

The Department of Soil Science field fertility program for 1967 included 45 multi-treatment field-scale plots on stubble land. Plots were located in the Brown, Dark Brown, Black, and Gray-Wooded Soil Zones and included crops of wheat, oats and barley. Six of the 45 plots failed to produce a greater than 4.0 bushel per acre increase with any of the applied fertilizer treatments.

The following tables give a comparison of the yield increases obtained from a standard application of 23-23-0 and the optimum fertilizer rate. In Table 1, the average fertilizer rate which gave the maximum yield increase is shown and in Table 2, the comparison is made with the Soil Test Fertilizer recommendation.

TABLE 1. Average Yield Increases on Stubble Fertilizer Plots

Crop	Soil Zone	Check Yield	Fertilizer Rate Giving Max Yield		Yield Increase	
			N lb/ac	P <sub>2</sub> O <sub>5</sub> lb/ac	Maximum	20 lb N 20 lb P <sub>2</sub> O <sub>5</sub>
Wheat	Gray-Wooded (2)	7.6	60	30	9.3	2.7
Wheat	Black (11)	18.1	31	25	9.6	6.1
Wheat	Dark Brown (14)	17.9	29	23	8.5	4.0
Wheat	Brown (4)	15.9	24	23	5.0	2.0
Barley	Gray-Wooded (3)	14.1	73	27	13.2	2.8
Barley	Black and Dark Brown (8)	21.9	32	23	9.4	5.6
Oats	Gray-Wooded & Dark Brown (2)	29.0	70	30	16.4	6.5

TABLE 2. Average Yield Increases resulting from the application of 20 lb N and 20 lb P<sub>2</sub>O<sub>5</sub> and Soil Test Recommendation.

	Check Yield	Yield Increase	
		20 lb N 20 lb P <sub>2</sub> O <sub>5</sub>	Soil Test Recommendation
Average of 13 test locations (V.L.A. Co-Op Tests)	17.5	5.6	7.9

Even though moisture was in short supply during the growing season, stubble seeded crops responded well to fertilizer applications. The importance of optimum amounts of fertilizer is evident from these data.