

|||
**want to know
 more about
 aquatic
 weed
 control . . . ?**

|||

. . . then our Applicator's Manual of Aquatic Weed Control offers you just the material you need.

. . . in 16 pages, entirely concerned with the practical aspects of aquatic weed work, Applicator's Manual of Aquatic Weed Control details growth habits and ecology of aquatic species;

. . . thoroughly discusses chemicals used in aquatic weed work;

. . . and concludes with explanations on equipment used to perform control measures. The final pages also include an extensive bibliography.

. . . if you've been contemplating expanding into aquatics and need some solid down-to-earth information . . . Applicator's Manual of Aquatic Weed Control will give you a firm grasp of this complex and stimulating phase of the industry.

. . . there's no substitute for this handy "hip-pocket" manual of aquatic weed fundamentals. Order your copy today . . . better yet . . . order one for each member of your organization.

|||

PRICES: 1-10, \$1.00 each; 11-25, 90¢ each; 26-50, 80¢ each; 51-250, 75¢ each; 251-500, 60¢ each; 501 and over, 50¢ each; postage prepaid in the United States only. Supply is limited.

ORDER NOW!

WEEDS TREES AND TURF
 1900 Euclid Avenue
 Cleveland, Ohio 44115

Send me . . . copies of your aquatic reprint at \$. . . each. My check for . . . is enclosed.

Name

Address

City State

**Aquatic Weed Control Gains World-Wide
 Perspective At 5th Hyacinth Control
 Society June Meet in Palm Beach**

"Aquatic weed control is a colossal world-wide problem," Dr. E. C. S. Little, A.R.C. Weed Research Organization, Oxford, England, told 70 experts (representing 7 states and 2 foreign countries) at the fifth annual Hyacinth Control Society meet at the Seabreeze Holiday Inn, in Palm Beach, June 28 to 30, 1965.

Dr. Little described the plight of the Egyptians, who are trying to restrict the range of waterhyacinth, a beautifully-flowered, but prolific, floating weed, to waters above the Khartoum Dam on the Nile River. They spend almost \$1.5 million each year. "But the waterhyacinths are getting past the dam into the lower valley," he said.

Political upheavals can disrupt the methodical control of pest weeds, Dr. Little pointed out. When Belgium managed the Congo, the government spent about \$4 million to control waterhyacinth. "Since Congolese independence and the turmoil which followed, all the money and effort has been wasted, because the weeds have grown back as bad as they ever were," the British weed expert said.

Continuing his round-the-world tour of weed problems, Dr. Little explained that *Salvinia auriculata* covers vast portions of Lake Kariba in Southern Rhodesia, and other water bodies. This weed serves as a resting place for cercariae life stages of certain trematode blood flukes, which parasitize snails and other animals, including man. Cercariae are the same type of organism which causes swimmer's itch (shistosome dermatitis), though the swimmer's itch organism does not penetrate and develop further within humans as some other species of blood flukes can and do. When cercariae escape the confines of infected snails, the cercariae attach to floating *Salvinia auriculata*. Anyone touching these plants risks having the parasites penetrate his skin. Penetration and development of these cercariae within

humans causes the disease bilharzia, for which there is no known cure. It usually leads to death. Bilharzia afflicts many people in Asia, Africa, and South America, though the weeds may not be associated with it.

A Hyacinth Habit Change?

Experts in the United States are concerned because waterhyacinths have been observed, on the one hand, tolerating water of increasing saltiness, and on the other, tolerating colder water. Waterhyacinth is a fresh water weed. But William Wunderlich, chief of the Aquatic Growth Section of the Army Corps of Engineers, New Orleans District, noted that today waterhyacinths are found in water much saltier than they could tolerate a few decades ago. Now rafts of waterhyacinths which float into the Gulf of Mexico stay alive much longer.

"Thirty years ago," Wunderlich also disclosed, "waterhyacinths were found only as far north as Baton Rouge, Louisiana (the plant is originally South American). But, today, we find them as far north as Arkansas."

Biological control of aquatic weeds is being investigated in countries other than the United States. British fisheries expert, W. H. L. Allsopp, who promoted the use of manatees, or sea cows, to control aquatic weeds in British Guiana, pointed out that manatees are slow to reproduce, but live long, up to 150 years.

Manatees are large, up to 1½ tons, mammals which have adapted to water. They have been captured at lengths up to 19 feet.

The Society learned that three manatees placed in display pools in Georgetown, British Guiana, between 1879 and 1890 are still alive. From 1890 to 1921, the manatees bore offspring to make the total five. By 1941, two were born, and by 1965 three more were added (one of the total has died, making a total of nine).

Weed controllers in British

Guiana originally captured 79 of the docile, herbivorous, aquatic mammals, and put them into canals in 1962 to eat weeds. Most have escaped since, because barriers in the canals were not maintained. British Guiana, too, gained independence, and the new government failed to follow through.

Allsopp, who is employed by the Food and Agriculture Organization of the United Nations, cannot continue manatee research because no funds are forthcoming. However, he firmly believes that these beasts can be effective biological controls against aquatic weeds.

Dr. Peter Sguros, Florida Atlantic University, Boca Raton, is presently studying manatees over a three-year period, under a project sponsored by the Flood Control District. He hopes to determine their utility as biological controls. Five manatees were captured and introduced into canals near Fort Lauderdale in May of 1964. He reports that they have chewed their way through half-mile long sections of infested canals every two months. They eat all the weeds, even to the roots, Dr. Sguros reported.

"Shifty" Weeds Stymie Experts

Five years ago, experts hoped that weed problems could be tackled and solved in a short time. But time and the plants have proved otherwise. Experts hadn't counted on the phenomenon now called ecological shift (See WTT, March 1964, pg. 16).

"First we developed a spray to kill southern naiad, then elodea moved in (shifted) and took over," reports Robert Blackburn, of the U. S. Department of Agriculture laboratory, Fort Lauderdale. "We became so interested in controls that we overlooked these ecological shifts. I don't know why they occur," Blackburn confessed.

With each success, new problems are created; relatively speaking, experts know less today than they did five years ago.

The need for a no-drift spray gun prompted the Army Corps of Engineers in the New Orleans District to develop an instant on-

off trigger. William Wunderlich is the chief of the weed control section.

Old guns, Wunderlich explained, produce a fine mist when first triggered. They do not spray a coarse stream until the gun barrel is twisted. Fine spray droplets may drift on air currents and contaminate nearby crops or other desirable plants.

The new gun, which Wunderlich says costs only \$30.00 to assemble, produces a coarse stream when first turned on. It gives precise on-off control for operators.

No date was given for the next meeting. Future plans of the Hyacinth Control Society will be announced in *Weeds Trees and Turf*, the newly-elected president, Zeb Grant, director of operation and maintenance, Florida Flood Control District, reported.

Vermeer Builds Tree Mover

A completely automatic tree moving machine that digs, balls, transports, sets, and plants large trees has been introduced by the Vermeer Mfg. Co., Pella, Iowa.

The new Vermeer TM-700 Tree Mover makes it possible for nurserymen, landscape contractors, tree firms and general contractors to dig, move, and plant a large 7" or 8" diameter tree in very short time with no hand

John Bean Offers Catalogs

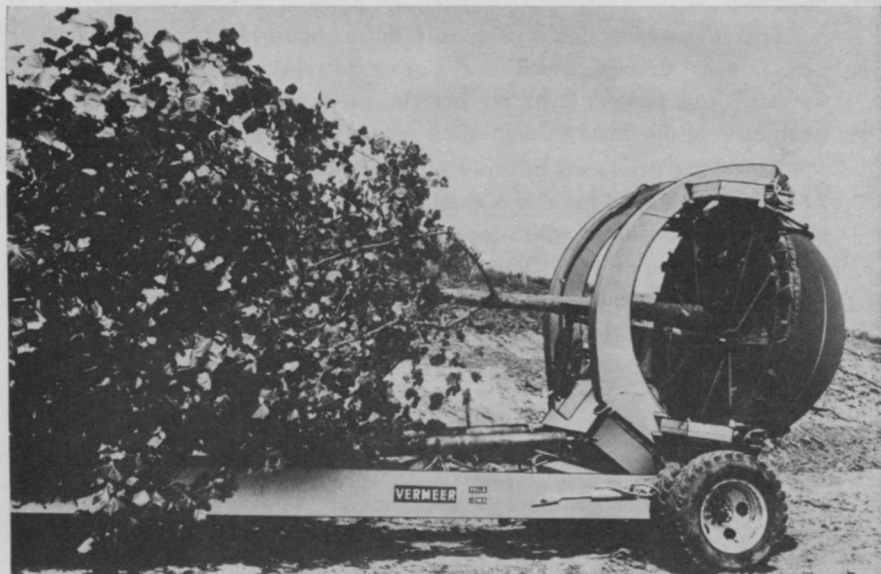
Free catalogs of John Bean power sprayers are now available from John Bean Division, FMC Corp., 1305 South Cedar St., Box 9490, Lansing, Mich. 48909. The new catalogs picture and report the complete line of John Bean sprayer models, attachments, and accessories.

labor, the company says.

The machine is a tree transporter equipped with two hydraulically operated "cutting cups" that dig the tree ball surrounding the tree in minutes. The machine then hydraulically lifts the tree and its ball out of the hole and lays it forward on the carrying trailer for transport. At the planting site, the tree is lifted upright and set into the receiving hole. The entire operation is controlled with a series of hydraulic levers.

According to Vermeer, this machine is highly suited to volume tree moving operations. The tree mover digs out the tree, and sets it into the balling stand with wrapping material in place, ready to receive the ball. Trees can then be lifted onto flatbed trucks for delivery to new planting area.

For additional information, literature, and demonstration, interested readers may write to Carl Boat, Sales Manager, Vermeer Mfg. Co., Pella, Iowa.



New on the market is this fully automatic tree moving machine which is equipped with huge cups that cut their way into the soil around and under the tree. The machine lifts the tree out and transports it to a new location where it sets tree into hole. Machine's "bite" is 7' in diameter, 40" deep.