

# Methods And Equipment Used By A Commercial Applicator

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Aqua Weed Control was formed to combat the ever increasing growth of aquatic weeds in the Southeastern United States, particularly in recreational lakes.

Through practical experience, it was soon evident that use of wheeled equipment and spray boats alone was not enough to cover the many varied conditions and weeds existing in larger areas. Thus it was that Aqua Weed Control, Inc. in 1967 has become associated with Orlando Helicopter Airways, Inc. of Orlando, Florida, one of the largest helicopter equipped companies in the U.S.

Our joint companies have the following equipment available to cover all types of aquatic weed infested areas. For example in water hyacinth control we offer spraying by air-boat and where growth prohibits boat use, applications by helicopter are used for rapid coverage of large inaccessible areas, such as water conservation areas and canals.

The advent of spraying by helicopter which offers an extremely maneuverable spraying or granular dispensing platform has greatly increased the economic range of aquatic weed control programs in saving of both manhours and materials.

The granular dispensing equipment has a high flow rate—up to 800 lbs. per minute with a broad calibration range—from 5 lbs. per acre to 1,000 lbs. per acre. The width of swath may be to 120 feet or narrow strips for small drainage ditches or beach fronts. The equipment is

precise, easy static calibration and a non-varying constant flow. Of utmost importance granular aquatic herbicides may be applied without fear of drift to nearby crops and odor-free pellets pay off in good public relations, a feature not always enjoyed by other formulations of herbicides.

Liquid applications are made with our Sikorsky HH-19G (Figure 1), which is one of the latest helicopter models with a capacity of 300 gallons per spray tank and 50 foot booms. The HH-19G has a cruising speed up to 100 knots and range of 400 miles to reach and work distant areas. At the present time these ships are operating in Florida, Louisiana and Virginia.

Our Chief Pilot, Mr. Jay Young has over 10,000 hours of commercial helicopter flying experience. An important feature which we offer to the prospective user of our services is the reduced cost of ferrying equipment. We have special trailers built to allow towing of helicopters to distant destinations. In addition to conventional pumps and spraying equipment used by our airboats and helicopters, we are testing new forms of equipment for the application of invert formulation for both helicopters and spray boats. Our service will apply only those products which have gained full federal approval and are so labeled for aquatic use. Our Company remains in constant contact throughout the Southeast with federal research stations and national chemical factory technical personnel to remain abreast of the latest techniques and materials available.



FIGURE 1.—THE SIKORSKY HH-19G.<sup>1</sup>

<sup>1</sup>The H-19 spray system has been tried and proven over the last two years on many thousands of acres of Florida citrus as well as extensive herbicide programs. The system is FAA Type Certificated and utilizes a hydraulically powered spray pump having a capacity of 100 GPM and up to 120 PSI. The spraying pressure can be regulated from 0 to 120 PSI by the pilot while in flight, and the system is complete with either re-circulating or mechanical agitation, electric shut-off valve, with switch on pilot's cyclic, and 300 gallon spray tank.

Fifty foot booms are normally installed, however, longer or shorter booms can be used when necessary. The spray system is designed so that it can be removed or installed in the helicopter within less than 30 minutes. There is also a splash shield and drains incorporated around the main spray tank so that chemicals are not spilled inside the main cabin. Hydraulic and spray boom pressure gauges are mounted on the pilot's instrument panel for ease of control.

