

DRYLAND SPRING GRAIN

Wheat

The Advanced yield spring wheat nursery consisted of 27 entries this season. Seeding was done May 3. Plots were four rows ten feet long and replicated three times. Growing conditions were very good during the growing season. Moisture was above normal for the season. See weather data in this report. There was no lodging in the nursery, and very little loose smut. This nursery was cultivated once during the growing season.

Control in this nursery was very good. Yields were high. The mean was 52.1. Pilot and Ceres were significantly higher in yield than Thatcher which was used as a check. Test weights were below normal in all but three varieties. For more details of this trial see Table XXIV.

The western regional white wheat nursery was seeded in four row plots, three replications with fifteen entries. The conditions listed above for the hard red spring nursery are the same for this nursery. The results were not significant when analysed statistically. The two hard red wheats were lower in yield than the white wheats, except Marfed. Test weights were all below standard. See Table XXV.

To determine the value of durum in the economic picture in Western Montana, a nursery was seeded in the Bad Rock community in Flathead county. Nine entries in four row plots ten feet long and three replications were included in this nursery. The previous crop was oats and the soil was very sandy. Hail damage July 20 was in part responsible for the low yields. Damage was not severe, but quite noticeable. Mindum and Sentry were highest yielding but not as high in yields as the hard red springs in the nursery. These results were not significant upon analysis. This nursery will be continued next year to further evaluate these varieties. Table XXVI.

The milling and baking plots included five varieties. These were seeded in seven foot drill widths, 100 feet long. Frost, on September 1, severely injured this planting. Because of the frost injury it was not used in milling and baking tests. N2389 was high in yield with 57.9 bushels per acre. Table XXVII.

Table XXV. Agronomic data from Western Regional White Spring Wheat Nursery, dryland at Creston, in 1956. Four row plots three replications.

Date Planted. May 3, 1956

Date Harvested. September 10, 1956

Size of Plot. 16 feet.

| Variety or Cross | C. I. or N No. | Head- ing Date | Heading Height In Ins. | Plot Yield In Bushels Per Acre | | | Total Bushel | Average Bushel Per Acre | Bushel Wt. in Pounds |
|----------------------------|----------------------|----------------------|------------------------------|-----------------------------------|------|------|-----------------|-------------------------------|----------------------------|
| | | | | I | II | III | | | |
| Thatcher | 10003 | 7-1 | 42 | 45.4 | 45.4 | 46.1 | 136.9 | 45.6 | 57.0 |
| Onas | 6221 | 7-9 | 44 | 56.0 | 56.0 | 59.6 | 171.6 | 57.2 | 57.0 |
| Lemhi x Hope-Fed. | 13053 | 7-6 | 42 | 34.0 | 53.9 | 65.2 | 153.1 | 51.0 | 55.0 |
| 4232-20B | 13259 | 7-1 | 42 | 50.3 | 45.4 | 53.9 | 149.6 | 49.9 | 58.0 |
| Lemhi 53 | 13068 | 7-7 | 45 | 53.2 | 52.5 | 52.5 | 158.2 | 52.7 | 58.0 |
| Henry | 12365 | 6-30 | 44 | 44.7 | 39.0 | 60.3 | 144.0 | 48.0 | 58.0 |
| Lemhi | 11415 | 7-7 | 44 | 55.3 | 57.4 | 57.4 | 170.1 | 56.7 | 59.0 |
| Baart ¹ | 1697 | 7-6 | 48 | 50.3 | 57.4 | 48.9 | 156.6 | 52.2 | 59.0 |
| Kenya x Lemhi ⁶ | 13258 | 7-7 | 45 | 57.4 | 61.7 | 53.9 | 173.0 | 57.7 | 58.0 |
| Federation | 4734 | 7-14 | 45 | 45.4 | 55.3 | 46.8 | 147.5 | 49.2 | 58.0 |
| Marfed | 11919 | 7-9 | 44 | 57.4 | 53.2 | 60.3 | 170.9 | 57.0 | 59.0 |
| Idaed | 11706 | 6-28 | 37 | 48.2 | 44.7 | 46.1 | 139.0 | 46.3 | 58.0 |
| 4232-20 S | 13260 | 7-9 | 47 | 53.2 | 42.5 | 48.9 | 144.6 | 48.2 | 59.0 |
| Onas 53 | 13257 | 7-9 | 43 | 50.3 | 60.3 | 61.0 | 171.6 | 57.2 | 58.0 |
| Marfed x Merit-28 | 13058 | 7-5 | 43 | 46.8 | 58.1 | 45.4 | 150.3 | 50.1 | 58.0 |

Note: Lemhi is used as a check in this nursery.

Mean Yield.....51.9
 S. E. \bar{x}3.558
 L.S.D.N. S.
 C. V.6.86%

Analysis of Variance

| Source | D. F. | Mean Square | F |
|-------------|-------|-------------|------|
| Replication | 2 | 57.56 | 1.52 |
| Varieties | 14 | 54.357 | 1.43 |
| Error | 28 | 37.984 | |
| Total | 44 | | |