QUACKGRASS CONTROL FOR ALFALFA AND FIELD CORN PLANTINGS

Jonas Vengris
Department of Plant and Soil Science
University of Massachusetts

A. SARANAC ALFALFA

In the spring of 1979 alfalfa conventional seedings were established on an area uniformly infested by quackgrass (*Agropyron repens* L. Beauv.). For quackgrass control Roundup and EPTAM herbicides were used. On November 9 1979, plots were split and half of each plot was treated with Kerb (pronamide). Alfalfa was mowed twice in 1979 (7/26 and 11/1) and 6/12/80. Treatments and summary of results are presented below in Table 1.

Table 1. Alfalfa and weed dry matter yields (ton per acre) of three cuttings (7/26/79, 11/1/79 and 6/12/80).

Treatments	No Kerb				With Kerb			
	Alfalfa	Weeds	Total	Alfalfa %	Alfalfa	Weeds	Total	Alfalfa %
Check	1.05	2.59	3.64	29	1.33	1.82	3.15	42
Roundup 2lb/A	2.84	1.45	4.29	66	3.58	0.79	4.37	82
Roundup 3lb/A	3.02	1.35	4.37	69	3.74	0.76	4.50	83
EPTAM 5lb/A	2.70	1.06	3.76	72	3.54	0.34	3.88	91

No significant differences were observed between two Roundup rates in controlling quackgrass. Roundup and EPTAM treatments significantly (over 80%) controlled quackgrass but this perennial weed was not eradicated by these treatments. Later in the first season quackgrass increased and contributed to the deterioration of alfalfa stands. The late fall application of Kerb was helpful in suppressing quackgrass significantly.

Alfalfa was significantly injured by EPTAM at the 5 lb/A rate. Later the stands regained normal growth and produced comparable stands.

B. FIELD CORN

Quackgrass control treatments included Roundup, atrazine and Eradicane. For annual weed control Roundup-treated plots also were treated with Lasso + atrazine (2 + 1.5 lb/A) preemergence to corn. Results from 1979 and the 1980 plot layout are presented below in Table 2 and Fig. 1. In both years Funk's G-4444 field corn was planted.

Table 2. Quackgrass control and corn yields, 1979.

	Treatments	Quackgrass Control %	Relative Yields Check = 100
1.	Check	0	100
2.	Roundup 3 lb/A	92	149
3.	Atrazine 4 lb/A	73	137
4.	Eradicane 5 lb/A	70	129

All treatments significantly suppressed quackgrass and increased silage corn yields. No treatment eradicated the quackgrass completely. In one to two years, without additional control means this weed will usually regain its original infestation level.

Fig. 1. Plot layout 1980.