Control of Annual Grass Weeds in Soybeans
Michigan State University Extension Service
IPM Facts
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Biology

Annual grass weeds complete their life cycle in one year by germinating, flowering, producing seed, and dying. Reproduction is by seed only; there are no overwintering vegetative parts. Summer annuals complete their life cycle from spring to fall, while winter annuals complete their life cycle from fall to late spring. Most common annual grass weeds in Michigan are summer annuals.

Cultural Control

Cultural control utilizes crop management practices that allow a desirable crop to out-compete weeds. Two common cultural control methods are the use of a smother crop and crop rotation. Smother crops compete with weeds for light, nutrients, and moisture. Common smother crops include forage sorghum, cereals (barley, oats, wheat, or rye) and legumes (alfalfa or clover), although any highly competitive crop that is well adapted to an area may be suitable.

Crop rotation prevents the buildup of weeds common to a specific crop. An ideal crop rotation includes crops that have vastly different growth habits and planting conditions compared to other crops in the rotation and to the predominant problem weeds. Smother crops can be included in the crop rotation.

Mechanical Control

Tillage can be used for both ground preparation and weed control. Tillage equipment can be subdivided into two categories, primary and secondary. Primary tillage tools include moldboard plows, chisel plows, and heavy disks. Secondary tillage tools include various types of harrows, field cultivators, row crop cultivators, finishing disks, and rotary hoes. Rotary hoes are used to remove shallow-rooted weeds prior to or shortly after crop emergence. Row crop cultivators are used to remove weeds between crop rows.

Tillage can influence weed species communities. For example, grasses and perennial weeds are more predominant in reduced tillage systems.

Shallow cultivation may be used to enhance herbicide applications. Cultivate as shallow as possible to prevent bringing weed seeds to the soil surface. Do not cultivate fields receiving preemergence herbicide applications for at least 2 weeks following application; however, if dry weather persists for 7 to 10 days following a preemergence application, rotary hoe the field. Delay cultivation after postemergence herbicide applications for at least 7 to 10 days to allow time for the herbicide to translocate throughout the sprayed weeds.

Chemical Control

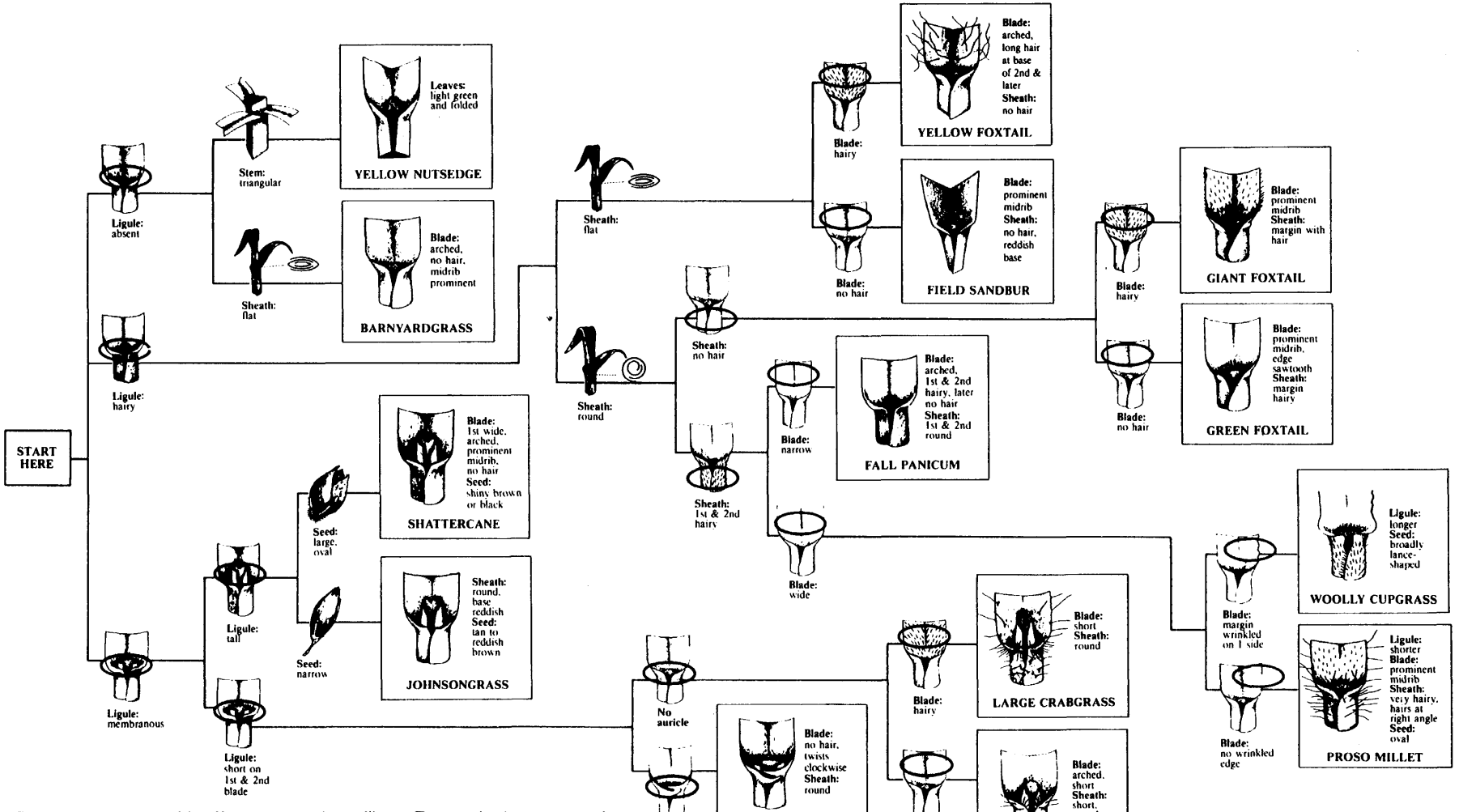
Chemical control of annual weeds can be achieved with herbicides applied preplant incorporated, preemergence, or postemergence. Consider the energy and environmental implications when choosing a control.

Preplant incorporated herbicides are mechanically incorporated into the soil prior to planting. Incorporation of some herbicides is necessary to prevent losses from volatilization or photodecomposition.

Preemergence herbicides are applied to the soil surface after the crop has been planted but before the crop seedlings emerge through the soil.

Postemergence herbicides are applied after crop emergence. They either burn off the aboveground portion of the weeds or they may be translocated throughout the weed and kill the growing points. Most postemergence herbicides are applied broadcast. However, certain herbicides can be applied with directed equipment such as drop nozzles when the crop or weeds are too large for broadcast applications.

GRASS SEEDLING IDENTIFICATION GUIDE



This key is a way to identify grass weed seedlings. To use the key you need to understand how the key is organized and be able to recognize a few simple plant characteristics.

This key uses drawings to show which part of the plant to examine. Identifying characteristics are circled.

Examine grass seedlings with great care. One characteristic alone seldom identifies the weed.

Then begin on the left side of the key and proceed step by step to the right. Do not skip any steps.

Illustrations courtesy of Emory Nelson and Mobay Corporation, Agricultural Chemicals Division, Kansas City, Missouri

Grass Weed Response to Herbicides in Soybeans

Herbicide	Rate/A[a]	Barnyardgrass	Crabgrass	Giant foxtail	Green foxtail	Yellow foxtail	Fall panicum	Witchgrass	Wild proso millet
		Control[b]							
Preplant incorporated:									
Command	1 1/2 pt	G	E	E	E	G	G	G	F
Dual	2 pt	E	E	E	E	E	G	G	F
Lasso/Partner/Microtech	2 qt	E	E	E	E	E	G	G	F
Lexone/Sencor 75DF	1/2 lb	F	F	F	G	G	F	F	P
Preview 75DG	6 oz	F	F	F	G	G	F	F	P
Prowl 3.3 EC	2.4 pt	E	E	E	E	E	E	E	F
Pursuit	1/4 pt	F	F	G	G	G	P	P	F
Scepter	2/3 pt	F	P	G	G	G	P	P	P
Sonalan	2 1/2 pt	E	E	E	E	E	E	E	F
Treflan	1 1/2 pt	E	E	E	E	E	E	E	F
Preemergence:									
Dual	2 pt	E	E	E	E	E	G	G	F
Lasso/Partner/Microtech	2 qt	E	E	E	E	E	G	G	F
Lexone/Sencor 75DG	1/2 lb	F	F	F	G	G	F	F	P
Linex/Lorox 50DF	1 1/2 lb	F	F	F	F	F	F	F	P
Lorox Plus	14 oz	F	F	F	F	F	F	F	P
Preview	6 oz	F	F	F	G	G	F	F	P
Prowl 3.3 EC	2.4 pt	G	G	G	G	G	G	G	F
Pursuit	1/4 pt	F	F	F	F	F	P	P	P
Scepter	2/3 pt	F	P	G	G	G	P	P	P

[a] Refer to Extension Bulletin E-434, **"Weed Control Guide for Field Crops,"** for more specific weed control recommendations.

[b] P = poor; F = fair; G = good; E = excellent

Grass Weed Response to Herbicides in Soybeans

Herbicide	Rate/A[a]	Barnyardgrass	Crabgrass	Giant foxtail	Green foxtail	Yellow foxtail	Fall panicum	Witchgrass
		Control[b]						
Postemergence[c]								
Assure II + COC[d] or NIS[d]	0.44 pt + 1% or 1/4%	G	G	E	E	E	E	E
Blazer + NIS[d]	1.5 pt + 1/8%	N	N	F	F	F	F	N
Fusilade 2000 + COC[d]	1 1/2 pt + 1 qt	E	G	E	E	E	E	E
Fusion + NIS[d] or COC[d]	1/2 pt +1/4% or 1/2%	G	G	E	E	E	G	E
Option II + COC[de]	0.7[e] pt + 1 qt	G	F	E	E	G	G	G
Poast + COC[d] or Dash	1 pt + 1 qt or 1 qt	E	G	E	E	E	E	E
Poast Plus + Dash	1 1/2 pt + 1 qt	E	G	E	E	E	E	E
Pursuit +28% N[d] + NIS[d]	1/4 pt +1 qt + 1/4%	F	F	G	G	G	F	F
Reflex + NIS[d] or COC[d]	1 pt + 1/4% or 1%	P	P	F	F	F	P	P
Scepter +NIS[d] or COC[d]	1/3 pt + 1/4% or 1 qt	N	N	F	F	F	N	N
Select + COC[d]	1/2 pt + 1 qt	E	G	E	E	E	G	G

[a] Refer to Extension Bulletin E-434, **"Weed Control Guide for Field Crops,"** for more specific weed control recommendations.

[b] N = none; P = poor; F = fair; G = good; E = excellent.

[c] Refer to labels for size of grasses controlled by each postemergence herbicide and specifics on application rates, spray pressure, gallonage, tank mixes, etc.

[d] NIS = nonionic surfactant; COC = crop oil concentrate; 28% N = 28% liquid ammonium nitrate

[e] Apply Option II at 0.5 pt/A for giant and green foxtail control.

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To protect yourself and others and the environment, always read the label before applying any pesticide.

This publication contains pesticide recommendations based on research and pesticide regulations. However, changes in pesticide regulations occur constantly. Some pesticides mentioned may no longer be available, and some uses may no longer be legal. If you have questions about the legality and/or registration status for using pesticides, contact your county Cooperative Extension Service office.

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