ANNUAL WEED CONTROL IN FIELD CORN

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A. 1980 TRIALS

Presented below are the experimental design (plot layout) and description of our 1980 annual weed control in field corn. The major troublesome annual weeds in field corn are: fall panicum (*Panicum dichotomiflorum* Michx.), crabgrass (*Digitaria* spp.), lambsquarters (*Chenopodium* sp.) and red-root pigweed (*Amaranthus retroplexus* L.). These were all present in the 1980 corn plots.

SOIL: Hadley fine sandy loam, South Deerfield Experimental Farm.

PLOTS: 12' x 25', three replicates

Preplant incorporated (PPI) treatments were applied on dry soil May 22 and immediately rototilled in 3-4" deep.

Funk's G-4444 corn was planted May 22.

Preemergence (PRE) treatments were applied May 23 on rather dry soil surface. After eleven days, there were showers (0.5") on June 3. Heavy winds blowing the soil and more than 10 days of dry weather should be considered as poor conditions for preemergence treatments.

Postemergence (POST) treatments No. 12, 13, 14 and 17 were applied on June 4. Corn was 3-4" tall, grassy weeds (GW) and broadleaf weeds (BW) 1-1½" tall. Two hours after treatments light showers occurred.

Postemergence treatment No. 15 was applied June 18. Lambsquarter and red-root pigweed seedlings were 2-4" tall and corn 8" tall.

B. 1977-1979 RESULTS

The last two colums in Table 1 show average annual grassy weed (GW) control results and silage corn yields. Annual broadleaf weeds (BW) were controlled 95-100% by all treatments used. Although, with the exception of 2,4-D, all treatments significantly controlled annual troublesome grassy weeds; postemergence applications were poorest. In case of grassy weeds preplant incorporated and preemergence applications should be preferred and used. Due to the poor grassy weed control, postemergence treatments produced lowest silage corn yields.

Table 1.

PLOT LAYOUT FOR 1980				1977-1979 RESULTS	
Treatments	Blocks* and Treatment Distribution			GW Control %	Corn Yields Check = 100
	I	II	III		
1. Check	1	9	16	0	100
2. Check, hand weeded	2	10	15	100	156
3. Sutan, 4 lb/A, PPI	3	11	4	-	-
4. Sutan + atrazine, 4 + 1 lb/A, PPI	4	12	1	91	164
5. Sutan + Bladex, 4 + 1.6 lb/A, PPI	5	13	2	99	160
6. Lasso + atrazine, 2 + 1 lb/A, PRE	6	14	3	93	158
7. Lasso + Bladex, 2 + 1.6 lb/A, PRE	7	15	7	97	164
8. Simazine + atrazine, 2 + 1 lb/A, PRE	8	16	6	90	150
9. Bladex + atrazine, 2 + 1 lb/A, PRE	9	17	5	94	159
10. Bladex, 2.5 lb/A, PRE	10	18	14	93	160
11. Prowl, 2 lb/A, PRE	11	1	17	94	151
12. Prowl + atrazine, 1.5 lb/A, PRE	12	2	18	95	155
13. Bladex, 2 lb/A, POST	13	3	8	83	150
14. Atrazine + oil, 2 + 2 qt, POST	14	4	9	50	138
15. 2,4-Damine, 0.5 lb/A, POST	15	5	10	0	108
16. Dual + atrazine, 2 + 1 lb/A, PRE	16	6	11	89	146
17. Dual + atrazine, 2 + 1 lb/A, POST	17	7	12	61	144
18. Dual + Bladex, 1.5 + 1.5 lb/A, PRE	18	8	13	91	156

* Blocks: I - West; III - East. Plots: 1 to 18 from North to South.