

Pasture/Hay Field Weed Control Timing Chart

W. Bryan Smith, Area Extension Agent - Agricultural Engineer, Cooperative Extension Service

Brian Beer, Area Extension Agent, Cooperative Extension Service

Jonathan Croft, Area Extension Agent, Cooperative Extension Service

Lee van Blake, Area Extension Agent, Cooperative Extension Service

Effective Weed Control

The most effective weed control strategy is to maintain thick, healthy forage stands. Weeds are plants of opportunity, and will utilize any weakness to establish themselves in a pasture or hay field. These weaknesses may include soil fertility issues, overgrazing, scalping during mowing, and soil acidity issues. If these issues are not addressed, weed control will be unsatisfactory at best.

The first step in effective weed control is to evaluate the pasture or hay field and determine what conditions may have led to existing weed problems. Soil testing to determine the current nutrient and pH status is the place to begin. After fertility issues have been corrected, overgrazing problems should be eliminated with a change in stocking rate, a change in rotation schedule, or an addition of grazing land. For hay fields, scalping-during-mowing and mowing-too-low issues should be corrected by raising the mower to the correct height. Weak forage stands may also require some type of renovation.

Weed Identification and Herbicide Selection

After these issues have been corrected, the weed or weeds of concern must be accurately identified so that the appropriate herbicide may be selected. Proper weed identification is critical, since most herbicides are developed to target specific weeds and have little effect on many others. Choosing the wrong herbicide due to a misidentified weed can easily result in large amounts of money spent with no little or no effect on the weed problem. Local Extension agents can help with weed identification, and after identifying the weed can also help the grower determine which herbicide will be most effective based on research data and herbicide label information. They can also point out possible issues with using a given herbicide, such as wind drift to nearby crops, volatilization problems, and

requirements to apply the herbicide during a specific growth stage of the forage crop or the weed to be controlled.

The herbicide selected must be labeled for both the weed to be controlled and the pasture or forage crop grown. It is against Federal law to use a herbicide on a crop or forage not listed on the label. The label on the herbicide provides information on weeds controlled, forages the herbicide may be applied to, mixing procedures, application rates, and proper safety apparel required during mixing and application. More information on herbicide handling and safety may be found in fact sheet PIP-16, "Handle Pesticides Safely," available on the web at <http://www.clemson.edu/extension/publications/files/pesticide/pip16hdlsaf.pdf>. Selecting the wrong herbicide is not only illegal, but can also destroy the desirable forage. The herbicide label is the law, and is there to provide directions on proper and safe application and use. Read the label!

Local Extension Agents utilize the Clemson University Pest Management Handbook to determine the most effective herbicide for the weed to be controlled and the forage grown. This handbook is available on the web at <http://www.clemson.edu/extension/agronomy/pest%20management%20handbook.html>, and provides a wealth of information including efficacy of herbicides on various weeds, recommended application rates, mixing and handling instructions, and sprayer calibration information. Proper sprayer calibration is critical to ensure correct application rates.

The Weed Control Timing Chart

One major decision remains after pasture/forage issues have been corrected, the sprayer has been calibrated, and the herbicide has been selected based on weed identification and forage grown: what time of year to apply the herbicide. The most effective herbicide for the control of a given weed may be almost completely ineffective if applied at the wrong time of year. There is an optimum time frame to apply herbicide to each weed. In most cases this time is early in the weed's life cycle, but in some cases herbicides should

be applied during a different growth stage. In other cases only a pre-emergent herbicide may provide effective control. Remembering when to apply herbicide for many different weeds can be a challenge. The herbicide label provides definitive information concerning the crop stage and time of day when the product may be applied, but a simple chart to help initially plan a weed control season would be of great benefit.

The Pasture/Hay Field Weed Control Timing Chart was developed to help remove confusion and guesswork when determining the recommended time of year to control various weeds in pastures and forages. The Chart is arranged with a list of common weeds in rows on the left, and months of the year in columns on the top of the chart. The row of each weed listed has a colored bar in the row under the time frame when the weed may be most effectively controlled. Green bars indicate application time ranges for post-emergent herbicides; goldenrod bars indicate application time ranges for pre-emergent herbicides.

Growers with a known weed problem may use this chart to plan their herbicide purchases and their application timing for the growing season. The chart may also be used to determine if a weed issue recently discovered may be best addressed immediately, or if a herbicide application should be delayed until later in the season or the following year to be most effective.

If there are several different weeds to be controlled, the chart may also help the grower decide if a single application of one herbicide will be appropriate, or if there will need to be two different applications due to the timing required

to control the different weeds. The recommended control time ranges for a number of the weeds listed overlap, so in some cases an application time may be selected that will offer good control for more than one weed (provided the herbicide selected is effective in controlling both weeds).

Contact Information

As mentioned, your local Extension Agent is your best source of information for weed identification, herbicide selection, and determination of application rates. The Agent may also be able to offer information or cautions based on the pesticide label - for instance, should care be exercised or another herbicide used if a soybean crop or fruit orchard is planted nearby.

A listing of Clemson Extension Offices in every county of the State can be found on the web at <https://www.clemson.edu/extension/co/index.html>.

Disclaimer

This chart is provided as a planning tool. It is not provided as a substitute for herbicide label information, which is the law, nor is it to be used in absence of the directions on the herbicide label. It is simply provided to help the grower plan approximate weed control timing as a portion of an effective weed control strategy, which includes following all herbicide label directions and observing all warnings and cautions, including setbacks from water bodies, roads, property lines, and wells; warnings concerning volatilization and wind drift; requirements for surfactants, nozzle types and sizes, spray pressures, and water volumes applied; and worker protection apparel required.

Reviewers/authors:

W. Bryan Smith, Area Extension Agent - Agricultural Engineer, Clemson Cooperative Extension Service, Clemson University
Brian Beer, Area Extension Agent / Assistant Program Team Leader, Clemson Cooperative Extension Service, Clemson University
Matthew Burns, Ph.D., Program Team Leader / Extension Livestock Specialist, Clemson Cooperative Extension Service, Clemson University
Jonathan Croft, Area Extension Agent - Agronomy, Clemson Cooperative Extension Service, Clemson University
Lee van Vlake, Area Extension Agent - Livestock and Forages, Clemson Cooperative Extension Service, Clemson University

Pasture / Hayfield Weed Control Timing Chart

 Post Emergence
  Pre Emergence

	January	February	March	April	May	June	July	August	September	October	November	December
amaranth, spiny												
apple, tropical soda	(Invasive species - call Clemson Department of Plant Industries, 864-646-2140)											
bahiagrass												
barley, little												
bedstraw, smooth												
blackberry/dewberry					(While Flowering)							
broomsedge												
bullrush												
buttercup												
carrot, wild												
cheat												
chickweed, common												
cocklebur, common												
cogongrass	(Invasive species - call Clemson Department of Plant Industries, 864-646-2140)											
crabgrass												
croton, woolly												
cudweed												
dallisgrass												
dandelion												
dock, curly												
dogbane, hemp												
dogfennel												
eveningprimrose, cutleaf												
falsedandelion, Carolina												
foxtail, knotroot												
foxtail, yellow												
garlic, wild												
geranium, Carolina												
goldenrod												
goosegrass												
greenbriar (smilax)												
henbit												
honeysuckle												
horsenettle					(While Flowering)							

(Herbicide must be applied during both time frames to be effective.)
 (Herbicide must be applied during both time frames to be effective.)

Pasture / Hayfield Weed Control Timing Chart

Post Emergence
 Pre Emergence

	January	February	March	April	May	June	July	August	September	October	November	December
horseweed												
johnsongrass												
lambquarter												
lespedeza, sericea												
lettuce, prickly												
mint, perilla												
nutsedge												
passionflower, maypop												
pear, prickly												
pepperweed, Virginia												
persimmon												
plantains												
pokeweed, common												
radish, wild												
ragweed, common												
ryegrass, annual												
sandbur												
shepherdspurse												
sicklepod												
sida, arrowleaf												
sida, prickly												
smartweed												
smutgrass												
sneezeweed, bitter												
spurge, nodding												
thistles												
trumpetreeper												
vaseygrass												
vervain, blue												

Time frames listed in this chart are recommended application time frames for most effective control of weeds in pastures and hayfields in South Carolina. Local Clemson Extension agents can assist with the selection of the most effective herbicide and application rate for the weed issue to be addressed and the forage or forages grown.

This fact sheet may be reprinted in its entirety for distribution. If sections are re-used in other states, credit must be given to Clemson Extension and the authors.

Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, gender identity, marital or family status and is an equal opportunity employer.