MISCELLANEOUS CROP TRIALS

Grain Sorghum Nursery: 5 varieties or selections-triplicate 200th Acre plots.

Seed of 4 Mandan selections and the variety Norghum was furnished by the Northern Great Plains Field Station, Mandan, N. Dak., for trials at this station this year. As was the case in all trials here this year yields were low due to the extremely dry season. Highest yielder was Norghum which averaged 5.9 bushels per acre, followed by Mandan No. 3 and Mandan Selection 105 with respective yields of 4.3 and 4.2 bushels and Mandan No. 2, 3.3 bushels per acre. Lowest yield was 2.8 bushels per acre from Mandan No. 1. Test weights were fair, ranging from 51.0 to 54.0 pounds per bushel with the exception of Mandan No. 3 which weighed 46.5 pounds.

Particularly interesting was the wide lodging differential recorded after the first killing frost. Norghum, showing the least lodging, was considered 5% lodged while Mandan No. 3 was considered 70% lodged.

Sunflowers: 3 varieties-triplicate 20th acre plots.

Differences in yield were not great in this limited trial. Highest average was 264.0 pounds per acre from Advance followed by Dornacker Hybrid at 224.0 pounds and Advance-F-2 at 216.0 pounds per acre. Highest test weight was made by Advance which weighed 30.0 pounds per bushel, the other two entries weighing 27.0 pounds per bushel.

Winter Rye Varietal Trials:

Five varieties of winter rye were sown in duplicate 1/58th acre plots on September 13, 1948, on 1948 corn land. Highest yielder was Dakold (Dickinson Experiment Station Lot) which averaged 9.3 bushels per acre. Second was White Soviet at 7.8 bushels followed by Emerald and Imperial both of which averaged 6.7 bushels per acre. S. Dak. 44-1 and Dakold, (Agronomy Lot) yielded 5.8 and 5.7 bushels per acre respectively. Test weights were good varying from a low of 54.5 pounds per bushel for White Soviet to 56.5 for S. D. 44-1 and Dakold.

More seed was available for the 1949-50 winter rye trials, and plots were triplicated this year.

SAFFLOWER YIELD TRIALS

Field Plot Trials:

Due to the extremely dry season which was favorable for weed growth, the field plots of N-852 safflower were a total failure this year.

Uniform Regional Safflower Nursery: 13 varieties or selections-quadruplicate 4-row plots.

Safflower yields were considerably lower this season than in 1948, with the top strains averaging 834.7 pounds of seed per acre as compared to 1262.0 pounds per acre in 1948. The lowest yielding strain averaged 286.2 pounds of seed per acre as compared to 704.6 pounds for the lowest yielder in last years nursery. Dakota flax in the Regional flax nursery, which was seeded adjacent to the safflower nursery, averaged 336 pounds per acre and was outyielded by all entries in the Regional safflower nursery except the lowest yielding strain mentioned above.

Test weights were fairly good, with 8 entries weighing 40.0 pounds or more per bushel and with the lightest seed weighing 34.5 pounds per bushel.

Safflower, initially a slow growing plant, offers weeds very poor competition especially in drier years when conditions favor weed growth. This, perhaps, is one of its major shortcomings in this area.

WINTER WHEAT TRIALS

Uniform Winterhardiness Nursery: 30 entries-triplicate 3 row plots.

The winterhardiness nursery for 1948-49 was seeded on September 27, 1948. Germination was delayed by dry soil conditions and only a few plants had emerged before permanent winter weather put an end to the growing season. Stand counts made in the spring of 1949 showed Yogo, Iohardi and Minter to have the highest percentage of survival, each averaging 18%.

The 1949-50 Uniform Regional Winterhardiness Nursery was seeded September 23, 1949. In addition, a supplementary winterhardiness nursery of nearly 100 strains was seeded at Dickinson for the first time at the request of Dr. L. P. Reitz, Nebraska Agricultural Experiment Station, who is in charge of winter wheat experiments for this area. This nursery had been grown at six station farther south, but at many of these stations little or no differential survival has been reported in this decade. In an attempt to improve the efficiency of this observation nursery one planting was shifted from Colby, Kansas to Dickinson, N. Dak.