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## Grass Carp for Pond Weed Management

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Grass carp were imported to the U.S. several decades ago because of their unusual ability to eat aquatic plants and the fact that they are excellent table fare. While they only occasionally bite live or artificial bait, they put up quite a fight when hooked. Their initial cost is higher than a herbicide application, but they generally are cheaper in the long run. This publication is designed to guide you as you consider the use of grass carp in your situation.

Grass carp may be used along with other weed control measures, such as herbicides or by themselves. Many people stock grass carp for long term control while using spot herbicide treatments to achieve an immediate effect. For information on aquatic herbicide selection and use, plus other control measures, see SRAC publications 360 and 361.

Pond weeds are generally totally eliminated when 10 to 12 grass carp are stocked per surface acre. This is not recommended in sport fishing ponds, since some weeds are desirable as a refuge for forage fish from bass. Good results in sport fishing ponds have been obtained when grass carp are stocked at a rate of 10 per vegetated acre. For example, a three acre pond that is 50% covered by weeds is equal to 1.5 vegetated acres and would take 15 grass carp.

If bass are present, then large grass carp must be stocked to insure survival. Eight inch long grass carp are the minimum acceptable length for bass ponds, with larger grass carp recommended whenever practical.

There are several cases in which grass carp are generally not recommended:

- Sport fishing ponds with less than 25% weed coverage. Spot herbicide treatments can be used instead to open up some areas for shore fishing.
- Ponds with tough weeds, such as cattails, bullrushes, and lilies. These generally cannot be controlled by grass carp, which lack the teeth needed to consume them.

- Ponds managed as resting and feeding places for ducks. Grass carp will eliminate plants favored by ducks for food.
- Any situation where grass carp could escape and enter public waters. This includes any pond that overflows unless spillway barriers are installed. See the section on spillway barriers that follows.

A list of grass carp fingerling suppliers is available in the OSU Current Report, "Where to Find Fingerlings and Fish Farming Supplies". There are three types of grass carp from which to choose. Diploid grass carp are the recommended type for Oklahoma. Triploid grass carp are equally effective at controlling vegetation, but are more expensive. Hybrid grass carp are not effective. Diploids will not successfully reproduce in ponds since they require running water.

After stocking, it will be some time before you see any major effects. Holes in weed beds may begin to appear late in the first year or early in the second year following stocking.

Restock at the first sign of weed regrowth. Generally this will be after seven or eight years, which is the average grass carp life span.

Grass carp will escape over pond spillways and through overflow drains. Parallel bar barriers should be built to protect your investment and prevent illegal escape of grass carp into public waters. Owners of large impoundments should confer with their county Soil Conservation Office to insure that barriers will not increase the chance of a dam failure.

One method of constructing spillway barriers is to weld horizontal 3/8 inch rods to 3/4 inch vertical support rods. Leave a one inch gap between horizontal rods to hold eight inch and larger fish while allowing most trash to flow through. Four feet long by two feet high panels can be moved easily and pinned together like livestock corral panels. Steel

T-posts, driven into the spillway a few feet upstream of the barrier, are recommended if tree limbs or other large objects are likely to cross the spillway during heavy downpours. Overflow pipe barriers should have a top, sides and bottom that are larger than the diameter of the pipe. Barriers should be checked regularly and cleaned if needed.

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