MISSISSIPPI STATE UNIVERSITY EXTENSION

Itchgrass (*Rottboellia cochinchinensis*)

Itchgrass [*Rottboellia chochinchinensis* (Lour.) W.D. Clayton] is a nonnative, warm-season, annual grass introduced to Miami, Florida, in the 1920s. It is a federal noxious weed and is listed as a state noxious weed in 12 states including Mississippi, Arkansas, Florida, and Texas. Itchgrass is a profusely tillering grass that can be very competitive in row crops and pastures as well as along roadsides (Figure 1). It is spread primarily by seed. Itchgrass germinates in summer, with new plants emerging for extended periods.

Description

Vegetative Growth

Some texts indicate potentially 4 species of *Rottboellia* L.f., but through recent taxonomic revision, that number is probably closer to 2 or 3. Itchgrass can reach 10 feet or more in height and tillers profusely. Itchgrass has short, stiff hairs on the sheaths (Figure 2), especially near the collar. These hairs can puncture or irritate skin when handled—hence the name itchgrass. The flat leaves are around 1 inch wide, taper to a point, and have short hairs on the leaf surface.

Flowering

The inflorescence is a raceme approximately 4 inches long, with spikelets in pairs and no awns (Figure 3). One of each spikelet is stalked and sterile; the other is stalkless and fertile. Each is attached to a thickened axis. The fertile, stalkless spikelet is oblong and around ¼ inch long. Plant growth is extremely rapid under good conditions, with seed production initiated 6 to 7 weeks after emergence. Seed production continues throughout the growing season. Seeds break off as they mature, but during the after-ripening process, they require a 5- to 6-month period for germination. Seeds may retain viability in the soil for up to 4 years.

Dispersal

Since itchgrass often frequents rights-of-way, the most probable mechanism of dispersal is movement on maintenance equipment, such as mowers. It may also occur in other managed habitats, such as pastures and row crops.

Habitat

Itchgrass is a problem weed in row crops, especially grass crops and pastures, and in railroad, highway, and other rights-of-way (Figure 1).

Figure 1. Itchgrass on a roadside in Mississippi showing its ability to obstruct visibility.

Figure 2. Itchgrass sheath showing stiff hairs.

Figure 3. Itchgrass inflorescence.

Distribution

Roettboellia is not native to the United States. Itchgrass is native to the Old World tropics, probably India. It is now widespread in the tropics and subtropics worldwide. It was introduced into the United States for potential forage in the 1920s. Since that time, the grass has been reported in Alabama, Arkansas, Florida, Georgia, Indiana, Louisiana, Mississippi, North Carolina, and Texas. Field studies indicate that itchgrass may grow and produce seed as far north as Minnesota. Despite efforts to map and monitor its spread, the full extent of its invasion is not clear.

Control Methods

There are no effective biological control methods; however, chemical and mechanical methods can be used.

Chemical

Several herbicides can be used for itchgrass pre-emergence and post-emergence control (Tables 1a and 1b). Pre-emergence herbicide options include clomazone + diuron or metribuzin, and pendimethalin. Post-emergence herbicide options include asulam, glyphosate, nicosulfuron, glufosinate, clethodim, fluazifop, quizalofop, sethoxydim, sulfometuron, and trifloxysulfuron + asulam. See Tables 1a and 1b for trade names and rates.

Mechanical

Cultivation has been used to control itchgrass in row crops, although the addition of chemical controls may greatly enhance results in row-cropping systems. Small patches of itchgrass may be removed by hand. Take precautions to avoid the stiff hairs, which may irritate or pierce the skin.

Table 1a. Chemical control tactics for itchgrass (pre-emergence).

Method	Herbicide	Rate (ounces per acre or spot treatment)
clomazone + diuron	Command 3ME + Diuron, Direx, etc., 4L	32–43 oz/A + 80 oz/A
clomazone + metribuzin	Command 3ME + Sencor, Metribuzin, etc., 4L	32–43 oz/A + 24 oz/A
pendimethalin	Pendulum 3.3EC, Prowl H_2O, Prowl 3.3EC, etc.	19–58 oz/A

Table 1b. Chemical control tactics for itchgrass (post-emergence).

Method	Herbicide	Rate (ounces per acre or spot treatment)
asulam	Asulox, Asulam, etc.	128 oz/A
glyphosate	Roundup, etc.	32 oz/A of 3 lb ae/gal formulation
nicosulfuron	Accent	0.67 oz/A
glufosinate	Liberty, Finale, Lifeline, etc.	28–34 oz/A
clethodim	Select	6–16 oz/A or 0.5%
clethodim	Envoy	12–32 oz/A or 1%
fluazifop	Fusilade II	6–12 oz/A or 0.5%
sethoxydim	Poast	12–40 oz/A or 1%
sethoxydim	Vantage, Poast Plus, Sethoxydim, etc.	24–36 oz/A or 1.5%
sulfometuron	Oust, SMS, etc.	4 oz/A
trifloxysulfuron + asulam	Envoke, Monument + Asulox, Asulam, etc.	0.2 oz/A + 96 oz/A

References

USDA, NRCS. 2007. The PLANTS Database. National Plant Data Center, Baton Rouge, LA 70874-4490 USA. http://plants.usda.gov

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