

COGONGRASS INVADES THE SOUTH

by Stephanie Worley Firley

It grows on every continent except Antarctica and has earned a reputation as one of the worst weeds on earth. Now, according to **Jim Miller**, cogongrass (*Imperata cylindrica*) is one of the most threatening invasive species in the South.

Native to Southeast Asia, cogongrass was accidentally introduced into the United States as packing material in an orange crate that arrived in Grand Bay, AL, in 1912. A few years later, it was intentionally planted as a potential forage crop in Mississippi and as a soil stabilizer in Florida.

And then it began to spread.

SRS Forest Inventory and Analysis data indicate that cogongrass currently grows on over 46,000 forested acres—and counting—throughout the Southern United States. “This does not take into account the thousands of unsurveyed acres occupied by cogongrass in nonforested settings,” says Miller, an ecologist with the **SRS Insects, Diseases, and Invasives Plants** unit in Auburn, AL. “Because cogongrass is a fast moving and destructive plant that can thrive almost anywhere, the entire Southeast is at risk for invasion.”

Each cogongrass plant can produce as many as 3,000 wind-dispersed seeds that can germinate on disturbed soil. Cogongrass also spreads by underground stems known as rhizomes that form dense mats reaching deep into the soil. The rhizomes have pointed tips—sharp enough to pierce the roots of nearby plants—that send

out shoots and branches that multiply and grow, expanding into colonies that can completely exclude other vegetation, even kudzu.

“The rapid spread of cogongrass can primarily be attributed to seeds and rhizomes that hitchhike on mowers, equipment, hay, fill dirt, and rocks being transported out of infested zones,” says Miller.

Cogongrass can apparently tolerate all light and soil conditions except dense shade and permanently wet soil, so most habitats in the South are fair game. Once established, it is extremely difficult to control.

Fire doesn’t slow down the invader; cogongrass itself is a fire hazard to be taken seriously. The plant

burns readily, even when green and especially when plant tops have browned and dried in the winter. Homes and structures in the wildland-urban interface and in suburban areas are increasingly at risk due to the unnaturally hot and fast wildfires produced by ignited cogongrass. Following a fire, the surviving rhizome system allows cogongrass to quickly regenerate and continue spreading.

The spread of cogongrass has so far been limited to temperate areas with relatively mild winters, but that could change.

Red Baron or Japanese blood grass, an ornamental variety of cogongrass used in landscape

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Red Baron cultivar of cogongrass may allow the plant to invade further north. (photo by Charles T. Bryson, www.bugwood.org)




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plantings, is cold hardy. As of yet, the cultivar does not produce viable seed, but its pollen is viable.

“There is real potential for the cold hardiness that has been bred into the red varieties to be imparted to invasive cogongrass populations through pollen,” says Miller. “If this occurs, the whole United States and southern Canada would be open for invasion.” This concern has

prompted several Southern states to prohibit the sale and distribution of the cogongrass cultivar.

Proactive control and eradication of cogongrass and, ultimately, rehabilitation of infested lands in the South is an ongoing challenge. “Cooperation and education on a grand scale are needed to rid the South of cogongrass,” says Miller. “But preventing cogongrass from becoming established in the first place will be the best—and least costly—solution to this problem.” 

For more information:

Jim Miller at 334-826-8700, x36 or jmiller01@fs.fed.us

Recommended reading:

Loewenstein, N.J.; Miller, J.H., eds. 2007. **Proceedings of the regional cogongrass conference: a cogongrass management guide.** Auburn University, AL: Alabama Cooperative Extension System. 77 p.

Stephanie Worley Firley is a biological science information specialist with the SRS Eastern Forest Environmental Threat Assessment Center in Asheville, NC.

Cogongrass rhizomes. (photo by Jim Miller, www.bugwood.org)



Cogongrass infestation in a pine plantation. (photo by Chris Evans, www.bugwood.org)



Field infested with cogongrass. Once established, it is extremely difficult to control. (photo by Nancy Loewenstein, www.bugwood.org)

When Cogongrass Invades, Southern States Fight Back

The urgent need to address the cogongrass crisis in the South has led to the establishment of a Memorandum of Understanding (MOU) among seven states: Alabama, Georgia, Mississippi, Louisiana, Florida, South Carolina, and North Carolina.

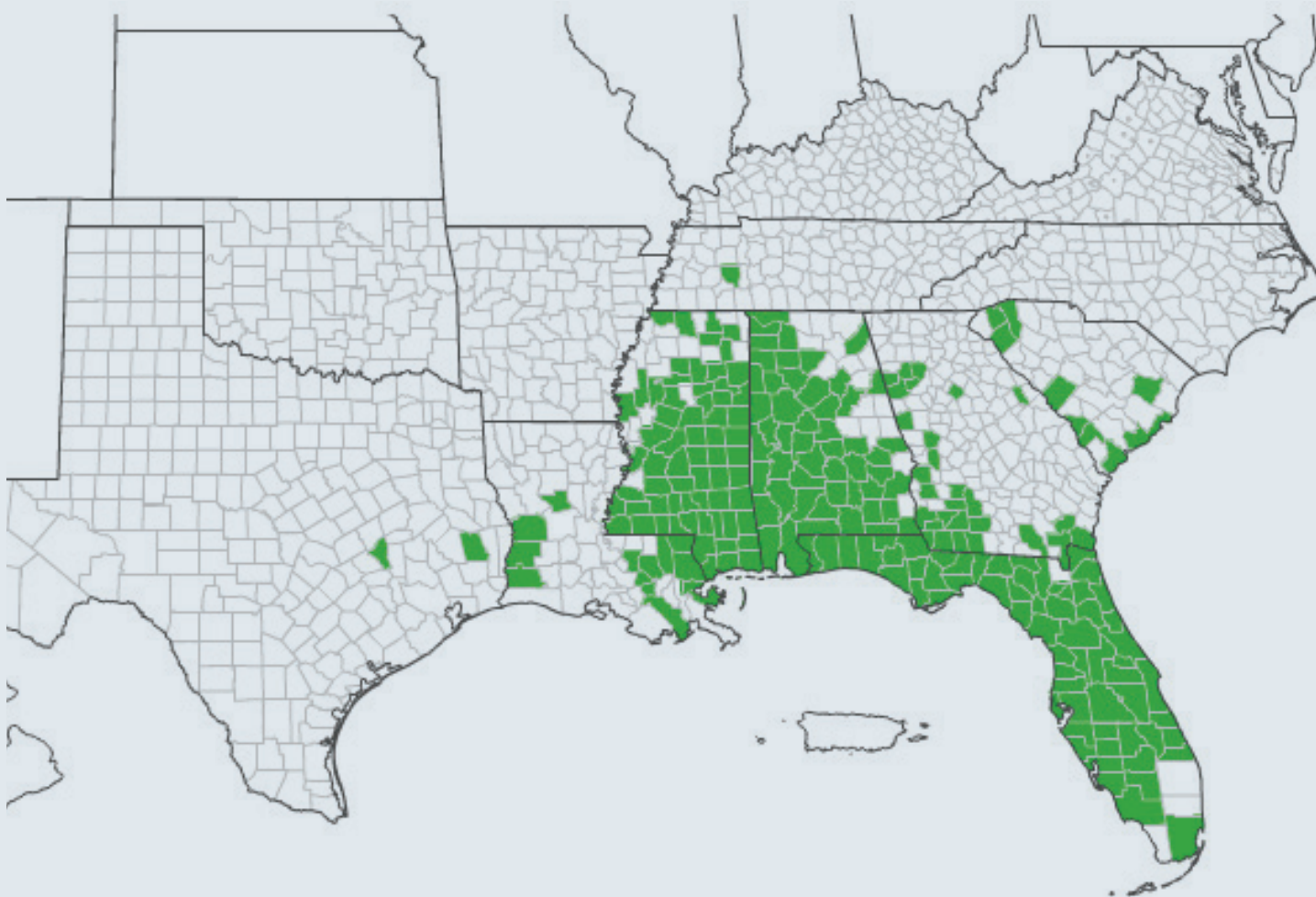
By signing the MOU in October 2008, the states agreed to coordinate efforts and leverage expertise and resources to control the invasive. Cogongrass task forces are being

formed in support of an integrated strategic plan for cogongrass eradication. Together, state forestry agencies will organize outreach programs to help landowners and organizations identify and prevent the spread of cogongrass.

Prior to the MOU, the states most impacted by cogongrass infestations to date—Mississippi, Alabama, Georgia, and South Carolina—joined forces to control the plant, map its distribution, and provide

educational resources through a 3-year grant from **Forest Service State and Private Forestry (S&PF)**.

Mississippi, Alabama, and Georgia will receive over \$8 million on behalf of S&PF as part of the **American Recovery and Reinvestment Act (ARRA)**. The ARRA funds will be released to the states in late 2009 and will be used to create jobs related to the treatment of cogongrass-infested lands. —SWF



Current cogongrass distribution. (from www.cogongrass.org)



You Can Use!

Controlling cogongrass on your land

Has cogongrass invaded your land? The first step—and the easiest—is identification.

Cogongrass has some features that make it fairly easy to identify. Compared to the deep green hues of other grasses typically found in the South, the leaves of cogongrass appear yellowish green, and the white upper midrib of the leaves tends to be slightly off center. The short nondistinct stems and the leaves appear to arise directly from the soil.

Cogongrass flowers in the spring—earlier than most other grasses—in a striking display of fluffy silvery-white seed heads. Also distinctive is the pattern of spread: patches of cogongrass often radiate outward in circular patterns, which remain obvious even when plants turn brown in winter.

If you suspect cogongrass is growing on your land, contact your local forestry commission or county extension office as soon as possible for positive identification and to develop an eradication strategy. Since cogongrass is a federally listed noxious weed and is also listed as such by most Southern states, control and eradication are often assisted or carried out by state forestry and agriculture agencies. Prescribed burns should not be attempted without first consulting these personnel.

Some tips for controlling cogongrass:

- Minimize disturbance within miles of where cogongrass occurs. Anticipate spread.
- Treat cogongrass infestations as soon as possible. Young infestations are much easier to control than those that are older and well established.
- Effective and safe herbicides are available for cogongrass control. Remember that it is possible to kill or injure nontarget plants when using herbicides.

- Burning and mowing can improve the efficiency of herbicide treatments. However, burning can kill native shrubs and trees that constrain spread and may actually *cause* cogongrass infestations to expand more rapidly.

- Mowing, burning, or treating cogongrass with herbicides in early growth stages, during early flowering, or even shortly before flowering can stop seed production. However, these treatments may also *cause* flowering and seeding.

- Thoroughly clean all equipment and personnel to remove cogongrass seeds and rhizomes before leaving the site after working in an infested area.

- Do not plant the ornamental cogongrass cultivars (Japanese blood grass and Red Baron). If a cultivar has been planted, remove the plantings, and control sprouts and seedlings.

- Repeated cultivation and planting of aggressive grasses or herbicide resistant crops can restore pastures and croplands impacted by cogongrass infestation.

More information on herbicide treatments and specific application instructions can be found at: www.srs.fs.usda.gov/factsheet/400. See www.cogongrass.org for much more information about cogongrass in the South. —SWF



Has cogongrass invaded your land? (photo by Jeffrey W. Lotz, www.bugwood.org)