



Cogon Grass

Imperata cylindrica (L.) Palisot
Grass family (Poaceae)

NATIVE RANGE

Southeast Asia, Philippines, China, and Japan

DESCRIPTION

Cogon grass is a perennial, rhizomatous grass that grows from 2 to over 4 feet in height. The leaves are about an inch wide, have a prominent white midrib, and end in a sharp point. Leaf margins are finely toothed and are embedded with silica crystals. The upper surface of the leaf blade is hairy near the base; the undersurface is usually hairless. The flowers are arranged in a silvery, cylindrical, branching structure, or panicle, about 3-11 inches long and 1½ inches wide.

ECOLOGICAL THREAT

Cogon grass can invade and overtake disturbed ecosystems, forming a dense mat of thatch and leaves that makes it nearly impossible for other plants to coexist. Large infestations of cogon grass can alter the normal fire regime of a fire-driven ecosystem by causing more frequent and intense fires that injure or destroy native plants. Cogon grass displaces a large variety of native plant species used by native animals (e.g., insects, mammals, and birds) as forage, host plants and shelter. Some ground-nesting species have also been known to be displaced due to the dense cover that cogon grass creates.



DISTRIBUTION IN THE UNITED STATES

Cogon grass is distributed throughout the south and southeastern United States as far west as eastern Texas. There have been reports of cogon grass surviving as far north as Virginia, West Virginia and Maryland.

HABITAT IN THE UNITED STATES

Cogon grass is a hardy species, tolerant of shade, high salinity and drought. It can be found in virtually any ecosystem, especially those experiencing disturbance. Cogon grass has been found growing on sand dunes in the southeast, along roadsides, forests, open fields, and up to the edge of standing water.

BACKGROUND

Cogon grass was introduced to the United States both accidentally and intentionally. Cogon grass was first introduced to the U.S. at Mobile, Alabama, via shipping crates that contained cogon grass as a packing material. It was also brought in and distributed by the U.S.D.A. for use as a forage grass and for soil erosion control. Cogon grass is also sold by the nursery trade as an ornamental grass, valued for its attractive foliage and hardiness.

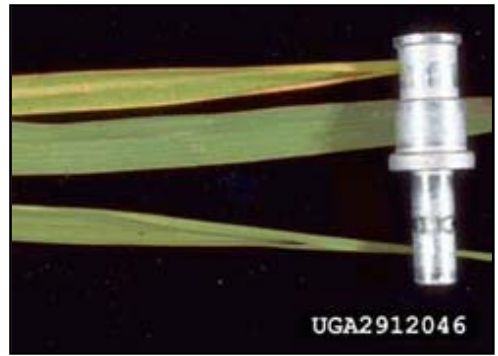
BIOLOGY & SPREAD

Cogon grass reproduces both vegetatively and from seed. A single plant can produce several thousand very small seeds that may be carried great distances by the wind. Vegetative spread of cogon grass is aided by its tough and massive rhizomes that may remain dormant for extended periods of time before sprouting. Rhizomes of cogon grass may be transported to new sites in contaminated fill dirt or by equipment used in infested areas.



MANAGEMENT OPTIONS

An integrated approach to cogon grass management, including chemical, mechanical and cultural methods, is necessary to achieve successful, long lasting control. Effective management of cogon grass has been achieved by the following combined mechanical-chemical protocol. First, the infested area is mowed in late spring to remove last year's growth and the accumulated thatch layer. About six to eight weeks later, when about eighty percent of the cogon grass has resprouted to a height of 6-12 inches, the site needs to be disced as deeply as possible. Discing may not be possible in all areas, due to the sensitive nature of some ecosystems. When adequate regrowth of the cogon grass has occurred, systemic herbicides (chemicals are carried through the plant tissues to the roots) are applied.



The best time to apply herbicides is in the early fall before first frost. A 2% solution of glyphosate (e.g., Roundup®) is recommended in areas that will be immediately revegetated, because glyphosate has no residual soil activity. In areas where immediate revegetation is not planned, and non-target plant damage is not a concern, application of a 1-1.5% solution of imazapyr (e.g., Arsenal®) may be considered. **IMPORTANT:** Because imazapyr is highly active in soil, it has a high potential for leaching into groundwater, so should only be used when groundwater impacts can be eliminated or minimized. Additionally, nearby trees or other plants may be damaged by improper application of this herbicide.

Revegetation may be necessary following herbicide treatment, to prevent soil erosion and to help reduce reinfestation by cogon grass. For roadside areas, revegetation with bahia grass and bermuda grass have been used successfully for these purposes. In natural areas, the choice of which species to use for revegetation becomes more difficult. For some areas, assisting the process of natural revegetation succession may be the best choice. Once decisions are made regarding the ultimate goal of the restoration project, revegetation plans should be made accordingly. Regardless of the goal, the area should be revegetated quickly to allow a stable plant community to be established. Lastly, it is important to exercise diligence, as it will be necessary to scout areas that have been treated for cogon grass and spot treat new plants with herbicides.

It may not be possible to use all of the methods prescribed above in every situation, but most effective control will be gained by using as many of the steps outlined above as possible. In areas where burning, mowing, or discing, are not possible, spot treatment with herbicides will help to control cogon grass. Revisit treated areas frequently and retreat with herbicides as necessary. The best time to begin a control program is late spring to mid-summer when cogon grass is experiencing peak growth. Some control measures, such as mowing and spot spraying with herbicides, can be implemented year round.

Fire

Burning has also been used successfully in controlling cogon grass. As with mowing, burning stimulates the growth and spread of cogon grass, making followup control a necessity. If you are interested in attempting this technique, contact management specialists listed below for more specific information. Also, be sure to obtain all required permits before attempting a burn even on small infestations.

USE PESTICIDES WISELY: Always read the entire pesticide label carefully, follow all mixing and application instructions and wear all recommended personal protective gear and clothing. Contact your state department of agriculture for any additional pesticide use requirements, restrictions or recommendations.

NOTICE: mention of pesticide products on this page does not constitute endorsement of any material.

CONTACTS

For more information on the management of cogon grass, please contact:

- Donn G. Shilling, Ph.D., University of Florida, Weed Science / Agronomy, Center Director and Professor, West Florida Research and Education Center, (850) 484-4482 or 983-2632, dgs at gnv.ifas.ufl.edu
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SUGGESTED ALTERNATIVE PLANTS

A number of native plants should be considered for replanting areas that were infested with cogon grass. Along roadsides, bahia grass (*Paspalum notatum*) is a possible choice. Each scenario will require a different approach to return an area previously infested with cogon grass to a healthy ecosystem. Specialists in cogon grass management should be contacted for assistance.

OTHER LINKS

- <http://www.invasive.org/search/action.cfm?q=Imperata%20cylindrica>

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PHOTOGRAPHS

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REFERENCES

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- Lippincott, C. L. 1997. Ecological consequences of *Imperata cylindrica* (cogon grass): Invasion in Florida Sandhill. Dissertation. Botany Department, University of Florida, Gainesville, Florida.