

THE WEED PATCH

Johnsongrass Control with Asulox and Envoke

Jim Griffin

Johnsongrass can emerge from seeds germinating in the soil (seedling johnsongrass) and from underground rhizomes (rhizome johnsongrass). For johnsongrass seeds to germinate soil temperature would need to be around 65°F. In contrast, rhizome johnsongrass can emerge during the winter and early spring when soil temperature is cool. In early March in the southern area of the cane belt johnsongrass was as tall as 4 inches in some fields. Soil applied herbicides to include Prowl, Dupont K-4, Sencor, Sinbar, Command, and Treflan will control seedling johnsongrass but have little activity on rhizome johnsongrass. To control johnsongrass after it has emerged requires use of Asulox/Asulam either alone or in combination with Envoke.

Asulox/Asulam Programs

Asulox/Asulam should be applied broadcast at 4 qt/A (2 qt/A on a 36 inch band on a 72 inch row) plus nonionic surfactant at 1 to 2 qt/100 gallons of water or crop oil concentrate at 1 gallon/100 gallons of water. A spray volume of 15 to 30 gallons of water per acre should be used. Asulox/Asulam at this rate will also provide some control of itchgrass and other annual grasses. A second application of Asulox/Asulam at 3 to 4 qt/A broadcast (1.5 to 2 qt/A banded) can be made to johnsongrass regrowth, usually about eight weeks after the first application. This follow up herbicide application can increase johnsongrass control, but may not increase yield over that obtained with a single early season application. Sugarcane injury is more likely when Asulox/Asulam is applied to sugarcane stressed from drought, excessive temperature, or flooded soils, especially after June 1.

Asulox/Asulam can also be applied as a spot treatment in fields where johnsongrass is scattered. The most accurate and economical method of spot treating is to use a calibrated sprayer at a constant speed with the operator turning the spray nozzles on and off as needed. If a high-volume “cattle gun” nozzle is used for spot treatment, apply a 2% solution of Asulox/Asulam (2 gallons of herbicide plus 98 gallons of water) plus nonionic surfactant or crop oil concentrate. To avoid sugarcane injury, spray only to wet the foliage and do not drench.

In visiting with growers at parish meeting this year I have heard reports that johnsongrass control is increased when Asulox or Asulam is applied with Prowl EC. In our research we have seen increased control in some cases with a band application of 2 qt/A Asulox plus 1 qt/A Prowl EC when johnsongrass was in the boot stage, but the response has not been consistent. Prowl is normally applied in early to mid March with the primary intent to control weeds as a soil treatment. Application of Prowl with Asulox or Asulam in mid-April may not be the most cost effective way to use Prowl.

Envoke and Asulox/Asulam Programs

Envoke at 0.3 oz/A broadcast (0.15 oz/A on a 36 inch band on a 72 inch row) will not provide complete control of rhizome johnsongrass. A broadcast application of Envoke at 0.3 oz/A (0.15 oz/A banded) with Asulox/Asulam at 2 qt/A (1 qt/A banded) has provided more consistent rhizome johnsongrass control

than Asulox/Asulam applied alone at 4 qt/A (2 qt/A banded). At these rates the cost of a banded application of Envoke plus Asulox would be about the same as the cost of Asulox applied alone (around \$25/A). As specified earlier, a high quality nonionic surfactant or crop oil concentrate should be added to the spray mixture. Envoke will also control itchgrass, morningglory, and nutsedge. Weeds treated with Envoke will turn yellow, red, or purple after several days and weed death generally occurs 1 to 3 weeks after application depending on the specific weed and growing conditions. Envoke can cause some yellowing and white banding on leaves present in the whorl at application as well as slight stunting but recovery is rapid and sugarcane and sugar yield have not been affected.

General Information Envoke and Asulox/Asulam Programs

For ground application of Asulox/Asulam or Envoke use a minimum of 15 gallons of water per acre on a broadcast basis. Higher spray volume should be used for heavy weed infestations to ensure adequate spray coverage. Coverage of large johnsongrass foliage can be increased when nozzles are mounted on drops and spray is directed into the canopy. Average air temperature should be at least 60°F with johnsongrass 12 to 18 inches tall and actively growing when herbicide is applied. If johnsongrass is purple in color from stress due to cool weather delay herbicide application until plants turn green. Do not cultivate, fertilize, or otherwise disturb the johnsongrass root system 7 days before or after herbicide application. With some variation caused by weather conditions, johnsongrass will be at the recommended treatment size in late March or early April. Asulox/Asulam may be applied by air but Envoke can not be applied aerially.

Dr. Jim Griffin is with the LSU AgCenter in the Department of Agronomy and Environmental Management and has research and extension responsibilities in the area of sugarcane weed management. Results from sugarcane weed control research and specific sugarcane weed control recommendations can be viewed at www.lsuagcenter.com/weedscience.

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