

HERBICIDE OPTIONS FOR PASTURE WEED CONTROL

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Weeds have become more evident and problematic in grazed pastures as forage and livestock production systems have intensified. As animals consume the more desirable and palatable plant species in pastures, weedy plants become more abundant. In particular, animals tend to avoid grazing plants which contain thorns, prickly spines, or are unpalatable making some pastures less productive. In fact, many of the more problematic plants observed in Kentucky's grazed pastures possess these characteristics including thistles, spiny amaranth (spiny pigweed), horsenettle, common cocklebur, tall ironweed, and buttercups.

Traditionally, mowing or clipping fields has been one of the primary means to deal with weed problems in pastures. To be the most effective as a weed control tool, mowing should be done in a timely manner during the growing season, specifically just before problematic weeds begin to produce new seed. More frequent mowing may be needed to curtail growth of perennial weeds. However, costs associated with mowing have increased as diesel costs have risen. Therefore, more producers are beginning to consider herbicide options as an alternative method for weed control.

Table 1 lists several of the herbicides labeled for use in Kentucky which control broadleaf weeds in established grass pastures. Herbicide selection will depend on various factors including the specific weeds present and the forage species growing in the field. Many variables can affect the performance of herbicides including weed size and growth stage, weather conditions before and after spraying, and application methods. Often the growth stage of weeds is at or near maturity before a significant problem is recognized. Learning to identify weedy plants at younger growth stages is important for some herbicide treatments to be effective. A detailed discussion of herbicide options can be found in University of Kentucky Extension Bulletin titled "*Weed Management in Grass Pastures, Hayfields, and Other Farmstead Sites*" (AGR-172).

Although chemical control options can be an effective tool for dealing with troublesome plants, there are issues which can limit herbicide use. One of the principle concerns is the negative impact broadleaf pasture herbicides have on clovers since many grass forages are interseeded with clover or other legumes. Most broadleaf herbicides labeled for use on grass pastures are likely to kill or severely injure established clovers. Furthermore, if a forage producer wants to reestablish clovers after an herbicide application, an important consideration is how long should you wait before reseeding. For herbicides that contain 2,4-D a 6 to 8 week waiting period may be sufficient; whereas, for herbicide products that contain active ingredients such as aminopyralid a minimum waiting period of at least 6 months may be necessary.

Another consideration before making herbicide applications are grazing or haying restrictions. In general, most herbicide products listed in Table 1 have no restrictions or a waiting period before beef animals can graze treated pastures; however, a waiting period may be required before harvesting treated areas for hay. The most restrictive intervals are for lactating dairy animals. The label guidelines for horses are generally the same as beef animals.

The cost of herbicide treatment is another issue that limits some applications. Herbicide costs can be quite variable (Table 1) and the cost of making an application should be added to the total cost of the treatment. When considering herbicide cost; however, it is also important to compare with the cost for mowing. If the primary purpose for mowing is just for weed control, mowing cost (such as fuel, equipment, and labor) may be more expensive than an herbicide application.

One of the more important considerations is the presence of sensitive crops growing nearby. Tobacco, grapes, several vegetable crops, and ornamentals can be sensitive to many of the herbicide products labeled for use on pastures. When applied under the wrong environmental conditions (high temperatures and humidity) and/or when wind conditions are favorable for off-site spray drift the risk of causing injury to sensitive crops increases. Consult the herbicide product labels for precautionary statements and be aware of your surroundings and the time of the season before making herbicide applications.

In summary, herbicides can be an important tool in pasture weed management. However, they are not a cure for all pasture weed problems. In some cases they may only be a short-term solution to a longer-term problem. They are generally more effective when used in combination with other pasture management practices which promote healthy pasture stands such as maintaining proper fertility and good grazing practices. In many cases, overall pasture management must improve to obtain the maximum benefit from an herbicide application.

Table 1. Herbicides labeled for use on permanent grass pastures in Kentucky.

Herbicide		Estimated Cost/Acre*	Type of Weeds Controlled
Cimarron Plus (0.125 to 0.5 oz/A)	<i>metsulfuron + chlorsulfuron</i>	\$2.25 - \$9.00	Selected broadleaf weeds and certain woody plants. Do not use on timothy. Growth of tall fescue and certain other pasture grasses may be suppressed (consult label).
2,4-D [3.8 lb ae/gal formulations] (1 to 2 qt/A)	2,4-D [various products]	\$3.75 - \$7.50	Herbaceous broadleaf weeds.
Banvel, Clarity, etc. (0.5 to 2 pt/A)	<i>dicamba</i>	\$5.50 - \$22.00	Broadleaf weeds and woody brush
Weedmaster (2 to 4 pt/A)	<i>dicamba + 2,4-D</i>	\$7.00 - \$14.00	Herbaceous broadleaf weeds
Remedy (2 to 4 pt/A)	<i>triclopyr</i>	\$14.00 - \$28.00	Woody plants and selected broadleaf weeds
Crossbow (1 to 2 qt/A)	<i>triclopyr + 2,4-D</i>	\$15.00 - \$30.00	Woody plants and broadleaf weeds
PastureGard (1.5 to 4 pt/A)	<i>triclopyr + fluroxypyr</i>	\$10.50 - \$28.00	Woody plants and broadleaf weeds
Milestone (3 to 7 fl.oz/A)	<i>aminopyralid</i>	\$8.25 - \$19.25	Herbaceous broadleaf weeds
ForeFront R&P (1.5 to 2.6 pt/A)	<i>aminopyralid + 2,4-D</i>	\$10.50 - \$18.20	Herbaceous broadleaf weeds
MOWING		\$12.00 - \$20.00	Suppression of broadleaf weeds, weedy grasses, and small brush

*The estimated cost (\$/A) does not represent the use of spray additives or the cost for application.