

JOHNSONGRASS



DESCRIPTION

Johnsongrass (*Sorghum halepense* (L.) Pers.) is a warm-season perennial grass native to Asia and northern Africa. It reproduces by long rhizomes and seeds and competes well with crop plants. Stems grow six to twelve feet tall, from roots that are freely-branching, stout, fibrous, and bear fleshy rhizomes. Leaves are alternate, simple, and relatively wide and long with a prominent white midvein. Spikelets are paired (one sessile and perfect, one stalked and anther-bearing) and borne in large open panicles. The fruits are reddish-brown grains about two millimeters long. Flowering occurs from May until frost, and fruiting occurs from June until frost.

PREVENTION OF SPREAD

The Kansas Noxious Weed Law (K.S.A. 2-1313a et. seq.) requires all landowners to control the spread of and to eradicate Johnsongrass on all lands owned or supervised by them. Methods used for control must both prevent the production of viable seed and destroy the plant's ability to reproduce by vegetative means. Infestation sites must be monitored after control methods have been implemented to ensure that dormant seeds in the seedbank do not germinate and establish new infestations.

JOHNSONGRASS CONTROL PRACTICES

Johnsongrass control means that the roots, rhizomes, and flowers must all be destroyed. The rhizomes, which are horizontal underground stems, can extend for more than six feet from the original plant and can sprout new plants every few inches. Because Johnsongrass is a perennial, two or more of the control methods listed below must be used together to control Johnsongrass, with the exception that herbicide applications may be used alone as a control. Contact your county noxious weed director for more information.

Cultural Control

Cultural weed control involves land and vegetation management techniques used to prevent the establishment or control the spread of noxious weeds.

Johnsongrass is generally a good forage grass, especially when young and healthy, but is intolerant of heavy grazing. Additionally, plants at certain developmental stages (when leaves and stems are actively growing) or plants that are stressed (especially due to drought, extreme heat, or frost) can become toxic to livestock due to the production of cyanogenic glycosides. Also, prolonged consumption of fresh Johnsongrass can cause nitrate poisoning in ungulates. Consequently, grazing as a control method must be carried out with extreme caution.

Planting a dense cover crop in the spring, after a period of intensive cultivation, may provide effective competition for Johnsongrass. The effectiveness of all competitive crops depends on intensive cultivation during the Johnsongrass growing season when land is not in crop.

Frequent surveys of fence lines, roadways, ditches, and other susceptible areas for new infestations and the timely removal of any new plants will prevent Johnsongrass from becoming established.

Mechanical Control

Mechanical weed control involves the physical removal of weeds or the reproductive parts of weeds. As a perennial species, Johnsongrass is difficult to control mechanically. Hand-pulling or hoeing may work for small, recently established populations, but these methods are too time-consuming and laborious to be economical on a large scale. Mowing or harvesting prevents weed seed production but does not prevent the plant from reproducing vegetatively.

Fall plowing may bring Johnsongrass rhizomes closer to the surface, exposing them to temperatures cold enough to kill them. Cultivation also reduces carbohydrate reserves in Johnsongrass, making it less competitive. However, once cultivated, the system of rhizomes can quickly produce new plants, and cultivation can spread the pieces of rhizome, ultimately increasing the extent of the infestation. It is important to clean roots and root fragments from equipment before entering uninfested areas of the field or other fields to prevent the spread of Johnsongrass. This is not financially practical for most agricultural production systems and may also increase erosion of the topsoil. In general, mechanical control is not a good option for Johnsongrass because of its ability to reproduce from both rhizomes and seed.

Chemical Control

The herbicides listed below may be used for cost-share with landowners to control Johnsongrass. Other products labeled and registered for use on this noxious weed in Kansas may be used in accordance with label directions but are not available for cost-share. Be sure to follow all label directions and precautions. For additional information consult the most recent edition of the Kansas State University publication of "Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland."

Any two or more of the herbicides listed below may be available for cost-share as a pre-mix or a tank mix if allowed on the respective labels. Contact your county weed program for availability.

Switching often between herbicides with different modes of action is highly recommended.

Herbicide	Mode of Action	Herbicide	Mode of Action
fenoxaprop-ethyl	1	primisulfuron	1
fluazifop-p-butyl	1	quizalofop-p	1
foramsulfuron	2	rimsulfuron	2
glyphosate	9	sethoxydim	1
imazapic	2	sulfometuron	2
metsulfuron methyl	2	sulfosulfuron	2
nicosulfuron	2		

Biological Control

Biological control refers to the deliberate application of a living organism to control the spread of weeds. These agents will not eradicate their host plant; therefore, other control methods must be used in addition to the use of biological control agents as part of an integrated pest management strategy. The importation of biological control agents is regulated by USDA-APHIS and is allowed by permit only.

There are no biological control agents available for Johnsongrass.