

AGRICULTURAL GUIDE

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Weeds Control

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Pasture weeds (Perennials)

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There are approximately 5,000,000 acres of native pasture scattered throughout Missouri. Productivity of this vast natural resource varies considerably and is due primarily to differences in management. Such differences include maintaining soil fertility and controlling undesirable vegetation in combination with a judicious grazing program. It is not uncommon to see once productive native pastures completely overgrown by brush and herbaceous weeds. Under such competition, desirable grasses become sparse and gradually disappear. Persistent overgrazing is the major factor contributing to the decline in pasture productivity. This publication is concerned primarily with some of the weeds that compete with desirable vegetation in native pastures.

Pasture weeds can be grouped in several different categories. These include:

1. Grasses or broadleaved weeds. There are several differences between these two general groups but leaf characteristics are most easily observed.

2. Length of life (longevity)

a. Summer annual - The life cycle is completed during one growing season.

b. Winter annual - Seedling is established during the fall. It then becomes dormant in winter, resumes growth in spring, matures seed and dies. It must go through a low-temperature dormancy period before changing from vegetative to reproductive growth.

c. Biennial - Requires two growing seasons to complete life cycle and dies after maturing seed during second year.

d. Perennial - Lives indefinitely. A perennial may be "simple" or "creeping" in root characteristics. A simple perennial develops a substantial tap root but does not spread laterally by underground structures. A creeping perennial may spread indefinitely by lateral root stocks that radiate out in all directions from the original plant.

Because of their long life, perennials are persistent and consequently are the most difficult group of weeds to control. Following are illustrations of several perennial weeds found in native pastures throughout Missouri.



Aster (*Aster* spp.)



Broomsedge (*Andropogon virginicus*)



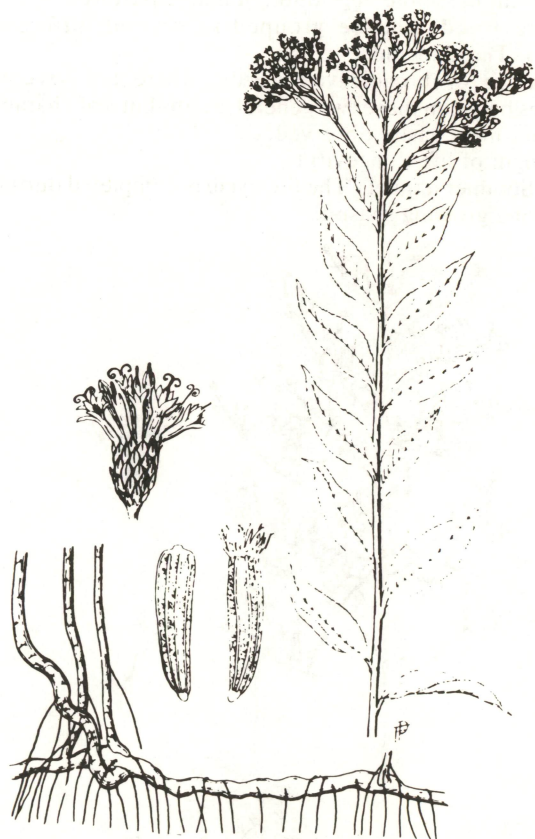
Curled dock (*Rumex crispus*)



Goldenrod (*Solidago* spp.)



Horsenettle (*Solanum carolinense*)



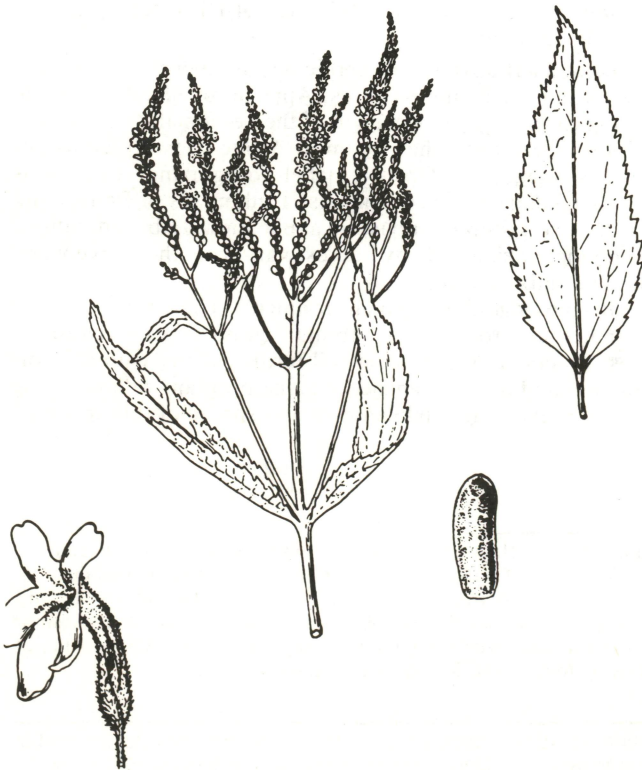
Ironweed (*Vernonia altissima*)



Red sorrell (*Rumex acetosella*)



Thoroughwort (*Eupatorium serotinum*)



Hoary vervain (*Verbena stricta*)



Water hemlock (*Cicuta maculata*)



White Snakeroot (*Eupatorium rugosum*)



Yarrow (*Achilla millifolium*)

Control

Except for broomsedge, control of the other illustrated pasture perennials is somewhat similar. An important objective of any control program should be the prevention of seed production and dissemination.

Mechanical

Perennial weeds can be reduced in stand by repeated mowing where terrain is suitable to the use of ground equipment. Mowing is most effective when root reserves are at a low ebb. For most weeds this occurs at the early bud stage of growth and will vary with growing conditions and with different species. Ironweed and Vervain bloom in early summer while Thoroughwort and Snakeroot bloom in early fall. Often a pasture will have a mixed population of several different perennials.

Chemical

Most of the illustrated broadleaved weeds can be controlled or suppressed by applying the 2,4-D ester at a rate of one pound per acre during active vegetative growth. A higher application rate is required if application is as late as the early bud stage. Where lespedeza or white clover grow in association with perennial weeds 2,4-DB ester can be used to

advantage. Lespedeza will tolerate 2,4-DB ester up to 1 1/2 pounds per acre.

Dicamba (Banvel). This herbicide has label registration for use on rangeland and pastures. Application should be made during early vegetative growth of the perennials. Banvel will kill lespedeza and other legumes. A rate of two pounds per acre is suggested. Observe label for grazing restrictions involving dairy and beef animals. Tank mixes of Banvel and 2,4-D are registered for pasture application. Label limitations involving grazing and hay harvest vary from the above when the tank mix is used.

Broomsedge (*Andropogon virginicus*). There is no practical chemical control for this perennial grass and prevention is most practical. Maintaining soil fertility along with a favorable pH and a well managed grazing program will go a long way in preventing establishment and spread of this species.

Illustrations included in this publication have been reproduced from the following. *Weeds of the North Central States* (Regional Publication No. 36), *Representative Missouri Weeds* (Bulletin 433), and *Principal Poisonous Plants of Kansas* (Tech. Bulletin 25). The author gratefully acknowledges authorization granted by the Universities of Illinois, Minnesota, Missouri and Kansas State.

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