

Hybrid Corn Varietal Nursery

Two hybrid corn varietal nurseries were established in south Wasco County. One nursery on the Peetz Brothers farm at Wamic is reported below. A second nursery established on the Jim Poulson farm on Juniper plat west of Maupin was destroyed by black birds and Chinese pheasants.

At the time of planting the soil moisture was good and the seed bed well prepared. The farmer had already placed approximately 400 pounds of 16-20-0 fertilizer. The soil test values for the nursery area were as follows:

| Soil Depth | pH | Pounds/Acre | | me. per 100 gms. Soil | | | | PPM B | % OM |
|------------|-----|-------------------------------|------------------|-----------------------|-----|-----|------|-------|------|
| | | P ₂ O ₅ | K ₂ O | K ₂ O | Ca. | Mg. | CEC | | |
| 0-8 | 6.0 | 54.50 | 1045.2 | 1.34 | 6.8 | 2.7 | 13.8 | 0.68 | 2.30 |
| 8-16 | 6.4 | 28.00 | 811.2 | 1.04 | 5.8 | 3.1 | 12.6 | 0.56 | 1.02 |
| 16-24 | 6.7 | 13.50 | 585.0 | 0.75 | 6.0 | 3.9 | 11.3 | 0.44 | 0.59 |

The test indicates an excellent fertility level for the elements included in the test and that probably the only elements that could be expected to give yield responses would be nitrogen and sulfur.

The nursery was seeded on May 17, 1963; near the end of June the nursery was weeded and the stand reduced to three plants per hill. The rows were 42 inches apart and the hills approximately 30 inches apart in the row. This resulted in a plant population of around 15,000 plants per acre, probably a low for optimum grain yield.

The stand was generally good, however four plots had missing hills; two of the plots where approximately 50 percent of the hills were missing were corrected for yield and identified in Appendix Table No. 33. The corrected yields appear a little high. The other plots had only two hills missing and were not corrected.

The height approximations were made on September 26, 1963. At this time the leaves and stalks of the early maturing varieties were yellowing. According to notes taken at this time, the total moisture content listed on Table No. 28 is a good relative indication of varietal maturity.

A black winged aphid (species unknown) was prevalent in the nursery and the three P. A. G. varieties appeared to be most heavily infested.

Table No. 28

Average Yield, Shelling Percentage and Total Moisture Percentage for Ten Hybrid Corn Varieties Grown on the Peetz Brothers Farm - Wamic, Oregon 1963

| Variety | Yield Bu/Acre 15% Moist. | Significance 5% | Ave. Shell. % | Total Moist. % | Plant Height Range Ft. |
|----------------------|-----------------------------------|--------------------|---------------------|----------------------|---------------------------------|
| P. A. G. 32 | 93.14 | | 79.7 | 33.9 | 8-10 |
| Idahybrid 216 | 93.02 | | 81.2 | 28.2 | 7-9 |
| DeKalb 36 | 92.33 | | 79.1 | 33.4 | 7-9 |
| Northrup King KE 475 | 87.92 | | 81.2 | 35.9 | 7-9 |
| P. A. G. 24 | 82.71 | | 79.5 | 30.4 | 7-9 |
| Northrup King KA 3 | 81.12 | | 77.6 | 34.9 | 9-11 |
| P. A. G. 26 | 79.67 | | 77.6 | 33.8 | 8-10 |
| Pride 5 | 77.71 | | 78.4 | 30.7 | 8-10 |
| Oregon 355 | 75.39 | | 80.8 | 36.6 | 9-11 |
| DeKalb 29 | 63.93 | | 75.3 | 26.2 | 6-7.5 |

Coefficient of Variation 8.9%

Seeded May 17, 1963

Harvested November 4, 1963

Appendix Table No. 33

Yield in Bushels Per Acre by Replication and Average for Ten Hybrid Corn Varieties Grown on the Peetz Brothers Farm - Wamic, Oregon - 1963

| Hybrid Variety | Replication | | | | Ave. |
|----------------------|-------------|--------|-------|-------|-------|
| | I | II | III | IV | |
| Oregon 355 | 75.32 | 73.20 | 80.96 | 72.08 | 75.39 |
| Idahybrid 216 | 94.21 | 93.10 | 97.76 | 87.00 | 93.02 |
| Pride 5 | 92.67* | 81.32 | 68.83 | 68.03 | 77.71 |
| Northrup King KA 3 | 83.64 | 70.53 | 87.33 | 82.96 | 81.12 |
| Northrup King KE 475 | 85.53 | 92.11 | 84.52 | 89.53 | 87.92 |
| P. A. G. No. 24 | 83.25 | 90.44 | 85.13 | 72.02 | 82.71 |
| P. A. G. No. 26 | 90.07 | 82.31 | 73.16 | 73.13 | 79.67 |
| P. A. G. No. 32 | 95.39 | 89.54 | 93.13 | 94.49 | 93.14 |
| DeKalb 29 | 49.67 | 71.71 | 69.16 | 65.19 | 63.93 |
| DeKalb 36 | 96.28 | 98.87* | 97.40 | 76.77 | 92.33 |

*Corrected Yields