

Dr. Lyle W. Weldon, atop air boat, research agronomist at Agricultural Research Service, USDA, Ft. Lauderdale, Fla., gets Society field

demonstration underway. Some 150 members of the Society registered for the 1967 annual meeting.

Aquatic Vegetation Control

*a major segment
of the industry*

Earl Ogle, Hercules, Inc., Wilmington, Del., demonstrated Hercules equipment for testing consistency of invert spray materials during field demonstration at Society's 7th annual meeting.

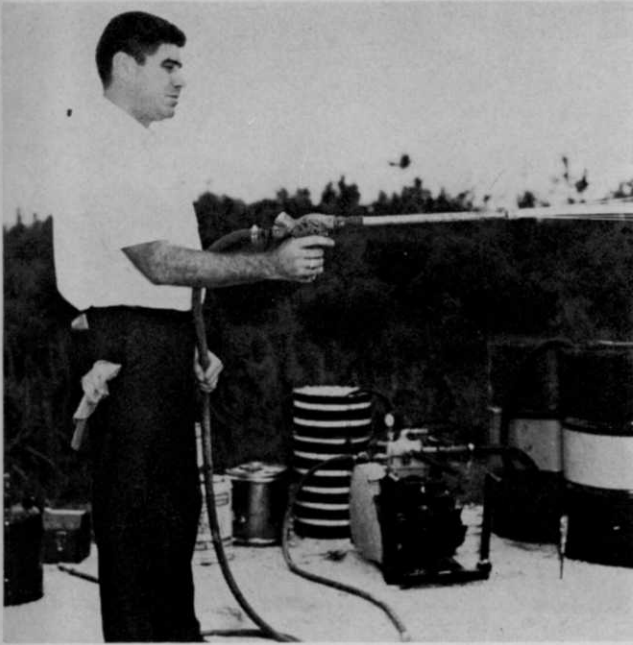


A WTT staff report on the 7th annual meeting of The Hyacinth Control Society, an organization dedicated to control of all noxious aquatic weeds. Members pool their experience and research in an exchange of information, aimed particularly at the applicator level.

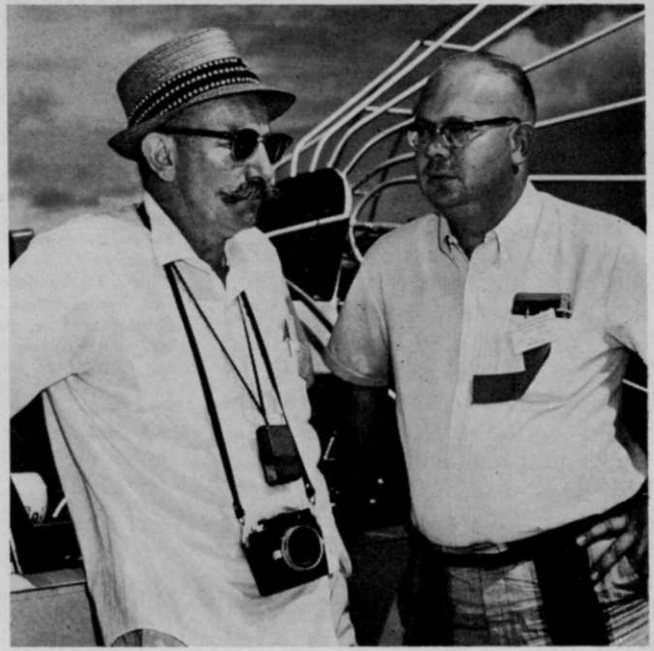
Aquatic weed control promises to become more complex. Problem areas increase as greater segments of the nation's population seek out and use inland water, whether lakes, canals or regular streams. Homebuilding and commercial use of inland water causes a buildup of pollution which in effect fertilizes bodies of water to the extent that they become natural incubators for weed growth. The usual result is that aquatic weeds limit

recreational, commercial, and public use of both natural and artificial water areas.

A good example of how quick noxious aquatic weeds can become a problem is found in the Panama Canal. Problems there began only about 10 years ago at a time when only hyacinths and some aquatic grasses were evident. These did not become alarming until about 5 years ago when many areas suddenly became choked with Elodea and



Stull Chemical Company's Bifluid System as an aquatic weed control technique is being demonstrated at field session of Society meeting by Bob Burgdorff, sales representative of Stull, Houston, Tex. On the program Burgdorff related Stull's pioneer work with this new concept of vegetation control.



John Gallagher, left, and James D. Gorman discuss aquatic weed problems during field demonstration of Hyacinth Control Society annual meeting. Gallagher is aquatic weed research specialist, Amchem Products, Inc., Ambler, Penna., and Gorman, Society president, is director of the Hillsborough County mosquito control unit, Tampa, Fla.

other varieties of submersed weeds. Mechanical methods of clearing choked areas worked for a time but, according to Julian S. Hearne, chief of the Dredging Division of the Panama Canal Co., who reported at the recent annual meeting of the Hyacinth Control Society at Ft. Myers, Fla., the need to rely on chemicals was soon apparent. Copper sulfate experiments were started in 1964 and produced good results. It was used in crystal form so that it would settle to the bottom and attack the root system of the plants. Later, in May 1966, Elodea was almost completely cleared by use of copper sulfate. However, because of the expense involved on the massive expanse of the Canal, Hearne said that experiments were started with other chemicals to seek methods of reducing costs. Most of the areas tested were plagued with about 90% Elodea, 8% coontail, and 2% water hyacinth and marginal grasses.

Results varied with concentrations of chemicals used, Hearne reported, but were generally good. For example, Hydrothol 191 used in liquid form at concentrations of 1.5 to 3 ppmw showed a remarkable disintegra-

tion of vegetation, and within 3 weeks plots were virtually free of all vegetation. No fish kill was evident. By contrast, a similar concentration of Hydrothol 191 in granular form produced a very slow effect with areas adjacent to spots where the granules fell having a very healthy effect.

Copper sulfate plus Diquat at

concentrations of 1 to 2 ppmw of each give kills ranging from 80% to 100%. Diquat alone at 1 to 2 ppmw concentrations gave 80% to 85% kills after 3 weeks. Copper sulfate crystals at 5 to 20 ppmw concentrations produced 90% to 100% breakup and decomposition of Elodea with no new growth showing after 3 weeks. Karmek at a concentra-

Zeb C. Grant, vice-president of the Hyacinth Control Society and director of operations and maintenance of the Florida Flood Control District at West Palm Beach, Fla., left; Charles J. Fox, technical representative of Hercules, Charlotte, N. C., center; and William Dryden, commissioner of the Lee County Hyacinth Control District at Ft. Myers, Fla., and a past president of the Society as is Grant, discuss program just prior to opening session.



tion of 3 pounds per acre foot gave a 10% reduction in weeds after 3 weeks; at 15 pounds, a 35% reduction.

Problems in aquatic control were reviewed for the record 150 registrants at an annual Society meeting by President James D. Gorman, director of the Hillsborough County, Fla., mosquito control unit. Among the most far reaching, he said, was a ruling by the Florida State Board of Health that no pesticide formulations containing 2,4-D, dalapon or Diquat had been registered for use in sources of potable water supply. This problem is being studied by a number of federal, state, and private agencies to determine the information required for registration of 2,4-D formulations. A report is expected shortly. Gorman also said that a bill had been introduced into the US Senate to prohibit importation into the US of exotic aquatic plant species. The Society is on record, Gorman stated, in support of the bill. Gorman called on Society members to stimulate interest in aquatic weed control by commercial applicators. Government agencies cannot treat aquatic weed problems on private property and to date, too few commercial applicators are qualified to handle the

Robert D. Blackburn, research botanist, Agricultural Research Service, USDA, Ft. Lauderdale, Fla., demonstrates new development in pump equipment for air boat use, during Ft. Myers annual meeting. Blackburn was elected Society president for the coming year.



specific problems. He complimented the work of researchers on present aquatic problems within the scope of current financing, but called for more research on control programs by university staffs, in Florida and throughout the Southeastern US area. At the annual Society banquet, Gorman was presented a plaque for his service to the organization.

Also receiving an award was William E. Wunderlich, chief of the US Army Corps of Engineers

aquatic growth control section at New Orleans, La. He received a lifetime membership to coincide with his retirement. On the formal program, Wunderlich discussed mechanical harvesters which have been used for a number of years to clear hyacinths from navigable channels. These harvesters, he said, are limited to waters deep enough to float them. Chemicals, he said, have ruled out all but about 3% of such work in his area. Attempts

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Charlie P. Johnson, left, president of the Johnson Spray Company which bears his name, and Paul R. Cohee, technical sales representative of Hercules, Inc. Cohee was elected secretary-treasurer of the group for the new year.



Andy L. Price, aquatic biologist of Pennsalt Chemicals Corp., Orlando, Fla., center, examines spray gun with group during field demonstration. Price discussed commercial aquatic weed control in southeastern U.S. on Society formal program.



Meeting Dates



Penn State 1967 Field Day, Pennsylvania State University, University Park, Aug. 16-17.

Nursery and Garden Supply Show, Texas Association of Nurserymen Annual Convention, City Auditorium, Austin, Aug. 20-23.

International Shade Tree Conference, 43rd Annual Convention, Marriott Motor Hotel, Philadelphia, Pa., Aug. 27-31.

National Arborists Association Annual Meeting, Marriott Motor Hotel, Philadelphia, Pa., Aug. 27-31.

American Society for Horticultural Science, Annual Meeting, Texas A. & M. University, College Station, Aug. 27-Sept. 1.

Annual Turfgrass Field Days, Virginia Polytechnic Institute, Blacksburg, Va. Noon Sept. 6-Noon Sept. 7.

Annual Turfgrass Short Course, Ala.-Northwest Florida Turfgrass Association, Auburn University, Auburn, Ala., Sept. 7-8.

Lawn and Ornamental Days, Ohio Agricultural Research and Development Center, Wooster, O., Sept. 12-13.

Pacific Northwest Spraymen's Association, Annual Conference, Seattle Center, Seattle, Wash., Sept. 15-16.

Northwest Turfgrass Conference, Annual Meeting, Harrison Hot Springs, British Columbia, Sept. 19-21.

National Agricultural Chemicals Association, Annual Meeting, Holiday Inn, Palm Springs, Calif., Nov. 5-8.

American Society of Agronomy, Annual Meeting, Sheraton-Park and Shoreham Hotels, Washington, D. C., Nov. 5-10.

Texas Fertilizer Association's 1967 Agricultural Exposition, KoKo Inn, Lubbock, Nov. 9-10.

Fertilizer Industry Round Table, 17th Annual Meeting, Hotel Mayflower, Washington, D. C., Nov. 15-17.

Entomological Society of America, Annual Meeting, Hotel New Yorker, N.Y.C., Nov. 27-30.

National Fertilizer Solutions Association, Annual Convention, Denver-Hilton Hotel, Denver, Colo., Nov. 28-30.

National Aerial Applicators Association, Annual Conference, Marriott Hotel, Dallas, Tex., Dec. 3-5.

North Central Weed Control Conference, Civic Auditorium, Fargo, No. Dak., Dec. 5-7.

Ohio Turfgrass Foundation Turfgrass Conference, Sheraton-Cleveland Hotel, Cleveland, O., Dec. 11-13.

Evergreen Diseases

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should be removed and the wounds treated with wound dressing.

Ice storms which cause thick deposits of ice to form on branches occur occasionally in the Midwest. The ice itself does not usually cause damage, but the extra weight can result in twig or branch breakage. Fortunately, ice damage is rare for little can be done to prevent it. Ice injury should be treated like any mechanical injury on evergreens. Injured plants should be pruned, watered, and fertilized; and wounds should be painted with wound dressing.

In addition to the diseases and other types of damage already mentioned, there are many troubles of evergreens for which the causes are unknown; and other problems are continually arising. Evergreen diseases have not received the attention that diseases of other plants have had; and much research is needed to solve not only the new problems which arise, but also some of the problems which have been with us for many years.

Aquatic Vegetation Control

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at commercial use of water hyacinths have had little success to date, he reported.

Officers elected for the new year by the Society which met June 18-21 are: Robert D. Blackburn, research botanist for the Crops Research Division, USDA, Fort Lauderdale, Fla., president; James Gorman, who served this past year as president, vice-president; Paul R. Cohee, technical sales representative for Hercules Incorporated, Orlando, Fla., secretary-treasurer; and Dr. Lyle Weldon, research agronomist, Crops Research Division, USDA, Fort Lauderdale, Fla., reelected as editor. Directors for the coming year are: Frank Wilson, Polk County Mosquito Control Unit, Eaton Park, Fla.; Dr. F. W. Zurburg, University of Southwestern Louisiana, Lafayette, La.; and Fred W. John, Southern Florida Conservancy District, Belle Glade, Fla.

Trimmings

Greenskeeper Knows His Turf. A stolen golf green at Teigmouth, Eng., turned up as a new lawn at the home of Ivan Hitchcock who, incidentally, is now serving 3 years probation for the theft. Greenskeeper Edward Yeo said he had no trouble spotting his green because there was no other turf in the area like it.

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Elm Blight On Run. Kansas City lost 13,200 elms from Dutch elm disease in 1963 which was 10% of the city's elm population. The city then hired Frank Vaydik, Detroit forester, who started a 3-pronged program in which diseased trees were removed as quickly as possible, dead or dying branches trimmed, and the 100,000 elms of the city sprayed yearly. Result was a loss of only 4578 trees in '64, 3744 in '65 and only 2912 last year, cutting losses to less than 3%. At the same time 7000 new trees are being planted each year to replace former elm loss.

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Irrigation Protects Against Hot and Cold Weather. Researchers now tell us irrigation can protect crops from frost damage. Seems that in the freezing process, water releases heat. A pound of water gives off 144 BTU's of heat. The increased moisture in the air serves as a blanket and reduces the amount of heat given off by the crop through radiation. Crops can be protected down to 20° temperatures by irrigating. During hot weather, light irrigation can be used to cool crops when temperatures are above 85° F. And all the time we thought irrigation just guaranteed the proper transpiration rate.

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Big Business. Virginia Tech researchers at Blacksburg point out that weed control accounts for heavy spending throughout the state. They estimate that weed losses cost citizens \$14 million in lawns and \$11 million in industrial sites and rights-of-way every year.

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"Grass" Contract to Monsanto. We hear that Monsanto Chemical Company was just awarded a \$174,468 contract to install synthetic grass on the Memorial High School Stadium football field at Seattle, Wash. Monsanto's bid was accepted over a lower bid of \$162,000 by virtue of a 5-year guarantee. Gate receipts plus stadium parking and rental fees will finance the installation. At the price, it has to be superior to Kentucky blue.

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Customer Credit. J. R. Stiffler of Borden Chemical offered his company's dealers a bit of timely advice in a recent newsletter. He urged them to arrange for customers to charge for purchases in order to increase sales. Stiffler says a number of dealers don't like the idea of the collection fee, but he feels that customers understand that the merchant has to be reimbursed for a direct charge or markup. Stiffler points to bank credit cards as a popular type aimed at practically every type of business. Seems to us it might be a good step for the service segments of the vegetation control industry.