Evaluation of fluazifop-P-butyl for para grass and torpedograss control in aquatic and wetland sites

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Invasive grasses continue to be problematic for aquatic managers in a wide variety of managed systems, and a lack of selective options has hindered restoration efforts. Recent work with the graminicide sethoxydim in aquatic systems in Florida has prompted the examination of a second active ingredient, fluazifop-P-butyl, which is known to be effective on many weedy grasses. Studies were conducted in south Florida to assess fluazifop-P-butyl efficacy on para grass and torpedograss, two of the most difficult to manage species in aquatic systems. Aerial and airboat application studies were conducted from 2016 to 2018 to compare fluazifop-P-butyl with glyphosate and imazapyr tank mixes. Single fall aerial treatments of fluazifop-P-butyl at 0.42 kg ai ha^{-1} reduced torpedograss and para grass cover to 19% and 6%, respectively, by early spring at 4 mo after treatment (MAT). However, both species recovered by the onset of the summer wet season the following year. Sequential applications 14 days apart reduced torpedograss and para grass cover to 6 and 4%, respectively, but did not increase the longevity of control. Airboat application studies also found good short-term control (< 3% cover) of both species at 2 MAT with fall treatments and reduced longer-term control (> 31% cover) with the onset of the following summer wet season at 8 MAT. Glyphosate and imazapyr provided better control of both species in all studies compared to the fluazifop-P-butyl. These studies indicate fluazifop-P-butyl may be a useful tool for torpedograss and para grass management in Florida, especially where a high degree of selectivity is needed. However, further studies are needed to establish optimal retreatment timings for longer-term control of both species.