

Reproductive Potential and Control Strategies for Deeprooted Sedge (*Cyperus enterianus*). Bryson, C.T.^{1,*} and Carter, R.² ¹USDA-ARS, SWSRU, Stoneville, MS, ²Valdosta State Univ., Valdosta, GA. Since its introduction in the early 1970s, deeprooted sedge has spread rapidly in the coastal plain of the southern United States. Currently, this non-native invasive sedge is found in 43 counties of Alabama, Florida, Georgia, Louisiana, Mississippi, and Texas. Because deeprooted sedge continues to spread, experiments were conducted from 1998 to 2002 to determine reproductive potential and control strategies of this aggressive perennial sedge in a containment area near Stoneville, MS. In a single growing season, deeprooted sedge plants grown from seeds weighed 1 to 1.8 kg/plant by frost. Mowing every two weeks prevented inflo-

rescence development, but did not control vegetative regrowth. Following a single tillage operation (disking), deeprooted sedge regrowth was rapid and seed production was only temporarily suppressed (< one month). Clipping at 15 cm above soil prevented inflorescence formation and seed maturation, but these plants initiated 1.2 times more inflorescence culms per season when compared to the unclipped plants. Any interruption in mowing schedule would result in seed production within 2 to 4 weeks. Seed per inflorescence ranges from 1,000 to > 20,000 depending on the size and maturity of deeprooted sedge, and mature plants (> 1 year old) produced from 10 to over 100 inflorescences per season. In a three year study, the most effective herbicide treatments for deeprooted sedge control were glyphosate at 2.2 kg/ha (98%) or 1.1 kg/ha followed by 1.1 kg/ha (10 days apart) (95%), hexazinone at 0.28 kg/ha (92%), MSMA at 2.2 kg/ha (85%), glyphosate at 1.1 kg/ha (84%), halosulfuron-methyl at 0.07 kg/ha (80%), 2,4-D at 0.8 kg/ha + dicamba at 0.27 kg/ha (78%), and 2,4-D at 2.2 kg/ha + picloram at 0.07 kg/ha (70%). Because deeprooted sedge continues to spread at an alarming rate, additional research is needed to determine more effective methods of prevention and control.

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