

TIMING OF NEW PRE-EMERGENCE HERBICIDES
FOR YELLOW AND GREEN FOXTAIL IN ALFALFA

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Yellow foxtail (Setaria lutescens) and green foxtail (Setaria glauca) are the number one weed pests of alfalfa in the Sacramento and San Joaquin Valleys. These weeds cause a severe loss in alfalfa yield, reduce quality and result in severely reduced hay prices.

In 1983, treatments consisting of trifluralin (Treflan 5G), pendimethalin (Prowl) and oryzalin (Surflan) were made the first week in March. Paraquat was added to each treatment since the foxtail had already started germinating the last week in February. Rainfall incorporated the herbicides into the soil. All three herbicides gave excellent control through October of 1983. The question arose as to the proper time to apply these pre-emergence herbicides for best control.

The study in 1984 consisted of applications being made December 20, 1983, January 20, 1984 and February 20, 1984. December and January treatments were Treflan 10 percent granular at 2.0 and 4.0 lbs/A a.i.; Prowl 2.0 and 4.0 lbs/A a.i.; and Surflan 2.0 and 4.0 lbs/A a.i. February treatments were the same with the addition of 1.0 lb/A a.i. treatment of each herbicide. Rainfall was considerably less on the January and February treatments compared to December.

RESULTS AND DISCUSSION

Treflan 10G applied in December at 2.0 lbs/A a.i. gave the most consistent season foxtail control, ranging from 86% in April to 88% in June and 80% in October. The January application resulted in 79% control in June, 83% in September and 64% in October. A February application of 2.0 lbs/A gave 90% control in June, 92% in September and 75% in October. The 1.0 lb/A February application gave good control through September, then dropped to 61% in October. There was no injury to the alfalfa with any of the treatments (See Figure 1).

Prowl EC applied in December at 2.0 lbs/A a.i. gave 92% control of foxtail in April, 92% in June and 65% in October. The January treatment resulted in a high of 79% control in July, 61% in August and 38% in October (See Figure 2).

Surflan EC at 2.0 lbs/A a.i. generally gave poor control (See Figure 3) Surflan at 4.0 lbs/A a.i. applied in December was equal to Prowl at the 2.0 lbs/A a.i.

The results of 2 years testing indicate Treflan 10G at 2.0 lbs/A a.i. will give excellent to good control of yellow and green foxtail for the season. Application should be made in mid-December to mid-January, since the foxtail starts germinating towards the end of February. A mid-December to January application would insure rainfall to incorporate the herbicide into the soil.

Presently there is a label for Treflan 10G 1.0 lb/A a.i. This rate can give effective control if put on by ground and good coverage can be obtained. An airplane application of 1.0 lb/A would have too much variability in the rate put on the field; thus poor control would result.

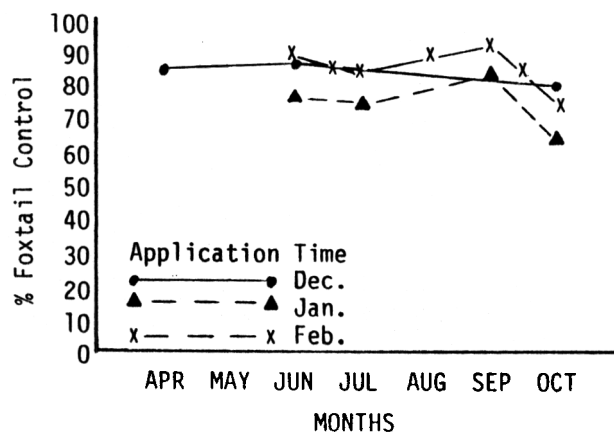


Figure 1. Effects of Treflan 10G at 2.0 lbs/A on yellow and green foxtail applied in December, January and February to alfalfa.

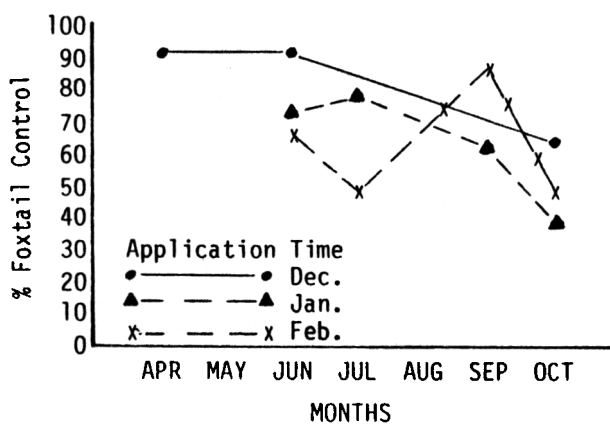


Figure 2. Effects of Prowl at 2.0 lbs/A on yellow and green foxtail applied in December, January and February to alfalfa.

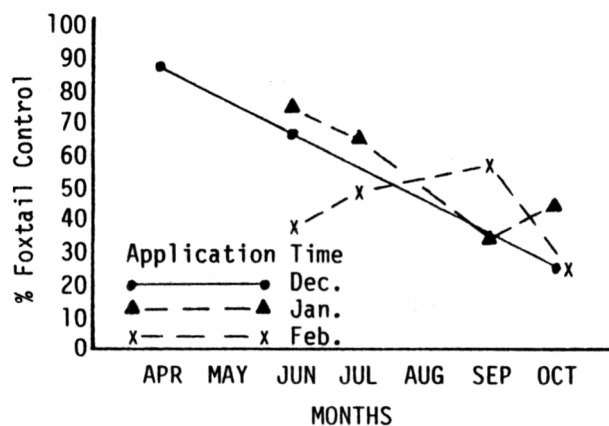


Figure 3. Effect of Surflan at 2.0 lbs/A on yellow and green foxtail applied in December, January and February to alfalfa.