

Comments on the Symposium

by
David Brakhage¹

After attending the 3-day symposium on grass carp, I would like to offer some comments about the use of grass carp to manage aquatic plants from my perspective as a waterfowl biologist.

There was limited participation by wildlife biologists and wetland ecologists in the symposium. This seems to be the case on the grass carp issue in general, which is unfortunate. A key factor for us all to keep in mind when addressing any aquatic plant management issue is that wildlife have a significant stake in the outcome of aquatic plant management decisions. Grass carp are a partially selective herbivore that have the capability to entirely eliminate aquatic vegetation from a system if present in sufficient numbers. Although they exhibit a preference for hydrilla, they will readily consume several other species of native plants that have been demonstrated as desirable for fish and wildlife. Concern over the use of grass carp relates to the possibility of overcontrol of vegetation and the elimination of not only the target plants, but desirable plants as well. The debate continues over the appropriate amount of vegetation needed in a lake system, if any, to maintain healthy fisheries. There is no debate, however, where wildlife are concerned. Desirable aquatic macrophytes are absolutely essential to wildlife species that rely on wetlands. These species include more than just ducks, too. Numerous other birds, reptiles, amphibians, and mammals rely on wetlands for their survival. The majority of these require aquatic macrophytes, and the boundaries of their desirable habitat is generally delimited by the occurrence of aquatic macrophytes within a system.

Stocking sufficient grass carp to quickly eliminate an established stand of hydrilla will

invariably lead to overcontrol of native plants once that hydrilla has been eliminated. The only way to avoid this is to either use grass carp initially when hydrilla remains at low levels or first knock back the standing crop of hydrilla with herbicides before grass carp are stocked. This latter approach may not be successful with hydrilla because massive growth potential may still exist in the system because of the roots and tubers that remain even though the standing biomass has been reduced. We have had limited success in achieving and maintaining the stocking rate necessary to control nuisance plants without impacting desirable plants. Our ability to learn about the appropriate stocking rates to reduce or eliminate hydrilla and achieve maintenance control is hampered by our inability to know what the actual stocking rate is at any given time. Some reliable method to remove grass carp must be perfected to allow their use in a safe manner and to ensure that overcontrol does not occur.

The desire to use grass carp in the face of uncertain effects is largely a matter of economics. Grass carp are less expensive than herbicides when the goal is total plant eradication. Grass carp may also be less expensive than herbicides when the goal is to maintain some level of aquatic plants in the system. An integrated management system combining grass carp and herbicides has appeal, but it is not as predictable or as safe as using herbicides alone. Furthermore, an integrated approach may not necessarily be less expensive than chemicals alone. Although required less frequently, herbicide treatments are still needed under an integrated system, and additional grass carp frequently need to be stocked to maintain the appropriate level of control. There may also be the additional cost of grass carp removal if the stocking rates get too

¹ Waterfowl Management Section, Florida Game and Fresh Water Fish Commission, Tallahassee, FL.

high. The use of contact herbicides rather than Sonar to fine-tune the stocking rate of grass carp per vegetated acre seems to make sense because contacts give a more predictable result than the systemic herbicide Sonar.

Clearly, based on the papers presented during this symposium, there is no cookbook answer available for the use of grass carp to manage aquatic plants. At least right now, it appears that every system will have to be treated separately with a commitment to monitor the effects of the control program and modify the approach as needed to maintain appropriate levels of vegetation in the system. Quality research should continue to identify safe and effective ways to use grass carp for aquatic plant management. Grass carp have the potential to be used effectively in an overall program of aquatic plant management.

I'm very reticent about using this fish widely before a technique is perfected to remove the fish when needed. I also caution aquatic plant managers not to succumb to the short-term interests of individual property owners or lake-user groups, but maintain an appropriate perspective on what is best for lake ecosystem and all its dependent organisms over the long term. Diploid grass carp should never be used under any circumstances, and every reasonable effort should be made to eradicate them from our nation's waters. I encourage the U.S. Fish and Wildlife Service to take action to completely ban the use of reproductively capable grass carp for aquatic plant management. Responsible and consistent use of grass carp requires a clearly stated policy and a coordinated planning effort where all stakeholders are appropriately represented.