



## Aquatic Weed Problems

Plants are a natural part of most waterbodies in Florida and can provide food, breeding areas, and shelter for many bird and aquatic species. Plant coverage of about 30 to 50 percent is recommended to maintain a healthy balance in a waterbody. However, the overgrowth of vegetation in ponds, lakes, and rivers causes serious problems throughout the state of Florida. Exotic plants are typically the culprits for aquatic weed problems, but native plants can also become problematic. Affordable solutions are needed for the control and alleviation of aquatic weed problems.

## What are Triploid Grass Carp?



Grass carp (*Ctenopharyngodon idella*), also known as white amur, is a fish native to Asia that feeds only on aquatic plants. They were introduced to Florida in

1970 to control nuisance aquatic plant growth. In 1984, a method to sterilize grass carp was developed, which enabled the production of the triploid grass carp used today.

Triploid grass carp are fish that have been genetically altered at hatcheries to prevent them from reproducing. Triploid grass carp are a biological and economical means of controlling particular aquatic weeds in waterbodies.

## State Requirements to Use Triploid Grass Carp

A permit must be obtained from the Florida Fish and Wildlife Conservation Commission (FWC) prior to stocking a lake with triploid grass carp. Lake property owners must give 100% approval for triploid grass carp to be stocked in a lake.

## Additional Information

**FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION**  
Telephone: 407-858-6170  
<http://myfwc.com/wildlifehabitats/invasive-plants/grass-carp/>

**ENVIRONMENTAL PROTECTION DIVISION**  
800 Mercy Drive, Suite 4  
Orlando, FL 32808  
407-836-1400  
[www.ocfl.net/epd](http://www.ocfl.net/epd)

**SEMINOLE COUNTY WATERSHED MANAGEMENT DIVISION**  
200 W. County Home Road  
Sanford, FL 32773  
407-665-2439  
[http://www.seminolecountyfl.gov/pw/roadstorm/wq\\_lakemgmt.aspx](http://www.seminolecountyfl.gov/pw/roadstorm/wq_lakemgmt.aspx)

# Aquatic Weed Control:

## A Pocket Guide to Triploid Grass Carp



[www.ocfl.net](http://www.ocfl.net)  

**Orange County Environmental Protection Division**

and



**Seminole County Lake Management Program**

## Characteristics of Triploid Grass Carp

- Live for at least ten years and probably much longer in cooler waters.
- Will grow rapidly and reach at least ten pounds. Some fish have reached 40 pounds.
- Feed from the top of the plant down so that mud is not stirred up. However, in ponds and lakes where grass carp have eliminated all submersed vegetation, the water becomes turbid.
- Have definite taste preferences: hydrilla, southern naiad, and thin leaved pondweeds.
- Tend to move from still waters into flowing waters and are difficult to recapture if a waterbody has been overstocked.
- They are unlikely to feed in swimming areas, docks, boating areas, or other sites where there is heavy human activity (tend to migrate and forage in deeper waters away from human activity).

## Feeding Preferences of Triploid Grass Carp

### Commonly Eaten Plants

- 1 Hydrilla
- 2 Muskgrass or Chara
- 3 Southern Naiad
- 4 Brazilian Waterweed or Elodea
- 5 Watermeal
- 6 Duckweed

### Rarely Eaten Plants

- 1 Water Lily
- 2 Water Lettuce
- 3 Water Hyacinth
- 4 Cattail
- 5 Torpedograss
- 6 Coontail

## Use for Aquatic Weed Management

### Advantages

- 1 Inexpensive method of aquatic plant control (\$20 to \$250 per acre) compared to chemical methods (\$200 to \$600 per acre) or mechanical control (can exceed twice the amount of chemical control).
- 2 Provides long-term control once fish become established.
- 3 Offers a biological alternative to chemical-only methods.
- 4 High effectiveness on some plants (hydrilla and southern naiad).
- 5 Can be supplemented with chemicals in an integrated aquatic plant management plan to increase effectiveness and lower costs.

### Disadvantages

- 1 It often takes six months to a year before plants decrease at low stocking rates (generally two to five fish per acre).
- 2 Overstocking can lead to the elimination of all plants, including desirable species that provide cover for fish and other animals. Removing excess fish is expensive and difficult.
- 3 Overstocking triploid grass carp may lead to algae blooms due to a loss in beneficial native plants.
- 4 All inlets and outlets to the lake or pond must be screened to prevent triploid grass carp from escaping into streams, rivers, or other lakes.
- 5 Predation of triploid grass carp is a natural occurrence that can affect management success.

## Steps to Using Triploid Grass Carp to Treat Aquatic Plants

### Working with your County Lake Management officials:

- Identify the problem plant to see if it is one that is preferred by triploid grass carp.
- Determine what degree of control is necessary.
- Evaluate the above advantages and disadvantages to using triploid grass carp in your situation.
- Contact the FWC for a permit application. FWC will determine lake resident approval requirements, as well as grass carp barrier requirements, for inlets or outlets for each application received.
- Find a certified supplier. FWC provides a list of suppliers approved to sell triploid grass carp in Florida with each permit. You must only use triploid grass carp obtained from an approved supplier, and they must be kept in a contained system.

