# Cogongrass

Cogongrass’s scientific name is *Imperata cylindrica* (L.) Beauv. (Incl. *I. brasiliensis* Trin.), but it is commonly known as Japanese bloodgrass, Red Baron, or speargrass. Cogongrass is designated as the seventh worst weed in the world. It is native to tropical and subtropical areas of the eastern hemisphere. This grassy weed spreads vegetatively and by wind-dispersed seeds. Cogongrass produces underground horizontal stems, or rhizomes, which root at each node and produce a new stem. These rhizomes remain dormant during winter and produce new plants the next spring.

Cogongrass was both accidentally and purposely introduced in the southern United States in the early 1910s and 1920s. Farmers planted cogongrass for pastures and erosion control, but cogongrass has poor nutritional value for livestock feed and is too weedy for erosion control. Unfortunately, cogongrass with reddish to maroon foliage is still sold by some nurseries as an ornamental grass called Japanese bloodgrass or Red Baron bloodgrass.

Cogongrass is regulated as a federal noxious weed. It is also a state noxious weed in Mississippi, so it cannot be moved within the state boundaries without a permit from the Department of Agriculture and Commerce Bureau of Plant Industry.

## Description

### Vegetative Growth

Cogongrass produces upright, smooth stems 6–47 inches tall that form loose or densely compacted stands. Its dense stems and rooting system choke out other vegetation (**Figure 2**). Leaves of cogongrass display a midrib that is off-set (closer to one leaf margin than the other).

### Flowering

An unusual characteristic of cogongrass is its flowering pattern. It flowers immediately after the transition from dormancy to full greenup in the spring, typically from March to May, although warm winters may cause earlier greenup and flowering. Cogongrass can also flower following frost, fire, mowing, tillage, or other disturbances. Most native grasses that resemble cogongrass flower well after plants have turned green, rather than immediately after greenup. Flowers typically occur at the top of the stem and are easily identified by silvery or whitish, silky hairs attached to the seed that create the appearance of a feathery plume (**Figure 3**). Silver beardgrass [*Bothriochloa saccharoides* (Sw.) Rydb; Syn. *Andropogon sacchariodes* Sw.] can be confused with cogongrass. However, silver beardgrass is smaller, forms clumps rather than dense stands, and flowers in summer.

Each cogongrass plant can produce up to 3,000 seeds per season. Cross-pollination is necessary for seed production. Seedlings are frequently found in open sites that have been disturbed by clear-cutting, burning, tillage, excavation, grading, fire ant mounds, or other disturbances. Seedlings begin to produce rhizomes about 4 weeks after emergence.

### Dispersal

Cogongrass is typically spread by wind, vehicles, equipment, animals, and contaminated soil.

## Habitat

In the Midsouth and other southern states, cogongrass usually occurs in noncultivated sites, including pastures, orchards, fallow fields, forests, parks, natural areas, and highway, electrical utility, pipeline, and railroad rights-of-way. Cogongrass prefers sandy soils with low nutrient levels, although it will inhabit more fertile sites.

## Distribution

Cogongrass occurs as a weed in Alabama, Florida, Georgia, Louisiana, Mississippi, Oregon, South Carolina, Texas, and Virginia. Several thousand acres are infested with cogongrass in the southeastern United States; more than 1.2 billion acres are infested worldwide. Unfortunately, this weed continues to spread.

## Control Methods

### Chemical

Currently, there is no single treatment that effectively eliminates cogongrass infestations. Roundup Ultra, Roundup Pro, or other brands of glyphosate (41% active ingredient formulations) at 5 quarts per acre or as a 1.5% solution will suppress cogongrass. Repeated applications each year for several years are needed for control. Applications of Arsenal, Imazapyr, Polaris, or Habitat (2 pounds imazapyr per gallon formulation) at 48 ounces per acre can be used in certain areas and provide excellent control up to 1 year after application. Because Arsenal and Roundup are nonselective, applications may damage nearby desirable vegetation. Since Arsenal remains in the soil for long periods, its effectiveness on cogongrass and other plants may continue up to a year after application. Do not apply imazapyr herbicides within two times the dripline of any desirable vegetation.

### Mechanical

Cogongrass will not persist in areas frequently tilled, so frequent tillage can control cogongrass in certain sites.

### Physical

Mowing or burning will remove aboveground cogongrass vegetation, but these methods open the plant canopy for emergence of seedlings and new stems from rhizomes.

### Cultural

Broadcasting or drilling Roundup Ready soybeans into cogongrass, followed by glyphosate applications, has been a very effective control method.

# References

Brown, D. 1944. Anatomy and reproduction in *Imperata cylindrica*. Joint Publication No. 7:15–18. Imperial Agriculture Bureaux, Great Britian. 66 p.

Bryson, C.T. 1984. Weed Alert: Cogongrass [*Imperata cylindrica* (L.) Beauv.]. Southern Weed Society Newsletter 17:8.

Bryson, C.T. & R. Carter. 1993. Cogongrass, *Imperata cylindrica*, in the United States. Weed Technology, 7:1005–1009.

Coile, N.C., & D.G. Shilling. 1993. Cogongrass, *Imperata cylindricl* (L.) Beauv.: A good grass gone bad! Florida Department of Agriculture & Consumer Services, Division of Plant Industry, Botany Circular No. 28.

Dickens, R. 1974. Cogongrass in Alabama after sixty years. Weed Science, 22:177–179.

Holm, L.G., D.L. Pucknett, J.B. Pancho, & J.P. Herberger. 1977. The World’s Worst Weeds. Distribution Biology. University Press of Hawaii, Honolulu, HI.

Hubbard, C.E. 1944. *Imperata cylindrica*. Taxonomy, Distribution, Economic Significance and Control. Imperial Agriculture Bureau.

Joint Publication No. 7, Imperial Bureau Pastures and Forage Crops, Aberystwyth, Wales, Great Britain.

McDonald, S.K., D.G. Shilling, C.A.N. Okoli, T.A. Bewick, D. Grodon, D. Hall, & R. Smith. 1996. Population dynamics of cogongrass. Proceedings of the Southern Weed Science Society, 49:156.

Patterson, D.T., E.E. Terrell, & R. Dickens. 1979. Cogongrass in Mississippi. Mississippi Agriculture and Forestry Experiment Station Research Report, 46(6):1–3.

Shilling, D.G., E.R.R.L. Johnson, J.F. Gaffney, B. Brecke, D. Colvin, D. Hall, G. Tanner, R. Querns, & H. Dozier. 1998. The influence of timing of herbicide application on cogongrass management and the influence of introduced species on cogongrass management. Final Report, Hernando County Public Works.

USDA, NRCS. 2007. The PLANTS Database (*http://plants.usda.gov*, 5 September 2007). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

**Publication 3190** (POD-02-18)

By **John D. Byrd Jr.**, PhD, Extension/Research Professor, Plant and Soil Sciences; **Victor Maddox**, PhD, Senior Research Associate, Plant and Soil Sciences; and **Charles T. Bryson**, PhD, Research Botanist, USDA Crop Production Systems Research Unit.

Copyright 2018 by Mississippi State University. All rights reserved. This publication may be copied and distributed without alteration for nonprofit educational purposes provided that credit is given to the Mississippi State University Extension Service.

Produced by Agricultural Communications.

Mississippi State University is an equal opportunity institution. Discrimination in university employment, programs, or activities based on race, color, ethnicity, sex, pregnancy, religion, national origin, disability, age, sexual orientation, genetic information, status as a U.S. veteran, or any other status protected by applicable law is prohibited. Questions about equal opportunity programs or compliance should be directed to the Office of Compliance and Integrity, 56 Morgan Avenue, P.O. 6044, Mississippi State, MS 39762, (662) 325-5839.

Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. GARY B. JACKSON, Director