

CHEMICAL WEED CONTROL

In 1964 a trial was begun to determine the effectiveness of pre-emergence applications of Atrazine for the control of weeds in corn, and to determine what effect such weed control has on silage yields under western North Dakota weather conditions. Treatments in 1964 included: Broadcast applications of Atrazine at planting time, with no cultivation during the growing season; application of a 14 inch band of the chemical spray over the row at planting time plus mechanical cultivation; and mechanical cultivation only. In the 1964 trial the yield of silage following mechanical cultivation only was 2.2 tons per acre. The average yield of all band spray treatments plus cultivation was 4.0 tons per acre, and the average yield of silage from all broadcast applications of Atrazine at planting time with no cultivation during the growing season was 4.9 tons per acre.

In 1965 the trial was enlarged to include 4 chemicals. Only two of these, Atrazine and Ramrod, controlled weeds satisfactorily.

Table 38. Yields From the Chemical Weed Control Trial in Corn in 1965.							
Treatment	Silage Yield in Tons Per Acre @ 70% Moisture						
	1	2	3	4	5	6	Average
Mechanical Cultivation Only No Chemical	5.8	6.8	5.8	6.3	5.1	5.1	5.8
Atrazine, Band Application Plus Cultivation	7.3	7.3	6.6	6.4	7.8	7.1	7.1
Ramrod, Band Application Plus Cultivation	8.8	6.5	5.8	5.4	6.7	6.7	6.7

Atrazine, Broadcast, No Cultivation	8.7	8.4	8.4	8.4	7.4	7.4	8.1
Ramrod, Broadcast No Cultivation	5.9	6.4	7.6	7.6	6.7	7.1	6.9

In both 1964 and 1965 highest yields in this trial were from the broadcast Atrazine treatment with no cultivation during the growing season. The average yield for mechanical cultivation only for the two year period is 3.8 tons of silage per acre. The average yield where weeds were controlled by a broadcast application of Atrazine was 6.5 tons per acre.

Residual Atrazine can damage small grain grown on the land the year following treatment. Wheat and oats seeded on land treated in 1964 showed no damage at low rates of application. Damage was heavy however, where 2 $\frac{27}{11}$ pounds of Atrazine was applied. Further study of the residual effect this chemical has under western North Dakota weather conditions is planned.

[Back to 1965 Research Reports Table of Contents](#)

[Back to Research Reports](#)

[Back to Dickinson Research Extension Center \(http://www.ag.ndsu.nodak.edu/dickinso/\)](http://www.ag.ndsu.nodak.edu/dickinso/)

[Email: drec@ndsuent.nodak.edu](mailto:drec@ndsuent.nodak.edu)
