 4184 | 5573 | 4095 | 3087 | 3696 |
| 02WNZ-1100 | 3121 | 1360 | 4144 | 3505 | 5358 | 2778 | 4509 | 5058 | 4343 | 2663 | 3684 |
| HARRINGTON | 2791 | 1058 | 4696 | 3701 | 6068 | 2556 | 4233 | 4834 | 4107 | 2726 | 3677 |
| 01NZ111 | 2886 | 927 | 4611 | 3366 | 6780 | 2482 | 4226 | 4960 | 4181 | 2275 | 3669 |
| 02WNZ-1821 | 2260 | 810 | 5134 | 3233 | 5998 | 2373 | 4106 | 5075 | 4527 | 3145 | 3666 |
| <i>LEGACY</i> | 2374 | 1179 | 4421 | 2896 | 6380 | 2302 | 4146 | 4843 | 4256 | 3063 | 3586 |
| 04WNZ-55 | 2541 | 1238 | 4673 | 3570 | 5905 | 1801 | 4348 | 4911 | 4323 | 2524 | 3583 |
| 02WA-7018.13 | 2899 | 1218 | 3809 | 3483 | 5966 | 2392 | 4191 | 4127 | 4403 | 3115 | 3560 |
| 02WNZ-1990 | 2337 | 945 | 4408 | 3278 | 6516 | 2139 | 3974 | 4871 | 4068 | 3009 | 3554 |
| <i>03WA-192.4</i> | 2119 | 1348 | 4351 | 3275 | 6774 | 1677 | 3826 | 5298 | 3885 | 2546 | 3510 |
| 03WNZ-045 | 2152 | 948 | 4057 | 3639 | 5401 | 2337 | 3995 | 5007 | 4461 | 2970 | 3497 |
| 03NZ199 | 2042 | 969 | 4802 | 2917 | 6399 | 1871 | 4077 | 5254 | 4221 | 2183 | 3474 |
| <i>MOREX</i> | 2777 | 1217 | 4073 | 2637 | 5604 | 2324 | 3710 | 4740 | 3998 | 3158 | 3424 |
| <i>01NZ392</i> | 1980 | 978 | 4440 | 2822 | 6616 | 1730 | 3455 | 5147 | 3994 | 2982 | 3414 |
| <i>01NZ706</i> | 1962 | 893 | 4597 | 3302 | 6306 | 1941 | 3709 | 4441 | 4057 | 2931 | 3414 |
| AC METCALFE | 2025 | 1007 | 4303 | 3496 | 5541 | 2509 | 3711 | 4711 | 4053 | 2666 | 3402 |
| 01WA-13860.5 | 2365 | 981 | 4261 | 2661 | 5206 | 1690 | 3634 | 4287 | 3700 | 1964 | 3075 |
| WA 9820-98 | 1947 | 842 | 3922 | 2763 | 5445 | 1940 | 3472 | 4397 | 3280 | 1890 | 2990 |
| 02WA-7037.25 | 2341 | 857 | 3906 | 2783 | 4758 | 1603 | 3475 | 4342 | 3507 | 1980 | 2955 |
| MERESSE | 2152 | 942 | 3852 | 2315 | 4746 | 1601 | 3279 | 4091 | 3322 | 1495 | 2780 |
| STATISTICS | | | | | | | | | | | |
| CV (%) | 15.7 | 14.1 | 6.0 | 7.7 | 7.3 | 13.1 | 7.9 | 8.0 | 6.4 | 8.7 | 8.8 |
| LSD (0.10) | 540.2 | 226.7 | 379.0 | 360.2 | 612.2 | 420.5 | 449.7 | 535.6 | 375.9 | 353.2 | 136.2 |
| Average | 2517 | 1168 | 4645 | 3398 | 6104 | 2348 | 4151 | 4907 | 4286 | 2965 | 3649 |
| Highest | 3130 | 1818 | 5522 | 4109 | 7578 | 3127 | 4983 | 5953 | 4945 | 3930 | 4385 |
| Lowest | 1947 | 810 | 3809 | 2315 | 4746 | 1601 | 3279 | 4091 | 3280 | 1495 | 2780 |

TABLE 44_07TW: 2007 WSU SPRING BARLEY TRIAL SUMMARY

TEST WEIGHT (LBS/BU)

| VARIETY NAME (6-ROW in <i>italics</i>) | ALMIRA | ANATONE | DAYTON | FAIRFIELD | FARMINGTON | LAMONT | MAYVIEW | PULLMAN | ST. JOHN | WALLA WALLA | AVERAGE TEST WEIGHT |
|---|--------|---------|--------|-----------|------------|--------|---------|---------|----------|-------------|------------------------|
| MERESSE | 56.5 | 52.3 | 58.3 | 54.1 | 59.4 | 48.5 | 56.8 | 58.4 | 55.6 | 57.2 | 55.7 |
| 01WA-13860.5 | 53.7 | 52.9 | 56.0 | 53.6 | 56.1 | 52.3 | 55.9 | 56.9 | 55.0 | 56.0 | 54.8 |
| WA 9820-98 | 57.3 | 51.2 | 56.0 | 53.1 | 54.4 | 54.0 | 56.7 | 52.3 | 52.3 | 56.1 | 54.3 |
| 02WA-7037.25 | 51.5 | 51.1 | 54.2 | 52.0 | 53.2 | 47.9 | 53.6 | 49.6 | 50.4 | 55.5 | 51.9 |
| HAXBY | 49.3 | 49.1 | 52.1 | 48.9 | 51.6 | 50.5 | 52.1 | 53.4 | 51.9 | 53.1 | 51.2 |
| BOULDER | 48.1 | 48.5 | 51.3 | 49.3 | 51.9 | 46.5 | 51.7 | 53.7 | 51.1 | 51.9 | 50.4 |
| CHAMPION | 48.2 | 47.3 | 51.3 | 49.0 | 50.6 | 48.9 | 51.7 | 52.6 | 51.6 | 52.6 | 50.4 |
| SPAULDING | 48.2 | 45.7 | 51.5 | 50.3 | 50.9 | 49.7 | 49.9 | 53.1 | 52.1 | 51.3 | 50.3 |
| 01NZ111 | 48.7 | 47.6 | 51.7 | 49.0 | 50.3 | 48.8 | 50.2 | 52.1 | 50.7 | 50.7 | 50.0 |
| 04WNZ-286 | 47.5 | 45.7 | 51.6 | 48.9 | 50.9 | 47.9 | 51.4 | 50.8 | 50.8 | 51.4 | 49.7 |
| 02WA-7028.9 | 46.8 | 47.4 | 50.6 | 48.1 | 49.7 | 46.1 | 49.8 | 52.3 | 49.6 | 50.6 | 49.1 |
| 04WNZ-90 | 45.9 | 46.3 | 51.4 | 48.3 | 50.2 | 48.0 | 49.8 | 50.8 | 49.8 | 50.5 | 49.1 |
| BOB | 48.0 | 46.1 | 50.4 | 48.1 | 50.0 | 46.9 | 49.5 | 50.6 | 50.4 | 51.1 | 49.1 |
| 02WA-7018.13 | 46.8 | 45.5 | 50.0 | 47.3 | 49.8 | 46.8 | 49.6 | 51.7 | 48.9 | 51.1 | 48.8 |
| 03WNZ-045 | 44.4 | 45.6 | 50.3 | 47.0 | 48.8 | 46.4 | 48.6 | 52.9 | 49.5 | 50.4 | 48.4 |
| 02WNZ-1100 | 47.1 | 45.8 | 49.9 | 47.7 | 49.3 | 46.1 | 49.2 | 48.9 | 48.9 | 50.3 | 48.3 |
| 02WNZ-1095 | 46.6 | 43.7 | 49.8 | 48.4 | 47.6 | 46.8 | 49.2 | 50.9 | 48.3 | 50.6 | 48.2 |
| 02WA-7052.9 | 45.5 | 43.7 | 50.2 | 47.7 | 49.1 | 46.9 | 47.1 | 51.1 | 49.2 | 49.0 | 48.0 |
| BARONESSE | 45.2 | 45.0 | 49.4 | 47.2 | 48.7 | 47.7 | 49.0 | 47.9 | 48.1 | 51.1 | 47.9 |
| 02WNZ-1015 | 45.6 | 45.0 | 49.1 | 46.9 | 48.6 | 46.8 | 46.7 | 50.3 | 48.6 | 49.8 | 47.7 |
| BURTON | 44.4 | 44.4 | 49.6 | 47.1 | 49.6 | 47.2 | 48.3 | 47.7 | 48.3 | 50.2 | 47.7 |
| RADIANT | 45.6 | 45.0 | 48.9 | 47.7 | 49.0 | 46.4 | 48.0 | 47.3 | 47.4 | 51.0 | 47.6 |
| 02WNZ-1821 | 44.2 | 44.0 | 49.3 | 46.3 | 47.9 | 47.3 | 48.1 | 49.7 | 48.3 | 49.3 | 47.5 |
| 04WNZ-55 | 44.7 | 44.7 | 49.6 | 46.6 | 48.7 | 44.8 | 48.5 | 49.4 | 48.4 | 49.0 | 47.4 |
| FARMINGTON | 44.3 | 44.4 | 49.0 | 46.3 | 48.3 | 44.8 | 47.9 | 51.0 | 48.8 | 49.1 | 47.4 |
| AC METCALFE | 43.0 | 43.4 | 49.5 | 47.1 | 47.5 | 45.6 | 47.5 | 51.6 | 47.9 | 50.1 | 47.3 |
| 02WNZ-1990 | 43.7 | 44.3 | 49.1 | 47.4 | 47.6 | 45.8 | 47.2 | 49.2 | 47.1 | 50.5 | 47.2 |
| HE-8805 | 43.0 | 44.8 | 49.3 | 46.7 | 47.4 | 45.2 | 46.9 | 51.0 | 46.8 | 50.5 | 47.2 |
| MOREX | 45.8 | 42.0 | 48.5 | 46.0 | 47.5 | 45.0 | 48.2 | 49.7 | 47.7 | 49.8 | 47.0 |
| HARRINGTON | 45.4 | 44.4 | 48.7 | 46.6 | 48.3 | 46.0 | 46.9 | 47.0 | 45.8 | 49.5 | 46.9 |
| LEGACY | 43.7 | 40.8 | 47.1 | 45.3 | 45.6 | 44.9 | 46.0 | 50.9 | 46.1 | 49.7 | 46.0 |
| 03NZ199 | 42.2 | 43.9 | 47.2 | 45.4 | 46.8 | 43.1 | 46.1 | 49.5 | 45.9 | 46.9 | 45.7 |
| 01NZ384 | 43.8 | 41.8 | 47.5 | 44.4 | 46.4 | 43.5 | 45.1 | 48.4 | 45.4 | 48.2 | 45.4 |
| 01NZ392 | 41.4 | 41.3 | 47.0 | 44.6 | 46.6 | 43.7 | 44.3 | 49.4 | 45.5 | 48.0 | 45.2 |
| 03WA-192.4 | 41.8 | 42.3 | 45.8 | 42.4 | 44.6 | 42.3 | 44.7 | 49.4 | 44.6 | 46.9 | 44.5 |
| 01NZ706 | 41.4 | 40.5 | 46.6 | 44.1 | 43.8 | 43.0 | 44.3 | 46.0 | 45.0 | 46.4 | 44.1 |
| STATISTICS | | | | | | | | | | | |
| CV (%) | 3.5 | 3.3 | 1.0 | 0.7 | 2.2 | 2.5 | 1.6 | 3.6 | 2.4 | 1.2 | 2.4 |
| LSD (0.10) | 2.2 | 3.5 | 0.7 | 0.5 | 1.5 | 2.8 | 1.1 | 2.5 | 1.6 | 0.8 | 0.5 |
| Average | 46.4 | 45.5 | 50.2 | 47.8 | 49.4 | 46.7 | 49.1 | 50.8 | 48.9 | 50.7 | 48.5 |
| Highest | 57.3 | 52.9 | 58.3 | 54.1 | 59.4 | 54.0 | 56.8 | 58.4 | 55.6 | 57.2 | 55.7 |
| Lowest | 41.4 | 40.5 | 45.8 | 42.4 | 43.8 | 42.3 | 44.3 | 46.0 | 44.6 | 46.4 | 44.1 |

SUMMARY - SPRING BARLEY – 2007 WSU VARIETY TESTING DATA

1. Attached are **SUMMARIES** for yield and test weight and percent grain protein from the 10 Spring Barley nurseries in the 2007 Variety Testing Program. Three (3) locations are not listed in the 2007 data set (Bickleton, Ritzville and Reardan) since field variation (CV %) in these nurseries was outside the limits for providing accurate performance evaluations among the varieties/experimental lines. Most of the locations listed are within the vicinity of the towns listed; however, Mayview is a location in Garfield County approximately 25 NE of Pomeroy, WA. If you have questions about locations please don't hesitate to let us know.
2. **Average yield across** all locations in 2007 was 3649 lbs/acre that is 11.3% lower than a previous three year average. Environmental extremes were manifested throughout the growing season that included drought/heat stresses from March through May. A two 2-week cool period in mid-June coupled with some timely precipitation was extremely beneficial to enable spring barley to mature and finish without significant yield reductions.
3. Across all locations, a few newer varieties/experimental lines had average **YIELD RANKINGS** higher than Baronesse; that has played since a dominant role in spring barley production since the early 1990's. An interesting note on the newer spring barley entries that out yielded Baronesse is that nearly 60% of these entries had **test weight values** significantly higher than Baronesse indicative of emphasis placed on improving test weight in spring barley. Many of the 6-row varieties/lines (six entries are listed in italics in the data set) continued to be at the lower end of the yield rankings. This is fairly typical since 6-row types tend to produce few tillers and could have been more sensitive to wide swings in environmental patterns. .
4. **TEST WEIGHT** average values were 48.5 lbs/bu; that is 1.5% lower than a previous 3-year average (49.2 lbs/bu). across all locations. This corresponds to results of the 2007 Washington Barley Quality Survey, 75.9% of the Washington barley crop graded U.S. No.1 and 95.8% of this year's crop graded U.S. No. 3 or better.
5. **Four hull-less, waxy barleys** were included in the trial (02WA-7037.25, 01WA-13860.5, WA 9820-98 (WSU) and MERESSE (Westbred, LLC) that had exceedingly high test weight values due to the kernel characteristic with no 'hull'. Test weight values for these varieties had a range of 51.9 lbs/ac to 55.7 lb/ac. Waxy barley is a type of specialty barley that has several quality traits that make it adaptable to many end uses. Most notably, waxy barley has a modified starch profile and increased levels of beta-glucans. Varieties with waxy starch are ideal for many food and industrial applications. **Limitations of Waxy barley:** Generally waxy barley varieties have reduced yield between 20 and 30% compared to normal feed barley varieties. This yield reduction is in part due to the fact that most waxy barley varieties are also hull-less thus reducing their production per acre on a weight basis.
6. **IMPORTANT: AVERAGE Yield and Test Weight rank** comparisons can only fairly be judged within a given location. Each of the data sets attached have varieties sorted high-to-low on the **average of ALL 10 locations** that is only calculated to give a quick **snapshot** of all varieties across all locations.