

Cogongrass: A Growing Threat

By Nancy J. Loewenstein, Ph.D.

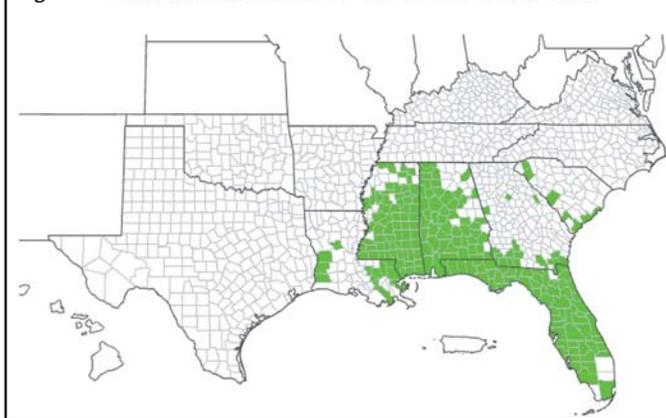
School of Forestry and Wildlife Sciences, Auburn University

Cogongrass has quickly become one of the worst invasive plant threats in Alabama.

Considered one of the worst weeds in the world for good reason, cogongrass is aggressive, tenacious, and extremely difficult to control. Until five or ten years ago the plant was mostly confined to the southwestern counties of Alabama, but it is now spreading rapidly throughout the state (figure 1), reducing forest and pasture productivity, destroying wildlife habitat, impacting rights of ways, and presenting an extreme fire hazard. Slowing the spread of cogongrass now, before it becomes an insurmountable task, is crucial. Landowners across the state can help in this effort by learning how to

identify cogongrass, how to avoid spreading it, and by taking steps to control it, when and if it appears.

Figure 1. Cogongrass Distribution - Southern United States



How to identify cogongrass

Cogongrass (*Imperata cylindrica*) often grows in dense, circular patches

(figure 2). Its stems are indistinct and the sheaths of leaves appear to almost arise directly from the soil. Unlike many grasses that grow in clumps, cogongrass grows in a more spread-out manner. Yet within a patch of it, the individual stems can be densely packed together. The linear leaves are usually one-half to one inch wide and can range from one to four or more feet tall even within the same patch. The edges of the leaves are saw-toothed, feeling a bit like sandpaper. Leaf color is often yellowish green ranging to blue-green at times, and the central vein is whitish and off center, especially near the base of the leaf (figure 3). After a freeze the leaves will usually turn brown, but the dense thatch will remain standing.



Figure 2. (Left) Cogongrass (*Imperata cylindrica*) often grows in dense, circular patches.

Cogongrass flowers and seeds occur on a spike or 'head' that is two to eight inches in length and silvery white in color (figure 4). Seeds are light and fluffy like dandelion seeds and are easily blown off by the wind or a puff of breath. A patch of cogongrass in flower or seed (figure 5) is easy to spot, making the spring and early summer when it is in bloom the easiest time to find and identify this pest. Johnson grass – and several other grasses which are sometimes confused with cogongrass – have different looking flower spikes and bloom during the summer or early fall.

Cogongrass rhizomes (underground stems similar to roots) form a very dense entangled mat in the soil. They have pointed tips which are so sharp they can pierce the roots of other plants. The rhizomes are noticeably segmented and covered with flaky, paper-like scales. Beneath the scales, the rhizomes are bright white. Johnson grass also has segmented rhizomes, but they are not covered with scales and are not sharp tipped.

Growth habits, distribution, and impacts

Cogongrass is very hardy and can tolerate a wide range of conditions. It can be found in natural and planted forests, pastures and grasslands, orchards, disturbed areas, urban areas, along rights-of-ways, in wetlands, and even in saline areas near the coast. It is adapted to growth in full sun but thrives in moderate shade as well, and can survive in the shade of a forest understory, 'waiting' for a chance to take off if the canopy is opened up providing more light.

Cogongrass is also adapted to fire but it burns hotter and more intensely than

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Figure 3. (Below) Leaf color of cogongrass is often yellowish green ranging to blue-green at times. The central vein is whitish and off center, especially near the base of the leaf.





Figure 4. Cogongrass flowers and seeds occur on a spike or 'head' that is two to eight inches in length and silvery white in color. Light and fluffy like dandelion seeds, they are easily blown off by the wind.

most other fire-adapted species. As a result, cogongrass fires tend to be especially destructive. Even longleaf pine forests which are adapted to and dependent on fire cannot tolerate cogongrass fires. After a fire, cogongrass rhizomes sprout and a new stand of pure cogongrass is soon in place and able to spread more rapidly in the burned-over area.

Cogongrass often dominates a site, creating such a thick stand both above and below ground that few other plants can successfully compete for space, nutrients, water, and light. Research also shows that cogongrass may release allelopathic compounds into the soil which can inhibit plant growth, and that puncture wounds from the sharp rhizomes can lead to rot and decay of roots of nearby plants. Wildlife cannot utilize cogongrass stands because of the dense growth, the extreme fire behavior, and because the low nutritive value and high silica content in the leaves make it unsuitable as forage. The bottom line is that cogongrass displaces many native species, reduces forest and pasture productivity, destroys wildlife habitat, impacts rights of ways, and alters natural fire cycles.

How to avoid spreading cogongrass

Like many invasive plants, cogongrass is a reproductive overachiever. Each plant can produce up to 3,000 windblown seeds and as the plant grows, the rhizomes spread underground as much as nine feet a year, putting up new plants along the way. Any rhizome segments that get broken off and moved to a new location can sprout and start a new plant, even weeks after being detached from the plant. It is through hitchhiking around the state – attached to skidders, fire plows, road graders, mowers, food plot equipment, and other forest and road maintenance vehicles and equipment – that cogongrass is spreading so quickly.

Clearly, helping this aggressive weed spread across Alabama and the Southeast is not in our best interest. It is also against the law. Cogongrass is classified as a Federal and State noxious weed, making it illegal to transport plants, seeds, or plant parts within the state or across state lines.

To avoid inadvertently transporting cogongrass hitchhikers, keep away from the plant when seed heads are present or when the soil is muddy and rhizomes can be broken off and stuck on vehicles or equipment. If you must work in areas infested with cogongrass, try to work in the contaminated sites last and make sure to clean vehicles, equipment, and clothing before leaving the site. It is also good practice to require that any off-site forest management equipment coming onto your property be cleaned prior to coming on site. Cleaning vehicles and equipment in the field may be challenging, but it is necessary to slow the spread of cogongrass and to avoid breaking the law.

How to control cogongrass

It has been said that you should never do anything to cogongrass just

Figure 5. A cogongrass infestation in flower or seed is easy to spot.

once because you will only make it mad. Indeed, controlling it takes time, effort, and persistence. This is why prevention of infestations is the most successful and cost-effective control measure for cogongrass. Of course, infestations do occur and the resulting control measures will depend on the location and size of the infestation.

In areas that can be tilled, repeated tillage to a depth of at least six inches throughout the growing season may control cogongrass. In areas where tillage is not an option, the herbicides glyphosate and imazapyr have proven most effective for control. Herbicides can be applied in the spring before flowering to suppress seed production, but should be applied in September or October for control and eradication. Complete eradication of the cogongrass rhizomes is exceedingly difficult and the plant will typically re-sprout following herbicide treatment, calling for multiple follow-up treatments. Some land managers have found that mowing or burning one to four months prior to herbicide application improves treatment success.

Site rehabilitation is important after control of a cogongrass infestation has been achieved. Fast-growing native grasses, forbs, and/or trees which can protect the soil and out-compete rogue cogongrass plants or other opportunistic non-native plants should be established as quickly as possible. Continued surveillance and diligence is required to maintain control of a site recovering from a cogongrass infestation.

More information about cogongrass and its control can be found at the web site: www.cogongrass.com. 

