

Aquatic Weed Control Using Grass Carp

Carp, or white amur, have been used for aquatic vegetation control in Mississippi for the past two decades. These fish, used as a "biological control" for aquatic vegetation, can be effective and cost efficient when stocked at appropriate rates and when the problem-weed species is a plant preferred by carp. Although these fish are voracious herbivores, they exhibit preferences for the softer, low-fiber, high-moisture plants when given a choice. Even when there is no alternative, grass carp will not always provide adequate control of certain plants that they do not prefer to eat.

It is important to identify the problem plant(s) properly and to choose to stock grass carp only when the problem plants are those that grass carp are proven to control. A number of studies have determined grass carp preferences of the various common aquatic plants, and results from some of that work are summarized in this publication. In some cases, although grass carp are listed in the scientific literature as preferring a certain weed, field experience in Mississippi shows them to be ineffective on a consistent basis. Those plants that grass carp do not consistently control are rated as "low" in effectiveness ([Table 1](#)).

Table 1. Common Mississippi aquatic plants, preference by grass carp, and effectiveness in providing control in lakes and small impoundments

Common name	Scientific name	Preference	Effectiveness
Coontail	<i>Ceratophyllum</i> sp.	High	High
Bushy pondweed, Naiad	<i>Najas</i> sp.	High	High
Arrowheads	<i>Sagittaria</i> sp.	Moderate	Low
Willows	<i>Salix</i> sp.	Low	Low
Spikerush	<i>Eleocharis</i> sp.	Low	Low
Hairgrass, Slender spikerush	<i>Eleocharis acicularis</i>	Moderate	High
Cattail	<i>Typha</i> sp.	Low	Low
Pondweed	<i>Potamogeton</i> sp.	Moderate	Moderate
Bladderwort	<i>Utricularia</i> sp.	High	High
Fanwort	<i>Cambomba caroliniana</i>	High	High
Parrotfeather	<i>Myriophyllum aquaticum</i>	Moderate	Moderate
Water primrose	<i>Jussiaea</i> sp.	Low	Low
Smartweed	<i>Polygonum</i> sp.	Low	Low
Filamentous algae	<i>Spirogyra</i> sp., many others	Moderate	Low
Muskgrass (algae)	<i>Chara</i> sp.	High	High
Stonewort (algae)	<i>Nitella</i> sp.	High	High
Planktonic algae	Many species	Low	Low
Alligatorweed	<i>Alternanthera philoxeroides</i>	Low	Low
Hydrilla	<i>Hydrilla verticellata</i>	High	High
Water hyacinth	<i>Eichornia crassipes</i>	Low	Low
Duckweed	<i>Lemna</i> sp., <i>Spirodella</i> sp.	High	Low
White waterlily	<i>Nymphaea odorata</i>	Low	Low

American lotus	<i>Nelumbo lutea</i>	Low	Low
Burreed	<i>Sparganium</i> sp.	Low	Low
Bulrush	<i>Scirpus</i> sp.	Low	Low
Elodea	<i>Egeria densa</i>	High	High
Water fern	<i>Azolla caroliniana</i>	Moderate	Low
Water cress	<i>Nasturtium officianale</i>	Moderate	High
Spatterdock, Yellow cow lily	<i>Nuphar</i> sp.	Low	Low
Sedges	<i>Cyperus</i> sp.	Low	Low
Eurasian water milfoil	<i>Myriophyllum spicatum</i>	Moderate	Moderate
Frogs-bit	<i>Limnobium spongii</i>	Low	Low
Water hyssop	<i>Bacopa</i>	Moderate	Low
Eelgrass	<i>Vallisneria americana</i>	Low	Low
Watermeal	<i>Wolffia</i> sp.	High	Low

For additional information on the biology and management of grass carp in Mississippi farm ponds, request [MSU-ES Publication 1894](#), *Grass Carp in Mississippi Farm Ponds*.

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