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Weed Control in Grass Hayfields

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Over time grass hayfields that are not cut multiple times in a growing season will begin to fill in with undesirable plants such as chicory, milkweed, dandelions and other perennial broadleaf weeds. Weed control in grass hayfields can be achieved by using cultural, mechanical and chemical methods. The most effective weed control strategy includes the use of more than one control method.

Cultural control of weeds can be accomplished by maintaining proper soil pH and using fertilizer or manure to replenish nutrients removed from harvest and help maintain a healthy dense stand of desirable forage grasses that will outcompete the weeds.

Cutting and harvest management timing will also serve as a form of weed control. Harvesting the grass hayfields earlier in the season and multiple times will reduce the chances that perennial broadleaf weeds will become established. Cutting height is also important, cutting too short (less than 4 inches) will reduce the competitiveness of the grass and favor the weeds.

In some cases it may be necessary take more substantial actions such as plowing and reseeding or chemical weed control. While these options can represent the best course of action for some fields, it is important to remember that without correcting soil fertility and cutting management challenges weeds will likely re-establish.

Herbicides can effectively control perennial broadleaf weeds in grass hayfields. Proper weed identification, herbicide selection and appropriate application timing is necessary. Typically herbicides are used as a last resort to control weeds because clovers and other desirable legumes will be killed.

Mid to late summer is an ideal time of year to control perennial broadleaf weeds in grass hayfields. After the field has been harvested it is necessary to allow for sufficient regrowth of the perennial broadleaf weeds before making any herbicide application. The herbicides used need sufficient leaf area for the chemical to be taken into the plant. If there is little or no regrowth due to dry weather conditions the herbicide application will not be as effective. Be patient and wait for the plants to recover and grow. There is a relatively wide window for application of the herbicide (mid-August through mid to late September in most areas).

According to the 2020 Cornell Guide for Integrated Field Crop Management, simple perennial broadleaf weeds such as chicory, tall buttercup, dandelions and curly dock are best controlled with a tank mix of 3 to 4 pints of 2,4-D (based on a 3.8 lb/gallon formulation) plus ½ to 1 pint of Banvel (dicamba) per acre. Creeping perennial weeds such as milkweed, Canada thistle and horsenettle are best controlled with a tank mix of 4 pints of 2,4-D plus 2 pints of Banvel per acre. As with most herbicides, there are several grazing and hay harvest restrictions when used[a & b].

Smooth bedstraw is another common perennial weed that is very difficult to control without the use of herbicides. Each plant has an intensive underground root system made up of roots and rhizomes that store large energy reserves for plant growth. Mowing may help some but the total number of plants will not be reduced. Mowing

bedstraw before it goes to seed can slow the spread of this troublesome weed. Tillage is probably the most effective non-chemical way to manage smooth bedstraw. If tillage is used it is best to grow a row crop for a couple of years before reseeding grasses and clovers or alfalfa.

Chemical control is the most effective way to control Smooth Bedstraw. Based on weed control research trials conducted by Dr. Russ Hahn, Cornell University, fall applications of Crossbow (a premix of 2,4-D ester + triclopyr) herbicide provided the greatest amount of control. Late summer or early fall applications of Crossbow[c] should be applied at 1.5 to 2.0 quarts per acre.

Proper fertilization, harvest management and good crop rotation practices lead to healthy, high producing stands of grass and can serve as the best method of weed control. When necessary, herbicides can be used to control the weeds. Always read and follow pesticide label directions before each use.

[a] *Do not harvest hay for lactating animals for 37 days after application of up to 1 pint of Banvel and 30 days for any application of 2,4-D.*
[b] *Do not harvest hay for lactating animals for 51 days after application of up to 2 pints of Banvel and 30 days for any application of 2,4-D.*
[c] *Except for lactating dairy animals, there are no grazing restrictions following application of Crossbow herbicide. Do not allow lactating dairy animals to graze treated areas until the next growing season. Do not harvest hay for 14 days after application of Crossbow.*