

# Biology, Ecology, and Control of Cogongrass {*Imperata cylindrica* (L.) Beauv.}

FACT SHEET NO. 1999-01

## INTRODUCTION AND DISTRIBUTION



Field of cogongrass



Off-set midrib on leaf

Cogongrass has several common names, including japgrass, Japanese bloodgrass, Red Baron, or speargrass but its scientific name is *Imperata cylindrica* (L.) Beauv. (Incl. *I. brasiliensis* Trin.). This grassy weed spreads by seed and vegetatively. Cogongrass produces numerous underground horizontal stems, or rhizomes, which are capable of rooting at each node and producing a new stem. These rhizomes are viable, but remain dormant during winter and produce new plants the next spring. Cogongrass has been designated as the seventh worst weed in the world (6). It is native to tropical and subtropical areas of the eastern hemisphere (1, 7). Cogongrass was both accidentally and purposely introduced into the southern United States in the teens and early 1920's into Alabama, Florida, and Mississippi (2, 5, 9). Many farmers planted cogongrass for pastures and erosion control. Cogongrass was not a good livestock feed and it was too weedy for erosion control (6). Unfortunately, cogongrass with reddish to maroon foliage is still sold by some nurseries as an ornamental grass called Japanese bloodgrass or 'Red Baron' bloodgrass. Unsuspecting homeowners discover that the red color vanishes and that cogongrass spreads into other areas of the landscape.

Currently, cogongrass occurs as a weed in Alabama, Florida, Georgia, Louisiana, Mississippi, South Carolina, Texas, and Virginia, and it continues to spread. (See U.S. distribution map on back page.) Several thousand acres are infested with cogongrass in the southeastern United States, and more than 1.2 billion acres worldwide (6). Because of its aggressive, weedy habit in other countries, cogongrass is included on the Federal Noxious Weeds list.

## IDENTIFICATION, BIOLOGY, AND ECOLOGY

Cogongrass produces numerous upright smooth stems 6 to 47 inches tall, which form loose or densely compacted stands. Because of the dense stems and rooting system, cogongrass usually chokes out existing vegetation (3). One unique characteristic for identification is that the midrib of the leaf is off-set (closer to one leaf margin than the other) (4). Another unusual characteristic of cogongrass is its flowering pattern. It normally flowers at the beginning of the growing season (March to May), although flowering may also occur following frost, fire, mowing, tillage, or other disturbances. Most native grasses that resemble cogongrass will flower at the end of the growing season, rather the beginning. In central and south Florida, however, cogongrass may flower throughout the year (2).

Flowers typically occur at the top of the stem, and are easily identified by silvery or whitish silky hairs attached to the seed which create the appearance of a feathery plume.



Immature seedhead



Mature seedhead

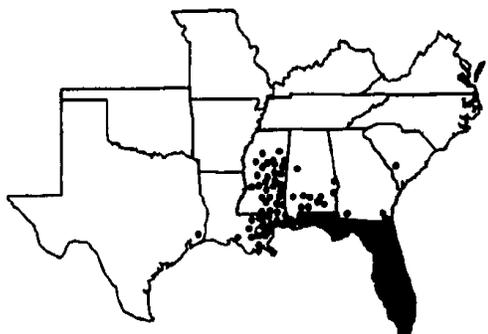


Silver beardgrass

There is one grass that may be easily confused with cogongrass. Silver beardgrass {*Bothriochloa saccharoides* (Sw.) Rydb. - *Andropogon saccharoides* (Sw.)} looks like cogongrass, but is smaller, forms clumps rather than dense stands, and flowers in the fall. In Mississippi and other southern states, cogongrass usually occurs in non-cultivated sites, including pastures, orchards, fallow fields, forests, parks, and natural areas, and highway, electrical utility, pipeline, and railroad rights of way. Soil type preference is primarily sandy soils with low nutrient levels, although cogongrass will inhabit more fertile sites. Each cogongrass plant can produce up to 3,000 seeds per season (6, 7). Researchers have found that cross-pollination is necessary to seed production (8). Seedlings are frequently found in open sites that have been disturbed by clear cutting, burning, tillage, excavation, or grading. Seedlings begin to produce rhizomes about 4 weeks after emergence (8).

## CONTROL STRATEGIES

Currently there is no single treatment that effectively eliminates cogongrass infestations. This weed will not persist in areas that are frequently cultivated; thus frequent tillage can be used for cogongrass control in certain sites. Mowing or burning will remove aboveground vegetation, but opens the plant canopy for emergence of seedlings and new stems from rhizomes. Roundup Ultra or Roundup Pro 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 at 16 ounces per acre can be used in certain areas, and has provided excellent control up to one year after application (10). Because Arsenal and Roundup are nonselective herbicides, 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.



Distribution of cogongrass in the United States

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