# SUMMARY

### **Rotation and Tillage Trials - 1952**

The 1952 trials completed forty-six years of study in Dry Land Soil Management at the Dickinson Experiment Station. Results in 1952 both for rotations and for tillage methods follow very closely the pattern which has been established over the long period that these trials have been conducted at the Dickinson Station. This year's trial again pointed up the need for and the value of proper tillage and crop rotation in western North Dakota, particularly in a dry year. The value of corn as a silage crop was again demonstrated, with 22 of the 23 corn plots averaging between two and one half and three tons of good quality feed per acre.

### **Fertilizer Trials - 1952**

No spectacular differences due to fertilizer application were recorded in Dickinson trials in 1952. Droughty seasonal conditions were undoubtedly responsible in a large measure for the lack of response from fertilizer application this year. Results from this year's trial with fertilizer, as well as results from previous trials point up the need for long term fertilizer rate work at the Dickinson Station to aid in determining whether or not the use of fertilizer is economically sound under dry land farming conditions such as those represented by the Dickinson Station.

### **Roughage Trials - 1952**

The unfavorable seasonal conditions prevailing in 1952 point up the need for more work with emergency feed crops in western North Dakota. The limited data available from the two year's trials with roughage at the Dickinson Station are insufficient to base conclusions on.

## Spring Wheat Trials - 1952

Presently, Mida, Pilot, Rival, Thatcher and Cadet are the top yielding commercial varieties in this area, with the late ripening Cadet tending to become somewhat unpopular because of its lateness which leaves it susceptible to stem rust attack for a longer period than is the case with the early maturing varieties. Numerous promising new strains are included in the more than 300 candidates which make up the six major small scale trials with spring wheat at the Dickinson Experiment Station.

## Winter Wheat Trials - 1952

The winter wheat nurseries grown at the Dickinson Experiment Station are part of a regional testing program and the trial at Dickinson is particularly desirable because of the severity of winter in this area. In the 1951-52 trials a Kharkof selection averaged twenty percent survival which was the highest percentage of survival in this year's trial. The majority of the entries killed out 100 percent.

## Oat Trials - 1952

The growing season of 1952 was most favorable for midseason oats and as a class the midseason types outyielded the early types by a wide margin. In the field plots Cody and Marida were high yielders followed closely by three selections from the cross Clinton x Marion, which were new to the Dickinson varietal trials this year. Two promising new strains included among the 102 entries which make up the small scale oat trials at the Dickinson Experiment Station, C.I. 5636 (Andrew x Clinton), and C.I. 4267 (Anthony x Morota), were high ranking entries in their respective trials this year and will receive special attention in future trials.

### **Barley Trials - 1952**

The five top yielding varieties in the Dickinson Experiment Station varietal field plot trials in 1952 were Hannchen, Tregal, Vantage and two selections from Composite Cross 6725 made at the Dickinson Experiment Station in 1945.

One of the most interesting developments in connection with the barley work at Dickinson this year was the release of Dicktoo, a new winter barley variety for Nebraska. Dicktoo (named for Dickinson Selection Two), traces to some early selection work with barley done at this station by Mr. Ralph W. Smith, former agronomist.

### Flax Trials - 1952

The drought of 1952 is reflected in the poor flax yields recorded this year. Top yielder in the Dickinson Experiment trial was Bison with an average of 9.3 bushels per acre. Yields were generally poor in both nursery trials with no entries being particularly outstanding.

#### Corn Trials - 1952

Nodak 301 and Experimental N. 712 are the two most promising hybrids in the trials at Dickinson in comparison with Falconer and Rainbow Flint, o.p. varieties. Nodak 301 has averaged 98 percent of the yield of Falconer in a comparison of grain yields and 108 percent of Falconer in a comparison of silage yields for the past nine years. No. 712 has been in Dickinson trials for only three years and a long term comparison with the open pollinated varieties is not feasible at this time.

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