Noxious Aquatic Weed Control

Must Be National Goal, Says Southeast U. S. Group

Control of noxious aquatic weeds has become a national concern. Little is being done to pull together effective methods and chemicals for control work, except efforts of the Hyacinth Control Society, which is mostly a group located in the Southeastern United States.

This Society was formed several years ago for the express purpose of developing more effective control methods for water hyacinths. At the time, the hyacinth problem was the big one, especially in Florida.

Since, however, hydrilla, elodea, and several other aquatic plants have become as important or more so in the fight to preserve and clean up inland water. The Society, then and now, despite its limiting name, is dedicated to control of all types of noxious aquatic weeds.

The need for control, however, is not now and really never has been limited to Florida and adjacent areas. Aquatics are a problem throughout the country and more industry weed control people are seeking answers than ever before. This likely accounts for the fact that representatives from five nations and 17 states attended the ninth annual meeting of the Society at West Palm Beach, Fla., June 15-18. Almost 200 applicators and company representatives of a total membership of 244 were on hand.

Such a high percentage of membership on hand at the annual meeting reflects the many problems of aquatic control—both those of actual weed control and those centering on permissive use of pesticides in public waters. It further demonstrates that the Society has a reputation for living up to its original goals, which included bringing together all possible information on methods of aquatic weed control.

Each year more and more persons outside the area concerned with this type weed problem attend Society sessions. To the end that the problems centering on aquatics are extensive, the Society membership this year voted to hold its 10th annual meeting next July at Huntsville, Ala. This will be the first such annual meeting at a location outside the state of Florida. Aquatic weed problems and controls in the Tennessee Valley Authority will be visited.

Aquatic Weed Control Outlook

Frank Wilson, president of the Society for this past year, and director of the Polk County, Fla., Mosquito Control Department, opened the 1969 formal program with an outline of current aquatic weed problem. He offered some well

Stanley C. Abramson, newly elected secretary of the Hyacinth Control Society and technical representative of Southern Mill Creek Products Co., Inc., (center with ribbon), opens the field demonstrations.

founded ideas on the direction of such control during the coming years.

Our way of life, he said, has increased the amount of waste water produced by each person. All waste waters, such as sewage and industrial effluents, storm drainage, runoff from fertilized areas, etc., have one factor in common. Each type of waste or runoff contains plant food elements such as nitrogen, phosphorus, potassium and others. These nutrients add fertility to inland waters—a process called Eutrophication.

Besides enhancing the production of native plants which create weed problems, runoff also fertilizes major pest plants which have been introduced from other parts of the world. These as well as native plants grow at fantastic rates in well-fertilized water, Wilson pointed out, and thus constitute major aquatic weed problems.

More Regulation Coming

As to the direction of aquatic weed control, Wilson told Society members that they could be sure of only one thing—that of change. Operations, Wilson said, cannot remain static. In fact Wilson predicted that 20 years hence, the group will likely look back to the relatively simple control problems of the '60s. He expects far more technical and complex problems in the '70s and '80s.

One change, Wilson pointed to, is that weed control operators can look forward to a much greater degree of supervision by regulatory agencies. Operations and methods, Wilson believes, will be closely supervised and all commercial applicators will be licensed. Because solving weed control problems may create problems for others, a director of any type weed control can plan on spending more time in liaison with the various agencies and groups which may be involved.

Wilson pointed out that for many years conservation has taken a back seat. As a nation, the dollar has taken precedence. In some cases, wildlife and natural resources have suffered. The country, Wilson said, is entering a period when emphasis is being shifted to conservation. With this shift will come an increase in interest aimed at biological controls. Stringent regulations will be developed further concerning use of pesticides in water. Research will point more toward chemicals and methods which are highly selective. The use of broad spectrum herbicides will be discouraged.

Even so, Wilson believes, aquatic weed control will become even more important in the economy. Waterfront real estate values will depend more and more on the degree of infestation present of submerged aquatic weeds.

Wilson also feels that labor problems will further beset the industry. He believes operators will use more, better, and possibly bigger equipment. Use of aircraft will increase. Wilson said that use of the helicopter in aquatic weed control operations will become commonplace.

Methods and Costs Discussed

During the 4-day program, numerous types of chemical and mechanical control methods and costs were discussed. Typical of reports was that of Robert J. Gates, superintendent of maintenance at the Southwest Florida Water Management District at Brooksville.

Gates revealed costs and chemi-

Andy Price, at the controls, demonstrates the Pennwalt weed control service during the field demonstrations.

Officers and directors elected for the coming year, from the left, are: Paul R. Cohee, Hercules, Inc., Birmingham, Ala., president; Frank Wilson, Polk County Mosquito Control, Eaton Park, Fla., outgoing president and director; Stanley C. Abramson, Southern Mill Creek Products, Tampa, Fla., secretary; Robert Blackburn, ARS, USDA, Fort Lauderdale, Fla., editor; Dr. Lyle Weldon, ARS, USDA, Fort Lauderdale, Fla., vice-president; Andy Price, Pennwalt, Orlando, Fla., director; and Jay L. Blanchard, Winter Park, Fla., director.

cals on control of hydrilla, elodea and Eurasian watermilfoil on local rivers in the areas of his district. These weeds are often rapidly spread, he said, by motor boat movements, waterfowl flights, and hurricanes. Cleanup on three local rivers in mid-April, 1969, was handled in five days.

Because of many climatology variables that had to be considered as well as manpower, herbicides had to be carefully selected, Gates said. This responsibility had to be given to staff people of two agencies working on this operation. Because of heavy spring flows in the Crystal and the Homosassa rivers, plus tidal fluctations, ranging from 1 to 3½ feet, four herbicides were selected. Use was based entirely on position of the tide, and location of the area to be treated; and the amount needed for the depth and flow of water.

Herbicides selected were: (1) Copper Sulfate — medium course crystals, a product of Copper Hill Tennessee Corp. This material was applied by spin disk applicator and air-boat. It had enough density to carry the herbicide to the bottom of the rivers and canals, having a high flow of water; (2) 20% of 2-4-D Granules, a product of Amchem Corp; (3) Aquathol-Plus, a Pennwalt Corp. product, both of these materials being systemic type herbicides; and (4) Hydrothol-191 was used in three small canals, also a Pennwalt Corporation product. These canals were completely clogged with "hydrilla" growth, which, Gates said, adversely affected values of the water front property. A small fish kill was experienced, he stated, because of dense weed growth, in this case attributed to the oxygen sag caused by rapid decomposition of the elodea plant.

Cost of treatment with the combination of herbicides used based on surface acre cost, are as follows:

Crystal River—Treated 172 acres. Cost per surface acre: $38.21.

Homosassa River — Treated 115 acres. Cost per surface acre: $44.85.

Chassahowitzka River — Treated 30 acres. Cost per surface acre: $26.80.

Except for some small spot treating, Gates believes that control will exist until early August, when a conservative rate of application should keep down infestations. Cost ratio benefit for this operation was at least 6 to 1 for dollars spent.

Herbert J. Friedman, president, Southern Mill Creek Products, Inc., Tampa, Fla., and Donald E. Seymour, president, Marine Biochemists, Inc., Waukesha, Wis., discuss technical materials available on aquatic weed control from the Society.

Visiting during break in program of Society are, from the left: John Gallagher, aquatic weed research specialist, Amchem Products, Inc., Ambler, Pa.; Mrs. Robert Blackburn, Fort Lauderdale, Fla.; Robert P. Blakely, Old Plantation Flood District, Plantation, Fla.; and Zeb C. Grant, Florida Flood Control District, West Palm Beach, Fla.