

Expanded Hyacinth Controls, New Spray Systems On Society Agenda at Tallahassee, June 28-30

Will chemicals alone defeat the mammoth aquatic weed "plague" in the Gulf and southeast Atlantic states? This question pondered by delegates to the fourth annual Hyacinth Control Society meeting in Tallahassee, June 28-30, began to weigh more heavily as speakers presented some new ideas in the works to control runaway water weeds.

A promise of better things to come was evidenced by Julian J. Raynes in his description of the 6-year-old program—Expanded Project for Aquatic Plant Control—authorized by Congress in 1958. Raynes is with the Master Planning Branch of the U. S. Corps of Engineers which carries out the expanded program to come up with improved control methods.

Expecting renewal of the Project after two more years, Raynes stated, "At a time when every effort is being made to conserve and utilize natural resources for their highest and best use, the losses incurred because of obnoxious aquatic plants on our waterways, streams, and tributaries are of great importance when we consider that water resources are not depleted or used up, but can be used over and over again by the public."

A serious problem in the Carolinas, Raynes said, is alligatorweed. Under the guidance of the Corps' program a promising insect has been introduced for control of this weed pest. The insect

is a South American flea beetle, genus *Agasicles*. It has passed all tests to date and found to be host specific for alligatorweed. It is hoped that this attempt at biological control will lessen the alligatorweed problem in the South.

New Spray System Bows

Drift has, since the introduction of growth regulator chemicals, such as 2,4-D and relatives, been a great problem for applicators of these herbicides. Improved formulations introduced from time to time somewhat lessened the danger of accident. Now, a new application method seeks to eliminate this worry altogether, Dr. R. E. Ogle, Hercules Powder Co., Wilmington, Del., revealed.

The new system is called the Rhap-Trol Spray System and has as its principle a water-in-oil emulsion rather than an oil-in-water type. This is called an invert emulsion.

"Although invert emulsions have been recognized since 1931," Dr. Ogle explained, "only recently have the mechanical developments in equipment enabled us to apply them commercially."

"The system provides for continuous mixing and emulsion formation in small chambers of bi-fluid mixing nozzles," Dr. Ogle detailed. "This is carried out by bringing the chemical (oil-based) and water through

separate lines to the mixing chambers where a thick water-in-oil emulsion is formed and sprayed simultaneously."

Such a system according to the Hercules expert, will prevent drift because the uniform droplets are produced large enough to fall directly to the target, yet small enough to cover the target plants adequately.

The Rhap-Trol Spray System can be adapted to any size operation, from aerial application to a single man walking with a backpack sprayer, Hercules claims.

Dr. Ogle also outlined the facts that the system eliminates pre-mixing; the system applies thin as well as thick emulsions; a uniform swath is produced; and there is little washing away because the oil droplets provide better contact.

Follow Rules for Safety

With the commonly used phenoxy herbicides, such as 2,4-D, 2,4,5-T, and dalapon, there is little excuse for these materials to injure either persons or desirable plants when simple rules are followed, Dr. J. R. Orsenigo, Associate Horticulturist, of Florida's Everglades Experiment Station, Belle Glade, told the group.

Proper instruction in the use of protective clothing, and sensible applying methods, prevent injury to personnel and the public. "Low toxicity herbicides are available for most situations, and there is little justification for using inorganic chemical, except in unique cases," Dr. Orsenigo advised the conference delegates.

A major reason for attending conferences such as the Hyacinth Control Society meeting is to find out how other workers do similar jobs. Delegates were pleased to hear William E. Wunderlich, Chief of the Aquatic Growth Control Section of the New Orleans Corps of Engineers District, describe portions of his control efforts in Louisiana.

"Excellent kills of waterhyacinths have been obtained using a 40% amine salt of 2,4-D applied as a ½% solution (by weight) in 100 gallons of water per acre. This figures out to a 4 lb. per

Society officers' attention was caught by a display at their June meeting. James D. Gorman (left) secretary-treasurer, Herbert J. Friedman, new vice-president, and John W. Woods (right) 1965 president pondered the merits of different hyacinth control methods presented.



acre application rate," Wunderlich calculated.

The Louisiana Engineers use a system where they draw chemical from its shipping container and water from the stream in which they're working through a self cleaning filter. Chemical is mixed and applied simultaneously. Applying craft moves at a speed of 2 mph.

"Standard spray pumps are used. These are piston type with a capacity of 10 gallons per minute (gpm) which are capable of operating at 400 psi; working pressure is usually 350 psi," the engineer continued.

"High pressures help penetrate the vegetation and give good coverage to small plants which would be otherwise sheltered if the spray rained in from above. Our guns are mounted on swivels so that the recoil is absorbed and good aim can be maintained through the spray-day without overtaxing the stamina of the operator," Wunderlich revealed.

Sweeping Cone Gives Coverage

The New Orleans controller stated that the spray pattern is important and showed how his men achieved good coverage.



Experienced waterway navigator, Captain Noah Tilghman (right), Palatka, Florida, talked about pre-2,4-D era travel over hyacinth-infested waters with Gene Brown (left), U. S. Corps of Engineers public relations section, Jacksonville, and Julian J. Raynes, also of the Corps, from Atlanta, Georgia.

"We move the gun from side to side in such a manner to provide a cone in the horizontal plane. On one-half of the movement, the gun is directed in a straight line to strike the plants below the leaves and to penetrate through the stems to reach small plants. The return swing in the gun is more rapid and is at an elevation that will permit the material to fall on top of the upper leaves of the taller plants. Thus the pattern takes on the

appearance of a cone with the lower sweep slightly flat and the upper portion curved," Wunderlich concluded.

The Hyacinth Control Society elected as president for 1965 John W. Woods, Chief, Fisheries Division, Florida Game and Fresh Water Fish Commission, Tallahassee. Former president Herbert J. Friedman, who is president of Southern Mill Creek Products Co., Tampa, Fla., stepped into the vice presidential spot of the Society. James D. Gorman, director of the Hillsborough Mosquito Control District, Tampa, remains as secretary-treasurer. New editor of the annual Hyacinth Control Journal is T. Wayne Miller, director, Lee County Hyacinth Control District, Fort Myers, Fla.

New directors of the Society elected this year are Dr. Robert D. Blackburn, Crops Research Division, ARS, USDA, Fort Lauderdale, Fla., and A. C. White, technical specialist with California Chemical Co., Orlando, Fla.

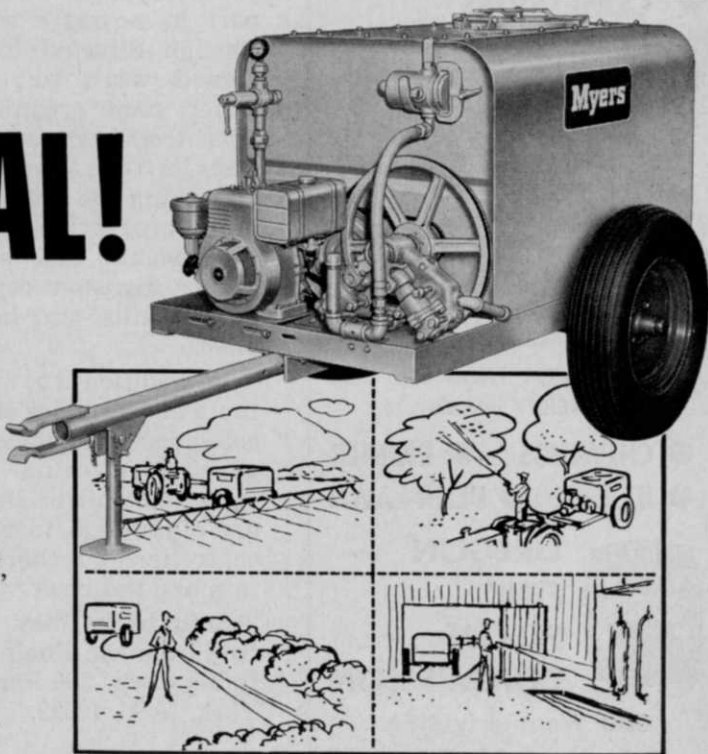
Future plans of the Society will be announced through this magazine, *Weeds and Turf* was told.

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