CONTROL OF JOHNSONGRASS 
AND OTHER WEEDY GRASSES IN ALFALFA

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Johnsongrass is considered one of the major weed species that infests alfalfa in Kentucky. Other weedy grasses such as large crabgrass, foxtails, barnyardgrass, and fall panicum can also interfere with alfalfa production. Low infestation levels of these grasses may not create significant concern, but high infestation levels can result in reduced yield, alfalfa hay quality, and/or shorten the life of the stand.

The fact that johnsongrass is a perennial makes it a more difficult weed to control compared to annual grasses. It is capable of reproducing by seed and by underground stems known as rhizomes. If left uncontrolled, seedling johnsongrass plants can emerge in alfalfa stands and develop an extensive rhizome system. Intensive alfalfa production, however, has been shown to be an effective method to help reduce heavy johnsongrass populations. This is primarily the result of frequent cutting or grazing practices and the use of herbicides that limits the johnsongrass plants ability to develop its root system and produce seed. Compared to johnsongrass, most of the other problem grasses in alfalfa are annuals. They typically emerge from seed each year in the spring or early summer months. These annual grasses tend to be a problem in spring seeded alfalfa stands or older fields that contain a thin stand of alfalfa plants.

Management practices that prevent or reduce problems with weeds in alfalfa will depend on a variety of factors. The desire of controlling grasses may depend on the intended use and age of the alfalfa crop. Also, certain grasses offer nutritional benefits. Thus, some growers who feed rather than market their alfalfa may place less emphasis on grass control in stands that become thin with age and infested with such grasses as johnsongrass or crabgrass.

The field history of problem weeds should be one of the first considerations before seeding a field to alfalfa. For weedy grasses, weed management practices implemented before the alfalfa has been planted can prevent or help reduce the population of some problem weeds. For example, planting a rotational crop such as corn or soybean for two or more years prior to planting alfalfa can be an effective method of reducing a high johnsongrass population. Several weed management options are available that will effectively control this weed in fields planted to corn and soybeans. In situations where crop rotation cannot be used, Roundup applied before alfalfa is to be seeded in the fall is another weed management tool for dealing with johnsongrass problems. Apply Roundup to actively growing plants at least two to four weeks before alfalfa is to be seeded. This will allow Roundup enough time to translocate downward into the rhizomes and root system of johnsongrass plants before the soil is disturbed prior to planting.

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In spring seeded alfalfa, soil-applied herbicides such as Eptam and Balan are effective for control of several grassy weeds including suppression of seedling johnsongrass. These herbicides should be applied when a seedbed has been prepared. Both herbicides must be incorporated into the soil before alfalfa is seeded. Balan and Eptam injure desirable perennial forage grasses or small grain nurse crops, and therefore, are not used during the seeding of alfalfa-grass mixtures. In general, herbicides available for control of weedy grasses in alfalfa are much more limited in alfalfa stands interseeded with a desirable grass.

After alfalfa has been seeded or has become established other herbicide options should be considered. In pure stands of alfalfa, Poast herbicide provides good to excellent control of many annual grasses and seedling johnsongrass. Also, fair to good control of rhizome johnsongrass can be obtained. Poast can be applied over-the-top of newly seeded or established alfalfa stands when grassy weeds are actively growing. Timing of the application in relation to the weed growth stage is just as critical as using the right application rate. For rhizome johnsongrass, higher use rates in alfalfa are generally recommended. The waiting period before harvesting or grazing the alfalfa is an important consideration before applying Poast. Another possible option for johnsongrass control in emerged alfalfa is the use of Roundup as a spot treatment or applied through a rope wick applicator. Roundup can be used in an alfalfa-grass mixture. However, no more than one-tenth of any acre should be treated at one time.

For small annual grasses a between harvest treatment of Velpar or Gramoxone Extra can be utilized. These treatments must be applied immediately following alfalfa hay removal and before alfalfa begins new growth. Therefore, timing of these treatments may be more difficult. Velpar should be used only on pure alfalfa stands more than one year old. Gramoxone Extra can be applied to older alfalfa fields or alfalfa less than one year old, depending on application rate.

A final consideration when dealing with grasses and other weeds in alfalfa is the economic benefit of a weed management approach. If the cost of treatment exceeds the value of the crop, then the use of a herbicide treatment may be too costly. On the other hand, for some problem weeds the additional cost during one season to prevent further propagation of a weed problem could lengthen the life of the alfalfa stand. The economic benefits of a herbicide application can be determined only by the intended end use of the crop and individual management preferences.

References:

