

SUMMERFALLOW MANAGEMENT STUDY

The objective of this trial is to determine the optimum number of cultivations required on summerfallow in western North Dakota as related to yield and cost of operation.

Previous work on summerfallow at this station has determined the best average date for first tillage of fallow as May 15.

In 1968 a trial was begun at Dickinson which compares grain production from summerfallow where the cultivations have been at 4 week, 5 week, 6 week and 7 week intervals, starting with the first tillage operation as close to May 15 as possible. When the first tillage can be applied on or about May 15, the average number of cultivations required for the 4 week treatment is 6, the 5 week treatment requires 5 and the 6 and 7 week intervals require 4 tillage operations during the season.

Fifty cents per acre can be considered a very conservative cost for one cultivating operation on summerfallow. To get the cost down this low an operator would have to be covering approximately 2000 acres. On this basis the 4 week cultivation interval costs a dollar per acre more and the 5 week cultivation fifty cents per acre per season more than does the 6 and 7 week cultivation method. However, this may be money well spent, as indicated by the accumulating yield data presented in the following tables.

Table 57. YIELD DATA – SUMMERFALLOW MANAGEMENT STUDY – 1971 – DICKINSON

Cultivation Interval	Yield in Bushels per Acre				Average
	Rep 1	Rep 2	Rep 3	Rep 4	
4 Weeks	48.4	48.9	45.4	44.4	46.8
5 Weeks	47.8	47.2	44.0	45.1	46.0
6 Weeks	45.0	51.0	43.6	37.1	44.2
7 Weeks	45.9	49.8	40.6	40.4	44.2

Table 58. AVERAGE YIELD DATA – SUMMERFALLOW MANAGEMENT STUDY 1968-1971 – DICKINSON

Cultivation Interval	Average Yield in Bushels per Acre				4 Year Average
	1968	1969	1970	1971	
4 Weeks	38.8	43.0	19.5	46.8	37.0
5 Weeks	37.4	43.0	19.1	46.0	36.4
6 Weeks	38.6	40.3	18.4	44.2	35.4
7 Weeks	39.5	38.0	16.8	44.2	34.6