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# Weed Control in Alfalfa Seed Crops

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Weeds are especially troublesome and costly in alfalfa seed crops. In the principal seed-producing area of southwestern Idaho, some 15 different kinds of annual, biennial and perennial weeds occur frequently in the alfalfa seed fields. These weeds cause an immediate as well as a future cost: At once they reduce seed yields, impede harvest operations, and increase dockage losses; in years to come the enormous amount of weed seeds that shatter in the alfalfa seed fields hampers the production of other crops.

Treatments are now available that will give reasonably satisfactory control of weeds in alfalfa seed fields. However, the choice of a specific treatment is complicated by four circumstances: First, the numerous kinds of weeds vary in their response to herbicides. Second, numerous herbicides are now available, and they vary in their affect on weeds and alfalfa. Third, there are four general methods of producing alfalfa seed in Idaho; each will influence weed control. Fourth, cultivation is an important means of controlling weeds, but it is not desirable in some fields.

Thus, there is no best way to control all weeds in all alfalfa seed fields. The best treatment for a certain field will depend on a careful consideration of the foregoing circumstances. A number of weed control treatments that have generally been most effective in Idaho are shown in tabular form. They are arranged under four headings. Each heading refers to one of the methods of producing alfalfa seed in Idaho. Under each heading several treatments are available. In the "Treatment and Remarks" section note the weeds and conditions that indicate the choice of a specific treatment.

For more detailed information including that on dodder control, contract your local county agent.

**REMEMBER:** Before using any herbicide, read the label. Follow the directions. You are responsible for herbicide residues on your crops and for problems caused by drift to other crops or properties.

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## Seed Produced from Seedling Alfalfa

In southwestern Idaho, alfalfa seeded in the fall or early spring will produce a good seed crop during the seedling year. But weeds are particularly serious. They must be controlled early in the spring; otherwise they will over-top the seedling alfalfa and cause severe stunting and delayed maturity of the seed crop.

Herbicide and amount per acre	Treatment and Remarks
Balan - 2 to 3 quarts in 20 or more gallons of water	Before planting alfalfa, spray on the soil surface. Immediately incorporate 2 to 3 inches deep. Will give good control of annual grasses and fair control of most annual broadleaf weeds. Control of nightshade and sunflower is poor.
Dacthal - 8 to 12 pounds in 40 or more gallons of water	Before planting alfalfa, spray on the soil surface. Incorporate 1 to 2 inches deep. Will give good control of annual grasses and fair control of most annual broadleaf weeds. Control of nightshade, sunflower and Russian thistle is poor.
2,4-DB - 1 to 2 quarts in 10 or more gallons of water	Spray on foliage after alfalfa seedlings are 2 inches tall and before weeds are 3 inches tall. Effective only on broadleaf weeds. Especially useful for killing broadleaf weeds not killed by Balan or Dacthal.

## Seed Produced from the First Alfalfa Crop

The practice of harvesting seed from the first alfalfa crop often leads to problems with such winter annual weeds as prickly lettuce and tansy mustard. On fields where cultivation can be used, a soil-incorporated preemergence herbicide is indicated. The tillage used for incorporation kills the winter annual weeds, and the chemical kills the summer annual weeds that come later. On "rough" fields where cultivation is not desirable, non-incorporated herbicide treatments can be used, but the results will be less satisfactory than where tillage can be used.

Herbicide and amount per acre	Treatment and Remarks
Treflan - 1½ to 2 pints in 20 or more gallons of water	Spray on the soil surface in early spring. Immediately incorporate 2 to 3 inches deep. Insure that winter annual weeds are killed by the tillage. Will control annual grass weeds and most annual broadleaf weeds. Indicated on fields that can be well tilled but where dodder is not serious.
Dacthal - 8 to 12 pounds in 40 or more gallons of water	Spray on the soil surface in early spring. Incorporate no deeper than necessary to kill winter annual weeds. Will control most annual grass and broadleaf weeds. Will help to control dodder.
Simazine - 1 to 2 pounds in 40 or more gallons of water	Spray on the soil surface in late fall after the first killing frost but before January 1. Will give fair control of most annual weeds. Indicated on fields where tillage is not desirable. <b>PRECAUTION:</b> Do not use on sandy or gravelly soils. Do not use on seedling alfalfa. Do not grow any crop except corn for 2 crop years.
Casoron - 35 to 50 pounds of 4% granules	In mid-April broadcast granules on the soil surface and irrigate. The treatment is expensive. It is indicated on non-tillable fields to suppress Canada thistles and dandelions, to control winter annual weeds and to help control dodder. <b>PRECAUTION:</b> Insure uniform application of the chemical. Do not use more than 50 pounds per acre of the 4% granules. Do not use on seedling alfalfa.

## Seed Produced from Alfalfa with the Bloom Delayed

From the standpoint of weed control, the practice of delaying the alfalfa bloom in the spring but harvesting no hay crop is much the preferred method of producing seed. It facilitates the timing of herbicide applications, but most important the means used to delay the alfalfa bloom give weed control that is very effective.

Herbicide and amount per acre	Treatment and Remarks
None	Cultivate in early-April with such implements as the mulch treader, KKK, or disc to kill winter annual weeds and retard alfalfa growth. Cultivate one or more times as needed to retard alfalfa until the growth is continued to a seed crop. This might suffice for weed control. If more is needed, apply either Treflan or Dacthal as indicated.
Treflan - 1 1/2 to 2 pints in 20 or more gallons of water	Spray on the soil surface. Incorporate 2 to 3 inches deep with the last tillage operation. Indicated on fields known to be badly infested with barnyardgrass, foxtail, and pigweed.
Dacthal - 8 to 12 pounds in 40 or more gallons of water	Spray on the soil surface. If summer annual weeds are the main problem incorporate lightly. If dodder is the main problem, do not incorporate.
3 pints of Dow General or Sinox General + 10 gallons diesel oil + 1/2 pint spreader-sticker + 50 gallon water spray at 60 gallons per acre	Use 2 or more sprays as needed from early-April to such time as the alfalfa growth is continued to a seed crop. Indicated as a means to retard alfalfa growth and to kill small weeds on non-tillable fields. If more weed control is needed, wait 10 to 15 days after the last spray and use one or more of the following as needed:
2,4-DB - 1 to 2 quarts in 10 or more gallons of water	Spray for annual broadleaf weeds on non-tillable fields.
Dowpon - 2 to 3 pounds in 10 or more gallons of water	Spray for annual grass weeds on non-tillable fields.
Casoran - 35 to 50 pounds of 4% granules	Broadcast granules and irrigate. Indicated for suppression of Canada thistles and control of dodder on non-tillable fields. PRECAUTION: Insure uniform application of the chemical. Do not apply more than 50 pounds per acre of the 4% granules.

## Seed Produced from the Second Alfalfa Crop

When seed is harvested from the second alfalfa crop, the weed problems are less severe than are those associated with first-crop seed. But some attention to weed control is usually necessary. The first crop should be removed for hay as soon as a reasonably good yield can be obtained. A late hay crop followed by a weed control treatment might delay maturity of the seed until frost becomes a hazard.

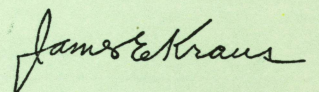
Herbicide and amount per acre	Treatment and Remarks
None	Cultivate in early spring before or shortly before alfalfa starts to grow to kill winter annual weeds. Remove the first crop for hay before June 1. This might suffice for weed control. If more is needed apply Treflan or Dacthal on tillable fields as follows:
Treflan - 1½ to 2 pints in 20 or more gallons of water	Spray on stubble. Immediately incorporate 2 to 3 inches deep. Indicated on fields known to be badly infested with barnyardgrass, fox-tail and pigweed.
Dacthal - 8 to 12 pounds in 40 or more gallons of water	Spray on stubble. If summer annual weeds are main problem, incorporate lightly. If dodder is main problem, do not incorporate.
Simazine - 1 to 2 pounds in 40 or more gallons of water	Spray on the soil surface in late fall after the first killing frost but before January 1. Remove the hay crop before June 1. PRECAUTION: Do not use on sandy or gravelly soils. Do not grow any crop except corn for 2 crop years. This treatment is indicated on non-tillable fields. If more weed control is necessary after removing the hay crop, apply one or both of the following treatments as needed:
2,4-DB - 1 to 2 quarts in 10 or more gallons of water	Spray on stubble for control of annual broadleaf weeds on non-tillable fields.
Dowpon - 2 to 3 pounds in 10 or more gallons of water	Spray on stubble for control of annual grass weeds on non-tillable fields.

### Authors

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