Torpedograss *(Panicum repens L.)*

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Fig 1. A monotypic stand of torpedograss (Panicum repens).

Figure 2. Torpedograss (*Panicum repens*) rhizome.

Figure 3. Inflorescence of torpedograss (*Panicum repens*).

Introduction

Problem

Torpedograss *(Panicum repens L.)* is a nonnative riparian, wetland and terrestrial plant native to Eurasia and is considered one of the World's worst weeds. It is also known as quack grass and bullet grass. When fully matured, torpedograss can grow up to 3 feet tall and form dense monotypic stands that out compete native species and lead to a loss of diversity and overall ecological health (Figure 1). The annual cost of torpedograss management in flood control systems has been estimated at 2 million dollars. It is considered a threat to wetlands and riparian zone areas because it outcompetes desirable native plants. Torpedograss now occupies thousands of acres of native marsh in Florida and occurs in 75% of Florida's 67 counties. Torpedograss is also a problem weed in turf and other areas in home landscapes and has been considered for listing as a noxious weed in Mississippi. It can also be a problem in citrus and many other crops. It does not provide adequate forage or habitat quality as compared to the native plants it displaces.

Regulation

Although torpedograss has been considered for regulation, it is not regulated in MS. However, torpedograss is a Class C Noxious Weed in Alabama and a Noxious Plant in Texas. It is a Prohibited Noxious Weed in Arizona and a Noxious Weed in Hawaii.

Description

Vegetative

Torpedograss is a perennial, rhizomatous grass that can grow in excess of 2.5 ft. In wetlands rhizomes may float. The sharp rhizome tips are the basis for the common name of torpedograss. It produces seeds, but viability is variable. Thus, the primary means of spread is vegetative (rhizome) reproduction. The aerial stems of torpedograss range from 1 to 3 ft. tall and are glabrous (hairless). Upper leaf sheaths glabrous or hairy and leaf blades stiff, linear, flat to folded and range from 1/25 to 1/4 inches wide by 1 to 10 inches long. Blades often have a grayish coloration. Blades are glabrous to sparsely hairy below, but usually long-hairy above, particularly near the ligule. Ligule is a short-ciliate membrane.

Flowering

The inflorescence is a loose open or upright terminal panicle, 3 to 9 inches long. Inflorescences may be produced year-round. Spikelets ovate, 2-3 mm long, about 1 mm wide, and glabrous. The first glume is short, truncate, loose, and nearly encircling the base of the other spikelet bracts.

Dispersal

Similar to cogongrass [*Imperata cylindrica (L.)* Beauv.], the introduction of torpedograss to the US was either by accident as ballast water contamination or as an introduction for forage uses sometime before 1876 when it was first collected in Mobile, Alabama. The extensive distribution of this plant is due in part to its ability to reproduce via seeds and rhizomes. Both rhizomes and seed can be moved in water, soil, or turfgrass sod to new locations.

Spread By

Torpedograss rhizomes and seed are usually spread by human activity, although water or storm events can also spread torpedograss.

Habitat

Torpedograss is commonly found in tropical and sub-tropical moist, sandy soils near ditches, marshes, wetlands, estuaries, shores of freshwater lakes, ponds, and rivers as well as along the coastal shores of estuaries, bays, and oceans. Rhizomes can grow out from the shoreline and float in the water. Although torpedograss does well in wet soils, it is tolerant of drought growing inland and out-competing bermudagrass and other southern turfgrasses in lawns and sod production. It can be problem weed in sugarcane and many other crops. Torpedograss prefers open areas with unrestricted sunlight, yet can persist under partially shaded conditions.

Distribution

U.S.

Torpedograss probably originated in the Old World. It is found from Southern Europe and Northern Africa to Asia and Australia. It also occurs in the New World tropics and subtropics. In the United States it is found in California, Hawaii, and from Texas to Florida and North Carolina in the southeastern United States.

MidSouth

It occurs in all Gulf Coast states, but apparently does not occur in Arkansas and Tennessee.

Control Methods

Biological

There are no known biological control agents of torpedograss.

Chemical

Chemical control is the preferred method for torpedograss control (Tables 1 and 2). Glyphosate and imazapyr are labeled for management of torpedograss in aquatic sites (Table 1). Glyphosate and imazapyr can also be used on terrestrial sites for torpedograss management. However comparing Table 1 with Table 2, notice that the trade names for both products are not the same. Thus, only use products with an aquatic label when managing torpedograss on an aquatic site. On terrestrial sites, quinclorac can also be used for torpedograss management (Table 2).

Table 1. Herbicides labeled for torpedograss treatment in water.

Herbicide	Active ingredient	Rate	Comments
Habitat	imazapyr	0.5 to 1% solution + 0.5% v/v nonionic surfac-	Do not apply to aquatic sites used for irriga-
Rodeo (others with aquatic label)	glyphosate	2% solution + 0.5% v/v nonionic surfactant compatible with the label	

Table 2. Herbicides used for torpedograss control in terrestrial sites.

Herbicide	Active ingredient	Rate/A	Comments
Arsenal	imazapyr	0.5 to 1% + 0.5% v/v nonionic surfactant.	
Drive/Facet/Paramount	quinclorac	10.7 oz + 24 oz methylated seed oil.	Avoid drift onto susceptible ornamentals. Do not plant eggplant for 12 months after application; do not plant tomato or carrots for 24 months after application.
Roundup (many others)	glyphosate	2% + 0.5% v/v nonionic surfactant if formulation does not	Avoid drift onto desirable plants.

Mechanical

Tillage practices have been used with little success. Tillage alone fragments the rhizomes and stimulates new growth. The best treatment strategies provide only temporary control of torpedograss. Therefore, landowners should use all precautionary measures feasible to prevent infestations. Closely inspect sod and containerized landscape material to make sure torpedograss rhizomes are not present in the growing media. Carefully inspect boating equipment, such as propellers and trailer rails, to make sure torpedograss vegetation is not transported between water bodies.

Physical

Prescribed burnings in combination with herbicide applications have been successful for torpedograss control.

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