THE AQUATIC PLANT MANAGEMENT SOCIETY, INC.

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Implications of Changing Management Pressures for Aquatic Vegetation in British Drainage Channel Systems

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Large areas of lowland Britain are drained by artificial drainage channel systems or canalized streams. Aquatic weed problems are severe in many of these systems. Herbicides (e.g. terbutryn, diquat, dichlobenil, glyphosate) and physical control measures are currently the principal management pressures influencing drainage channel vegetation. There is a trend towards increased reliance on biological control, using grass carp and shading by bank vegetation. A limited range of established-phase survival strategies appears to characterize the plant populations which make up the aquatic weed communities of these habitats. Altered management regimes may cause major changes, in terms of community structure, biomass and composition of weed communities comprising species which exhibit these currently-successful strategies: some predictions are made of likely changes in species dominance in response to altered management pressure.

Control of Aquatic Plants in Texas Canals

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Vascular aquatic plants such as Hydrilla verticillata, Alternanthera philoxeroides, Typha latifolia, Leersia aquatica Myriophyllum spicatum, and Eichhornia crassipes frequently cause problems in irrigation canals and ditches in Texas. Biological, physical, mechanical, and chemical methods are used to reduce populations of these species to acceptable levels and permit delivery of water for crop irrigation. Some unique circumstances in Texas have prompted creative and unique solutions.

AQUAMOG UPDATE: New Tools and Applications to Meet Mechanical Water Management/Aquatic Plant Problems

Tom McNabb

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2150 Franklin Canyon Road
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Applications have been developed to perform various water management tasks from plant control to sediment removal. The Aquamog is a multipurpose marine maintenance vessel. Emergent and submerged plant control applications will be highlighted.

Sonar Treatment Techniques for Large Water Bodies and Flowing Canals

David P. Tarver

Eli Lilly - Elanco Products Co.
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The use of Sonar has resulted in selective long term control of hydrilla in numerous lakes and reservoirs. Scattered treatment sites, treated over a period of time, have consistently improved efficacy in large systems. Efficacy in rivers and flowing canals has been less consistent due to herbicide dilution. Under an Experimental Use Permit (EUP)in the Spring of 1989, Sonar trials were applied to flowing canals to determine the concentration and exposure time required for target species control.

An Update on the Toxicological Data Generated for the Aquatic Herbicide-Endothall

Dr. Abraham J. Tobia

Manager of Toxicology, Pennwalt Corp.
Agchem Division, Three Parkway, Room 619
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The Pennwalt Corporation over the past several years has been developing the necessary toxicological data on the aquatic herbicide-Endothall to ensure its' registration by the United States Environmental Protection Agency. We will discuss this data in detail and present an update as to where we are in the registration process. Will also discuss our future directions for this product.

Aquatic Uses for Triclopyr

Bill Kline

Dow Chemical Co.
115 Perimeter Center Place, Suite 590
Atlanta, GA 30346.

An update on Triclopyr (Garlon 3A) efficacy for aquatic uses will be presented, and a summary of environmental and dissipation characteristics will also be discussed.

Grass Carp for Control of Hydrilla and Hygrophila in Agricultural and Urban Waterways.

Vernon V. Vandiver, Jr. and David L. Sutton

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Grass carp (Ctenopharyngodon idella Val.) have been used for the biological control of Hydrilla (Hydrilla verticillata Royle) and other aquatic weeds such as torpedograss (Panicum repens L.) in canals and ditches in citrus groves and vegetable farms in south Florida. the triploid grass carp have proved most effective in controlling regrowth of weeds in an integrated control program. Grass carp have now been stocked in two urban canal systems for Indian hygrophila [Hygrophila polysperma (Roxb.) T. Anderson] control.

Triploid Grass Carp Stocking Project Lake Marion, South Carolina

Steven J. de Kozlowski,
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Lake Marion, a 110,000-acre reservoir, has experienced a rapid spread of hydrilla since it was first discovered in 1982. Hydrilla now occupies an estimated 13,000 acres and severely impairs public use and access for much of the year. The State has initiated a 3-year project to stock 300,000 triploid grass carp to augment herbicide applications and provide long-term control. Because this is the largest lake ever stocked with triploid grass carp, studies are being conducted to monitor aquatic plant coverage, grass carp movement, water quality, and native fish populations. The first 100,000 grass carp have been released and preliminary radio tracking results indicate that most of the fish are remaining in the target area.

Practice of Biological Control of Aquatic Weeds in Egypt Using the Grass Carp

Ahmed F. Khattab & Zenab El-Gharably

Ministry of Irrigation, Water Research Center
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A brief summary of results achieved during the last 8 years of using grass carp to control aquatic weeds in Egypt. Emphasis will be placed on results from the large scale stocking of the Bassousia Canal with 105 kg of grass carp per ha in 1987.

CORPS of Eng. In-House A.P.C.

Edward D. Knight

U.S. Army CORPS of Engineers
P.O. Box 1317
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The Corp maintains the St. Johns River for noxious aquatic plants from Jacksonville to Cocoa. A diverse plant community dictates that application technology remain current to obtain an efficient operation. Although technology change is not an everyday occurrence, innovative ideas that come from the field, have a positive effect on the aquatic plant control industry.

Managing Monoecious Hydrilla in the Potomac River

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Washington, D.C. 20006.

Hydrilla verticillata is being managed in the Potomac River through mechanical harvesting to keep boating access open into and out of public facilities. Seventeen sites are scheduled for multiple harvests of 106 acres within a 19-mile stretch of hydrilla-dominated shoreline. Total distribution of submerged aquatic vegetation increased from 400 acres in 1983 to 3,700 acres in 1988 from Washington, D.C. to Quantico, VA. Difficulties encountered include 2-3 ft. tidal ranges, inconvenient transfer ramps and disposal sites, multiple state/local jurisdictions, escaped floating fragments, and mobilization/demobilization costs.

Hydrilla Eradication in San Francisco: A Unique Experience

Nate Dechoretz

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Control and Eradication, 1220 N Street, Room A-357,
Sacramento, California 94271-0001.

Detection biologists found hydrilla on December 8, 1988 in a 0.8 ha asphalt-lined reservoir. Eradication program included draining the reservoir followed by removal of all plant material, soil, and debris. Asphalt and the clay lining underneath was removed from areas within the reservoir infested with hydrilla. Tubers were found under and embedded in the asphalt. The exposed areas were treated with metham prior to reasphalting and refilling the reservoir.

Thermal Stratification and Submersed Application Techniques

Kurt D. Getsinger, W. T. Haller, and A. M. Fox

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University of Florida, IFAS
Center for Aquatic Plants, 7922 N.W. 71st Street
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Lakes and reservoirs become thermally stratified during summer months when most submersed plant control activities occur. Stratification can influence the distribution of herbicides in the water column. Dense plant growth at, or on, the water surface can increase the degree of stratification and further reduce mixing of surface applied herbicides below the thermocline.

Sinking agents, granules, and injection hoses are often used to improve herbicide deposition in the water column. Little research has been conducted on the relative benefits of these application techniques. This paper will review thermal stratification in reservoirs/lakes and discuss preliminary results of an application techniques study being conducted by the USAEWES and the UF Center for Aquatic Plants.

Flowering Rush - A Recent Arrival in Western Water Systems

Fred L. Nibling, Jr. and John E. Boutwell

U. S. Bureau of Reclamation
Denver, Colorado.

Flowering rush (Butomus umbellatus L.), an introduced perennial aquatic plant, has become a troublesome weed in irrigation canals and reservoirs in southeastern Idaho. The plant grows under submersed, emergent, and terrestrial conditions. Herbicide screening studies were performed in greenhouse during the winter of 1987-1988, testing candidate herbicides and various treatment conditions. Results of these screening studies were used to establish small field plot studies in southeastern Idaho during the 1988 growing season. A progress report of the ongoing study will be presented.

Emerging Aquatic Weed Problems in Colombia, South America

Mario Sanchez

Corporacion Autonoma Regional, CRA 10 No. 16-82
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Recent Findings Regarding the Efficacy of Benthic Barriers

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Dow Corning Corp.
Midland, MI 48684

Various factors contribute to the effectiveness of benthic barriers for aquatic weed control. These include low buoyant potential, resistance to plant penetration, impact on plant hibernicula that may be trapped below the benthic barrier, resistance to physical damage, and shading efficiency. Three benthic barriers, Aquascreen™, Texel™, and Bottom Line™ were evaluated for buoyant potential in concurrent light and dark experiments. Algae were allowed to colonize the upper surfaces of the benthic barriers in the lighted experiments while algae was precluded from growth on the shaded or dark treatments. The resistance of these three benthic barriers to the penetration or attachment of plant roots was also evaluated. Benthic barriers may be used to cover pant hibernicula, such as turions and rhizomes. Aquascreen™, Texel™, and Bottom Line™ were placed over the hibernicula of Potomogeton pectinatus L., Vallisneria americana Michx., and Hydrilla verticillata (L.f.) Caspary for specified amounts of time and then removed. The viability of the plant hibernicula were evaluated. Benthic barriers are also likely to alter sediment biogeochemistry. The three benthic barriers were placed over uniform sediments for specified amount of time and then removed. The covered sediments were evaluated for their ability to support the production of Myriophyllum spicatum L. and Hydrilla verticillata.

Effects of Late Season Application of Mariner Herbicide to an Australian Aquatic Weed, Potamogeton tricarinatus (Floating Leaf Pondweed)

Lars W. J. Anderson, K. H. Bowmer, and C. Ripper

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CSIRO, Division of Water Resources
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When bensulfuron methyl (Mariner^{tm}) was applied in water at 50 or 100 ppbw within canals in enclosures, or in glass house cultures, chlorosis and necrosis of newly emerged floating leaves occurred as well as cessation of additional leaf and flower formation. Foliar field application at 0.1 kg/ha to floating leaves produced similar responses within 10 to 12 days. Effects of these applications on relative biomass allocation and viability of rhizomes will be discussed, as well as potential interactions between Mariner and the effects of feeding by larvae of a native moth on this pondweed.

Field Dissipation of MARINER in Lake Seminole, Ga: Results to Date

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Center for Aquatic Plants
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Bensulfuron methyl (MARINER) is a sulfonylurea herbicide that shows promise for controlling many nuisance aquatic plants at aqueous concentrations near or below 100ppb. Based on results of small pond studies, E. I. DuPont de Nemours and Company, Inc., in collaboration with the Bureau of Reclamation and the U.S. Army Corps of Engineers, is testing this formulation under an Experimental Use Permit (EUP). Test rates in these open-water reservoirs are 3x the projected labelled rate of 100 ppb, since all previous work was performed in small ponds. Herbicide residues were measured over time in water, sediment, fish (game and rough), crayfish, and clams. Initial results of this study will be discussed.

Advances in Alligatorweed Management

K. H. Bowmer, P. J. M. Sale, G. McCorkelle
P. Eberbach & L. W. J. Anderson

CSIRO Division of Water Resources
Griffith Laboratory, NSW., Australia.

Alligatorweed is dominant in several thousand hectares of damp grazing land in coastal New South Wales. It threatens the productivity of Australian irrigation agriculture, and could devastate the aquatic ecology of inland river systems. About 150 herbicides or combinations have been screened in field experiments, but only a few compounds are effective in depleting enormous underground reserves of the plant. More detailed observations of uptake, translocation and degradation are being made using selected compounds. The prospects for management, though expensive, are promising. The strategy involves the use of herbicides together with the establishment of a competitive pasture sward.

The Absorption and Translocation of Glyphosate in Water Hyacinth

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STUDENT CONTEST PAPER

The absorption and translocation of ^{14}C-labeled glyphosate in water hyacinth, both foliar-applied and solution-applied, were studied. Results indicated that glyphosate can be absorbed from leaf surfaces of water hyacinth and translocated rapidly through the whole plant body and go out by exudation from roots and guttation from leaf tips. The movement of glyphosate inside water hyacinth is basipetal. Thus, glyphosate is transported through phloem tissues rather than xylem tissues.

Use of Mariner[tm] for Aquatic Weed Management and Reduction of Dispersal Propagules of Monoecious Hydrilla and American Pondweed

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The sulfonylurea herbicide bensulfuron methyl (Mariner[tm]) is effective when applied preemergent or early postemergent to a variety of aquatic weeds. However, when applied in water at 50 ppbw in outdoor and glasshouse cultures of hydrilla and American pondweed, Mariner also blocked the formation of propagules in these plants by 80 to 90%. Production of above-sediment turions (i.e. dispersive propagules) in monoecious hydrilla was completely blocked. Results of sequential exposures to American pondweed indicate that optimal inhibition of propagule formation is obtained when treatments are made within 3-4 weeks of the onset of short-day propagule inducing conditions and that for hydrilla, an exposure lasting at least 7 days is required.

Modeling Exposure Route, Tissue Concentrations, and Effects of 2,4-D on Eichhornia crassipes.

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STUDENT CONTEST PAPER

Aerial spray application of 2,4-D (DMA) is a common water hyacinth (Eichhornia crassipes) control method practiced in the U.S. Assuming a critical concentration of 2,4-D in plant tissues is required to elicit a response of partial or complete mortality of a treated population, the tissue concentration-response relationship of water hyacinth and 2,4-D and the influence of route of exposure (root uptake from water vs. leaf contact) should be important and have been experimentally examined. These relationships are being modeled using a computer program (HERBICIDE) written in Microsoft[tm] QBASTIC for IBM compatible computers.

Giant Cutgrass - A Strategy for Rapid Colonization

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The tall emergent grass Giant Cutgrass (Zizaniopsis miliacea) appears to be spreading within and between several lakes in Florida. Large-scale management of this native occurs in Lake Seminole where it has rapidly colonized much of the shallow water restricting access to many fishing areas. Data will be presented on the growth and reproductive strategies of Giant Cutgrass from studies conducted in Lake Seminole and in established, non-invasive stands in Lake Alice, Gainesville.

Effects of Exposure of Plants to Herbicides on Grass Carp Feeding

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STUDENT CONTEST PAPER

Use of grass carp and herbicides together has been suggested as a possible tool for aquatic plant management. Aquatic herbicides are not directly toxic to grass carp when used properly, but feeding inhibition has been noted when fish are exposed to much lower than lethal concentrations of these chemicals. This behavior could be due to effects of herbicides on plant palatability or food quality. An experiment was conducted to determine whether grass carp feed preferentially on plants which have not been exposed to herbicides.

Attempted Control of Phytoplankton with Sacramento Blackfish

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The Sacramento Blackfish is a native California cyprinoid which feeds on extremely fine suspended particles. Approximately 750 blackfish, averaging 364g each, were stocked into a 0.1-acre golf course pond receiving tertiary-treated wastewater for irrigation. The blackfish did consume phytoplankton (predominantly Scenedesmus) but, by also feeding on the zooplankton, counteracted their own herbivory and so failed to reduce phytoplankton density.

Efficacy of Early-Season Fluridone Treatments for Control of Watermeal

Stratford H. Kay

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Three formulations of fluridone were applied to small ponds in mid-March and early April 1988 and 89. At the time of application, the watermeal was just beginning to appear on the pond surface. Watermeal continued to expand on all ponds until mid-summer. By July, the watermeal had disappeared from ponds treated with either Sonar 4AS or 5P, but continued to persist through September in small amounts in locations treated with SRP. Following the 1988 treatments, ponds receiving the 4AS and 5P formulations remained clear through the spring of 1989. Watermeal was present in the SRP pond, however. Corn irrigated 3 months after pond treatment and marginal grasses showed fluridone symptoms in late summer.

Biology and Management of New Exotic Plants in Florida

Rob Kipker

Florida Department of Natural Resources,
Bureau of Aquatic Plant Management
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Mimosa pigra and Ipomea aquatica have the potential to become major pests in Florida. Information will be presented on their biology and management strategies. Also, information will be given on several other exotics that threaten Florida's environment.

Techniques Investigated for Capture and/or Removal of Triploid Grass Carp

Rue S. Hestand, B. Z. Thompson, & D. F. Clapp

Florida Game and Freshwater Fish Commission
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Active and passive sampling methods were evaluated for use in triploid grass carp population analyses and removing large number of fish. None of the sampling methods were determined to be suitable for mark-recapture population studies. Electrofishing, haul seining, angling and baited lift nets were the only techniques that exhibited catch rates of sufficient magnitude to be considered for removing large numbers of fish. Of these techniques, public angling is probably the only technique that is economically feasible.

Movement of Triploid Grass Carp in Florida Lake Systems

D. F. Clapp, R. S. Hestand, & B. Z. Thompson

Florida Game and Freshwater Fish Commission
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A telemetric study of triploid grass carp was conducted to determine movement and foraging patterns of these fish in an open lake system. Thirty-two fish in 2 separate lakes were tracked successfully. Triploid grass carp concentrated activity in areas of hydrilla infestation, but exhibited diverse movement patterns in the absence of hydrilla. Home areas ranged in size from 15 km^2 to 136 km^2. Fish were not observed to leave either lake system.

Update on Grass Carp Research in Lee County, Florida

John Cassani

Lee County Hyacinth Control District
P.O. Box 06005
Fort Myers, Florida 33906

Various ongoing research projects dealing with grass carp stocking rates, tetraploid induction and ploidy determination methods will be discussed.

Computer Controlled Application of Multiple Herbicides with Cibolo Sprayers

Johnny Kubacak

Cibolo Sprayers
1105 Simmons
Jourdanton, TX 78026.

Herbicides and additives have traditionally been applied as a tank mix solution in low booms or oc nozzles or handguns. Cibolo's development of the chemical injection system using radar for speed control along with multiple swath oscillating spray heads has increased productivity while decreasing misapplications. Equipment includes ground driven sprayers and airboats. Operators have the choice of up to 5 chemical injection systems with the ability to monitor and record information automatically on acres sprayed, amount of chemical used, linear distance, and time of day.

A Review of Ditchbank and Aquatic Weed Control Opportunities Using Glyphosate

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T. E. Dutt, and M. S. Wildman

Monsanto Agricultural Co., St. Louis, Missouri,
A Division of Monsanto Company

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Results from recent herbicide screening trials in Texas and Arizona for salt cedar (Tamarix pentandra) control show that excellent control is obtained when new label guidelines for Roundup[R] and Rodeo[R] are followed. Purple loosestrife (Lythrum salicaria) timing and rate trials established in 1988 in Washington State's Columbia Basin demonstrated the effectiveness of Rodeo[R] for loosestrife control. Data on grass seedhead suppression and growth retardation are reviewed when glyphosate is used for chemical mowing. The development and use of a dry glyphosate formulation is discussed.

Saltcedar and Purple Loosestrife Control with Tricolpyr

Jesse Richardson

Dow Chemical Company
9330 10th Avenue
Hesperia, CA 92345.

Salt Cedar Control with Arsenal[R] Herbicide

Mike Carrigan

Vegetation Specialist, American Cyanimide,
P.O. Box 687
Roswell, New Mexico 88201.

Arsenal[R] herbicide (Imazapyr) has shown excellent results in controlling salt cedar (Tamarix species). Early plot work in 1986 with the Velasco Drainage District in Texas and the Salt River Project in Arizona gave indications that a 1% solution of Arsenal[R] herbicide applied to the foliage of actively-growing plants resulted in excellent control. Subsequent work done by the USF&WS in New Mexico at 3 and 4 pints per acre also gave good to excellent results.

Aquatic and ditchbank plant management in an Arizona Irrigation System

Gary Colvin

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Aquatic and Ditchbank Plant Management, and Grass Carp Studies, in Canadian Irrigation Systems

Ducan Lloyd

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Almost since irrigation began in the Province of Alberta in the early 1900's, aquatic weed growth has impeded water flow causing serious water delivery shortages during critical crop growing periods. As an alternative to the costly chemical and mechanical control of submersed aquatic macrophytes in canal systems, the sterile grass carp (Ctenopharyngodon idella) is a very good candidate species. The 5-year research study which began in 1988 will evaluate this fish species in this northern latitude for its potential as a biological control and possible environmental impacts. Objectives of this study are: can the triploid grass carp function and survive in the canal systems, potential cost and benefits, sites suitable for this type of weed control, possible fate scenarios for escaped fish, list of potential diseases and parasites associated with the fish, requirements for private fish culture in the province, and other benefits to agriculture across Canada.

New Uses for Acrolein?

K. H. Bowmer & W. A. Muirhead

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Acrolein is widely used for the control of submerged aquatic weeds in irrigation systems, and there are several benefits if treated water could be used for rice-growing. Experiments to investigate the damage to rice showed, conversely, that rice yields were improved by some treatments. Soil disinfection by acrolein is one explanation, suggesting a new use for the herbicide. This application might also be utilized in the suppression of algal and cyanobacterial blooms in water supply reservoirs.

Hydrilla Control in Northern Mexico Irrigation Canals Using Triploid Grass Carp

Miguel Cota and Pat Gomes

United States Department of Agriculture
Latin American Region
Cristobal Colon 1136, Fraccionamiento Hipico,
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Aquatic Plant Management in Egyptian Canals and Waterways

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Weed Control in the Salt River Project

Winn Winkyaw

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In aquatic weed control, chemical, mechanical and chemical combination, and biological aquatic weed control are used on an operational basis. Chemical methods, such as Acrolein, Hydrothol 191; mechanical methods with teleskoopes, dragline and backhoe; mechanical and chemical combination methods using teleskoopes and graders during dry periods followed by chemicals; and biological control using Triploid White Amur for aquatic weed control will be discussed in detail. For surface weed control, chemical and mechanical methods are used. The cost, types of weed controlled, and achieved benefits by these various methods will be presented. Water quality parameters, water flowing characteristics, different clay and organic matter contents, and their influences on weed control will be discussed along with the criterias used for different type irrigation systems.

Maintenance Control, Florida's Aquatic Plant Management Program

Jeff Schardt

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Aquatic Plant Management
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Approximately 100,000 acres of aquatic plants are controlled annually in Florida's public waters, predominantly for the maintenance of waterhyacinth, water lettuce, and hydrilla. Control is conducted under a philosophy which integrates biological, chemical, mechanical, and drawdown methods in order to maintain exotic plants at the lowest feasible level. A strong centralized management approach is stressed in which nearly 1.25 million acres of public lakes and rivers are continually monitored. Twenty-three government agencies and private companies are under contract throughout the state to prevent aquatic plant problems from materializing.

Educational Program Needs Assessment of Aquatic Pesticide Applicators and Supervisors in Florida

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The primary purpose of this study was to collect data about the attributes, attitudes, beliefs and behaviors of licensed aquatic herbicide applicators and field supervisors in Florida. The data can be used in helping plan and develop extension educational courses and materials for the target population. Mail survey questionnaires having 231 questions and agree-disagree type opinion statements were returned by a random sample of 419 subjects.

The study found that approximately 1,500 people in Florida are employed as aquatic herbicide applicators and/or supervisors. As many as 40% of them may be unlicensed to apply aquatic herbicides. More than three quarters of them are employed by tax-supported public agencies, and approximately half have less than six years experience. Their most frequent field work situations are in irrigation and flood control systems and in lakes or ponds. The aquatic plants they manage most frequently are emergent water grasses and cattails, waterhyacinth plants, and algae. The herbicides they most frequently use in aquatic situations are glyphosate, diquat, 2,4-D, and copper formulations. Almost one-quarter of them operate harvesting and cutting machinery in addition to applying herbicides.

Nearly one-half do not "understand the concept of maintenance control" and approximately 40% indicated that they could not always identify the most troublesome aquatic weeds in their areas. More than one-third believe that aquatic herbicides are being "misused by applicators" and almost one-third believe that their health is being affected by using herbicides.

Applicators and supervisors rely more heavily on chemical companies than on public educational and regulatory agencies for their information needs, even though they do not rank chemical companies among their best sources of information. Less than half attended a meeting of the Florida Aquatic Plant Management Society which was rated as the most useful source of information for their work, and only one-third have attended IFAS short courses, which were rated as the second most useful source of information.

Respondents have a very strong desire for more educational courses and materials regarding aquatic herbicide advanced training, maintenance control, aquatic plant identification and aquatic ecosystem ecology. They believe courses should be offered every year, preferably in the winter.

The study also found that the questions most often asked by the public have to do with reasons for aquatic plant management and safety of herbicide use.

Georgia Station's State and Regional Extension Training in Aquatic Plant Management

Jay Shelton and Tim Murphy

The Georgia Station
Griffin, Georgia.

Hydrilla in California, Getting the Word Out!

Nate Dechoretz

State of California Food and Agriculture Department
Control and Eradication Branch
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Detection is a major component of the California Department of Food and Agriculture's (CDFA) program to prevent hydrilla from becoming established in California. However, the diverse water systems in California have made hydrilla detection difficult, time consuming, and labor intensive. In order to maximize the detection effort, CDFA has been conducting an extensive hydrilla identification and information program for public and private individuals and agencies associated with the various water systems in California.

Center for Aquatic Plants APH Extension Activities

Victor Ramey, Karen Brown, Phil Chiocchio
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Florida's steadily increasing population of over 700 per day, concomitant increasing water resource needs and the public's increasing interest in environmental topics demands readily available information on aquatic plant management and ecology. The UF, IFAS Center for Aquatic Plants provides training and information services for aquatic plant management professionals, pond and lakefront homeowners and the general public who are interested in all facets of aquatic plant management and ecology. Training and information is provided through circulars, newsletters and fact sheets; electronic databases, videotapes, workshops and demonstrations. The Aquatic Plant Information Retrieval System provides a comprehensive literature review that is readily available to academics and others throughout the world.