

Common Chickweed Control in Alfalfa

WS-18

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Unlike corn and soybean production, chemical weed control in alfalfa is limited to just a handful of products, most of which can be applied only to established alfalfa after it goes dormant in the winter. These herbicides are effective weed killers, but injures the alfalfa if the forage is not completely dormant.

Products that can be applied to established (at least one year old), dormant alfalfa include metribuzin (Sencor or Lexone), Velpar, and Sinbar. Kerb herbicide can be used to control certain weeds in established or new plantings after the legume has reached the trifoliate leaf stage but only in the fall before soil freeze-up. Gramoxone Extra also has a label for weed control in dormant alfalfa that is at least one year old.

Common chickweed (*Stellaria media*) is a winter annual weed. It germinates in the fall, over-winters in the vegetative stage, flowers and sets seed early in the spring, and then dies out during the hot summer months. It can be highly competitive with alfalfa and lower the quality of the forage, especially for the first cutting. Some growers have even complained that heavy chickweed infestations can delay hay drying due to the high moisture content of the weed.

After the first cutting is made, however, chickweed generally is not a problem. If the alfalfa stand is thin because of the presence of chickweed and other winter annuals, summer annual weeds such as lambsquarters and pigweed could become established in the bare areas and compete with the alfalfa for the rest of the season. Other winter annuals that can invade alfalfa besides chickweed include mustards (shepherdspurse, yellow rocket, wild mustard, field pennycress, etc.), mints (henbit and purple deadnettle), and buttercups.

A chickweed control program should start when seeding the alfalfa. Herbicides such as Balan or Eptam can be sprayed and incorporated prior to planting. These products control many annual grass and broadleaf weeds, thereby allowing the alfalfa seedlings to become established without the competition from weeds. A dense, competitive stand of alfalfa can be a very effective deterrent against annual weeds; provided that many cultural practices also are taken into consideration, such as:

- o liming and fertilizing;
- o seeding well-adapted, long-lived varieties;
- o using weed-free seed;
- o providing for proper soil drainage;

- o timely control of diseases and insects; and
- o cutting at proper growth stages to maintain the competitiveness of the crop.

A research project was conducted to determine which herbicides and application dates were most effective on controlling chickweed in established alfalfa. This project was conceived after receiving several inquiries from forage growers on how to control the weed. Two very popular herbicide treatments to control chickweed were fall applications of Princep or winter applications of Furloe herbicide. Princep has since lost its alfalfa label and Furloe is no longer being manufactured. Therefore, with the loss of these products, forage producers have been searching for adequate substitutes for the control of chickweed and other winter annual weeds.

Metribuzin (Sencor or Lexone), Velpar, and Kerb were fall-applied to dormant alfalfa plots in seven Indiana counties in 1990 (Allen, DeKalb, Noble, White, Jasper, Floyd, and Washington) and in White county in 1991. Spring applications at these same sites, but at different plots, included metribuzin, Velpar, and Gramoxone Extra. All plots, including the untreated plots, were 10' x 60' with each treatment replicated four times.

Again, all applications, both spring and fall, were made to dormant alfalfa. Percent control ratings for chickweed, as well as alfalfa injury observations, were taken approximately three weeks prior to the first alfalfa cutting. The results are outlined in the Tables 1 and 2.

In summary, the herbicides investigated in this study for the control of chickweed in established alfalfa generally provided good control for the first cutting, with one or two herbicides causing a slight height reduction of the alfalfa in a couple of locations. Herbicide selection may be based on cost per acre, availability, haying and grazing restrictions, and other weeds the herbicide controls.

Table 1. % Chickweed Control

Herbicide* Average of two years

Sencor - Fall 91

Sencor - Spring 99

Velpar - Fall 88

Velpar - Spring 98

Kerb - Fall 92

Gramoxone - Spring 79**

* Fall treatments applied during the months of November and December.

Spring treatments applied during March.

** 91% was recorded for 1991 and 66% for 1992. The poor control in

1992 was most likely the result of the cool, cloudy conditions at application.

Table 2. Injury Observations

Value represents the percent of the total herbicide replicates for that year and that displayed visual stunting (5-10%) compared to untreated plots. For example, in 1991, 28% of the fall-applied Sencor plots (8 of 28) had visual stunting.

Herbicide % of Replicates - 1991 % of Replicates - 1992

Sencor - Fall 28 0
Sencor - Spring 0 0
Velpar - Fall 50 0
Velpar - Spring 17 0
Kerb - Fall 0 0
Gramoxone - Spring 14 0

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