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Cogongrass Awareness and Identification: Part 1 of a 3 Part Series

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Many of us already know what cogongrass is and the vast devastation it can cause to pastures as well as other important ecosystems within Florida. However, for those who do not know cogongrass, this article will provide some basic information on the history of

cogongrass in the U.S., its basic biological characteristics and identification. This is the first of a 3-part series of articles; the following articles will discuss information on control, followed by long-term management.

Cogongrass is found on every continent and is considered a weedy pest in 73 countries. In the U.S., cogongrass is found primarily in the southeast. It was accidentally introduced into Alabama in the early 1900s, and purposely introduced as a potential forage and soil stabilizer in Florida (and other states) in the 1930s and early 1940s. However, it was

realized that cogongrass could be a weedy pest soon after investigations began. Since its introduction, it has spread to nearly every county in Florida. In some cases it has completely taken over pastures so that it is the only species present in the pasture. This is a common thread where cogongrass invades; invasion quickly causes displacement of desirable species and requires intensive management strategies.

There are many reasons why cogongrass is such a prolific invader. It is a warm-season, perennial grass species with an extensive rhizome root system. In fact, at least 60% of the total plant biomass is often found below the soil surface. In addition to the rhizome root system, cogongrass is adaptable to poor soil conditions and fire, it is drought tolerant, and it has prolific wind-dispersed seed production. Additionally, it can grow in both full sunlight and highly shaded areas; although it is less tolerant to shade.

Cogongrass spread occurs through the creeping rhizome system as well as seed production. The rhizomes can penetrate to a depth of 4 feet, but most of the root system is within the top six inches of the soil surface. The rhizomes are responsible for long-term survival and short-distance spread of cogongrass. Long-distance spread is accomplished through seed production; seeds can travel by wind, animals and equipment.

The rhizome system, as stated earlier, is responsible for long-term survival of cogongrass. Established stands are capable of producing over 3 tons of root biomass per acre. It is a specialized rhizome that is capable of conserving water. Notice that during the dry season, the top growth dies back. This is essentially a survival mechanism to keep the rhizome system alive. Additionally, another key to invasion is that the root system is thought to produce allelopathic chemicals, reducing the competitive ability of other plants.

Identification. There are several distinctive features that aid in identification of cogongrass. First, cogongrass infestations usually occur in circular patches. The grass blades tend to be yellow to green in color (Figure 1). Individual leaf blades are flat and serrated, with an off-center prominent white midrib (Figure 2). The leaves reach 2 to 6 feet in height. The seed head (Figure 3) is fluffy, white, and plume-like and flowering typically occurs in spring or after disturbance of the sward (mowing, etc.). Seed heads range from 2 to 8 inches in length and can contain up to 3,000 seeds. Each seed contains silky-white hairs, which are thought to aid in wind dispersal. When dug, the rhizomes (Figure 4) are white, segmented (have nodes), and are highly branched. The ends of the rhizome are sharp pointed and often are able to pierce the roots of other plants as well as animals walking or grazing within infested areas.



Figure 1. Cogongrass plants are yellow to green in color. Note that the edges of the leaf tend to have more yellow than green. Photograph used by permission from G. Keith Douce, University of Georgia, www.forestryimages.org.

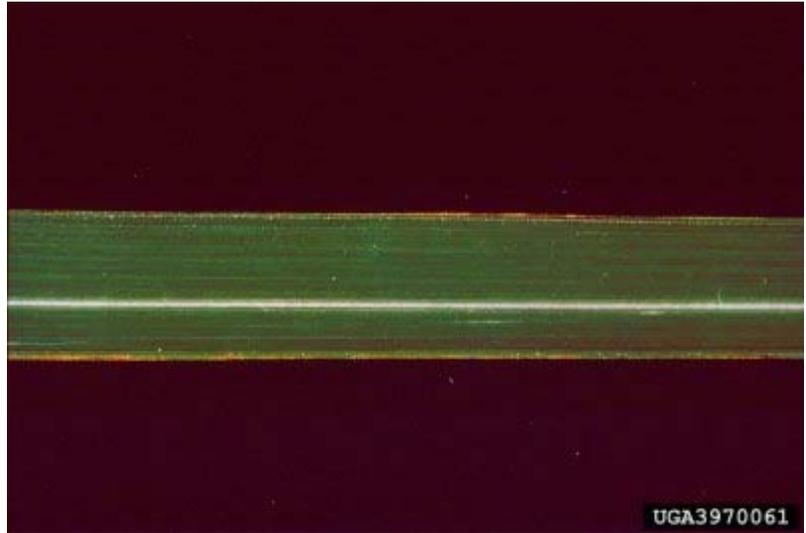


Figure 2. Cogongrass leaves have serrated edges and a prominent, white, off-center midrib. Photograph used by permission from L. M. Marsh, Florida Department of Agriculture and Consumer Services, www.forestryimages.org.



Figure 3. Seed heads of cogongrass are fluffy and white. Nearly 3,000 seeds can be produced per plant. Photograph used by permission from John D. Byrd, Mississippi State University, www.forestryimages.org.



Figure 4. Rhizomes of cogongrass are segmented (have nodes), where new shoots are able to grow. Photograph used by permission from Chris Evans, River to River CWMA, www.forestryimages.org.

Awareness of the biology of a particular plant helps us to understand how long of a fight we are up against if we want to control it. Cogongrass may be one of our toughest weed management challenges in Florida. If you did not already know, now you should understand that one application of an herbicide or one management tactic will not likely control this plant. Control of cogongrass will be discussed in the next issue, which will be the 2nd part of this 3 part series of information on cogongrass.