

Plots Fertilized Every Year

Hay yields from old crested wheatgrass plots fertilized every year with ammonium nitrate (33-0-0) are given in Table 11. This trial was begun in 1955, and 6 years' data are available. In all cases the fertilizer has been applied on these plots in early spring. The treatments include check, 25 pounds, N., 50 pounds N., and 100 pounds N. per acre.

In the 1960 season, all fertilizer applications produced increased forage yields, but as in previous years, the increases obtained with amounts of 50 and 100 pounds of nitrogen were no better than the increase obtained with 25 pounds of nitrogen. The hay yields for all treatments in the 1960 season were: check -- 1279 pounds per acre; 25 pounds N -- 2003; 50 pounds N -- 1954; and 100 pounds N -- 2160 pounds per acre. The 724 pounds of extra hay obtained with 25 pounds of nitrogen is a clearly profitable increase with hay considered to have a value of 1 cent per pound and with the price of nitrogen figured at 10 cents per pound.

The six-year average yields in this trial indicate clearly that there is no advantage to be obtained by annual applications of 50 or 100 pounds of nitrogen per acre over the increased yield obtained from applications of 25 pounds of nitrogen per acre.

For the six years of the trial the average yields of crested wheatgrass hay have been 1144 pounds per acre on the check, 1683 pounds with 25 pounds of nitrogen, and only 1671 and 1783 pounds per acre with 50 and 100 pounds of nitrogen, respectively. There appears to be no justification for using more than 25 pounds of nitrogen per acre applied annually for increased hay production on old crested wheatgrass fields.

Table 11. Forage Production from Old Crested Wheatgrass Plots fertilized annually with Ammonium Nitrate 33-0-3		
	Dry weight yield-lbs./acre	Percentage increase over check

Year	Check	25# N	50# N	100# N	25# N	50# N	100# N
1955	1276	2096	2121	2494	64.3	66.2	95.4
1956	612	751	763	670	22.7	24.7	9.5
1957	1356	2117	2064	2174	56.1	52.2	60.3
1958	1224	1679	1839	1993	37.0	50.2	62.8
1959	1116	1451	1284	1206	30.0	15.1	8.1
1960	1279	2003	1954	2160	56.6	52.6	68.9
6-year Average	1144	1683	1671	1783	47.1	46.1	55.9

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