

in hyacinth." At our last meeting it was reported quote: "Hyacinth grown in clear water has little chemical value, grown in highly polluted water rates high in chemicals. It would pay to plant hyacinth at our sewage fluent disposal plants and harvest same for their chemical value, and to improve water pollution conditions."

It was most interesting to see the moving pictures of Mr. Wm. E. Wunderlich, and his experience of hyacinth control with a harvesting machine in Louisiana canals. I am certain this harvester would be ideal for large waters, like the St. Johns River, controlling excess acreage of hyacinth, that would correct our navigational problem.

For shallow lakes, which are many, most of which have boat launching ramps the use of a small harvester on a barge, similar to the Army Duck. This barge or boat hull built as large as could be moved on our highway, in comparison to the largest Highway Trucks, and possibly a spare barge for loading hyacinth, would do the same operation.

Hyacinth around the shoreline of any lake or stream is an asset and should not be destroyed. Valuable trees along the river banks in most parts have been uprooted falling to the ground, for the want of protecting the roots from washing waves, underwashing the roots. The St. Johns River has suffered great damage of Bank Erosion caused from the act of trying to ERADICATE HYACINTH.

The Act of Mechanical Harvesting Hyacinth will provide improvements over spraying with four benefits. (1) Prevent bank or shore erosion. (2) Aid in water purification, correcting stream pollution. (3) Promote fish propagation, with food and cover, and reducing water temperature in summer months. (4) Provide a source of farm aid with a mulch in our sandy unimproved soil.

The U. S. Corps of Engineers are responsible, or obligated only to keep navigable streams open for movements of boats. The Jacksonville Engineers contend hyacinth grow and breed so prolifically that it is impossible to control them if a nucleus is left along the banks, and spraying is cheaper than a mechanical operation.

It appears from the moving picture demonstration at our last meeting the Mechanical Harvester used by the New Orleans Engineers is more efficient and capable, doing a better job at less cost for a Hyacinth Control Program. The Florida Game & Fresh Water Fish Commission agree the presence of vegetation is necessary for the propagation of fish. The more vegetation (of a harvesting variety) we can grow in our streams, the more we will benefit from water pollution.

Floridians take a lot of pride in our homes, our lawns which are usually green, and require mowing once a week. We go to expense to preserve our forests from fires, and provide green fresh cut grass along our highways. We build gardens to attract out of state visitors then we permit and pay large sums for destroying our beautiful waterways, that are now becoming unclean, unsightly and unhealthy.

I urge you to use every effort to correct this method of destroying Nature.

Insurance Coverages Applicable to Hyacinth Control Programs

by

J. B. JOHNSON, JR.

Sales Representative Automobile and Casualty Lines

It is a pleasure to be here with you today and I am complimented to have been asked to participate in this program. I

hope that what I have to say on my assigned subject will be of benefit to you. Please bear in mind that I speak to you solely from an insurance point of view and that my chemical knowledge is limited to the latest do-it-yourself edition on how to get rid of crab grass. May I add that I hope I am more successful with this talk than with the crab grass.

The subject of Hyacinth Control is relatively new to the insurance industry and this is most likely brought about by the limited areas where this problem exists. For example, the Southern Department of Fireman's Fund has had only one request for coverage relating to this type of risk. Essentially, insurance is a formal social device for the substitution of certainty for uncertainty through the pooling of hazards, and since we do not have any experience with aquatic weed control, we cannot have a firm position.

Before we go into the coverage pertaining to Hyacinth Control, I must advise you that we are not a market for this type of business and it is necessary that any risk be submitted solely on its own merit. This is not to say that this is a prohibitive class of business but rather a class that must be engineered to determine the type of operation we are insuring. We want to know the chemical makeup of the herbicide, how it is applied—by hand, machine sprayer or airplane spraying. Is the area to be sprayed contiguous with fruit groves, vegetable gardens, cereal and grass type crops or bird sanctuaries.

Tests have shown that some commonly used herbicides markedly inhibit reproduction of Mallard ducks and other fowl and produce bad flavor scores lower than standard where the farmer instituted a weed control program.

Because of the unusual hazards involved in the use of herbicides, it will not be a simple matter to secure adequate insurance protection. Much will depend on you—experience in the care and use and willingness to cooperate with insurance company engineers.

The greater than usual hazards involve occupational disease to employees from toxic or injurious chemical gases or fumes:

General Liability—fire hazard—toxic or injurious chemical gases or fumes, food damage.

And now we shall discuss the coverages applicable to your society. There are several types of insurance but we classify our writings into two groups—first party coverage and third party coverage. Damage to your owned property by specified perils is first party whereas damage by you or as a result of your operations is third party. In your operation, third party liability is of the greatest importance; therefore, I want to emphasize the legal liability needs. A value can be established for property but not a law suit.

To provide you with the broadest form of protection, I recommend the Comprehensive Liability Policy. This policy is as the name implies—all comprehensive with certain coverages mandatory and others optional. The coverage is two fold—Bodily Injury and Property Damage.

COVERAGE A—BODILY INJURY LIABILITY

Payment on behalf of the insured of all sums which the insured shall become legally obligated to pay as damages because of bodily injury, sickness or disease, including death at any time resulting therefrom, sustained by any person, caused by accident (note accident) and arising out of the ownership, maintenance or use of premises and all operations.

COVERAGE B—PROPERTY DAMAGE LIABILITY

Payment on behalf of the insured of all sums which the insured shall become legally obligated to pay as damages because of injury to or destruction of property, including the loss of use thereof, caused by accident and arising out of the ownership, maintenance or use of premises and all operations.

This coverage applies while you are performing your oper-

ation, and excludes coverage after such operations have been completed.

Completed operations coverage is an option and is highly recommended as a part of your coverage.

COVERAGE A—BODILY INJURY LIABILITY

Payment on behalf of the insured of all sums which the insured shall become legally obligated to pay as damages because of bodily injury, sickness or disease, including death at any time resulting therefrom, sustained by any person, caused by accident and arising out of—operations, if the accident occurs after such operations have been completed or abandoned and occurs away from premises owned, rented or controlled by the named insured, provided, operations shall not be deemed incomplete because improperly or defectively performed or because further operations may be required pursuant to an agreement, provided further, the following shall not be deemed to be “operations” within the meaning of this paragraph: (1) pick-up or delivery, except from or onto a railroad car, (2) the maintenance of vehicles owned or used by or in behalf of the insured and, (3) the existence of tools, uninstalled equipment and abandoned or unused materials.

COVERAGE B—PROPERTY DAMAGE LIABILITY

Payment on behalf of the insured of all sums which the insured shall become legally obligated to pay as damages because of injury to or destruction of property, including the loss of use thereof, caused by accident and arising out of—operations, if the accident occurs after such operations have been completed or abandoned and occurs away from premises owned, rented or controlled by the named insured, provided, operations shall not be deemed incomplete because improperly or defectively performed or because further operations may be required pursuant to an agreement; provided further, the following shall not be deemed to be “operations” within the meaning of this paragraph: (1) pick-up or delivery, except from or onto a railroad car, (2) the maintenance of vehicles owned or used by or in behalf of the insured, and (3) the existence of tools, uninstalled equipment and abandoned or unused materials.

The coverage as outlined is on the basis of *accident*—by accident, we mean a sudden event, chance, unintended by the insured and identifiable in time and place.

Since in your operation, claims could occur after a lapse of time, it is recommended that you discuss *occurrence* with your agent. By occurrence, we mean an event, or continuous or repeated exposure to conditions, which unexpectedly cause injury during the policy period.

In the foregoing, we have outlined coverages applicable for your operations to protect you against third party claims. In other words, this protects you against losses involving the public. For your protection against losses due to accidents involving your employees, I recommend Workmen's Compensation and Employer's Liability insurance to cover all employees. The limits are statutory. The contract provides compensation benefits as specified by the Florida Law as well as liability protection for you as the employer.

I have not dealt comprehensively with all lines of coverage, but I have emphasized the liability as this could prove to be the most costly where claims and losses are concerned. Consideration should, of course, be given to automobile coverages, real and personal property coverages and an adequate accident and health program. At the conclusion, I shall be glad to discuss these additional coverages.

The ultimate goal of surveying and programming insurance for your society is to protect the assets and credit of the society against losses and claims resulting from its operations,

to eliminate or reduce known hazards, and to see that you are not exposed to loss or claim which could have been readily and adequately insured.

I would like to emphasize the importance of selecting a professional agent to advise and assist you with coverages. By using this service, you will have the benefit of a complete survey for your exposures with needed recommendations of coverage. And do give your insurance counselor the time, at least quarterly, to discuss any phases of your program which need attention.

Time—if any

We have a very few minutes left in the time allotted me. I wonder if there are any questions you would like to ask concerning this discussion.

If not—

I thank you for your kind attention.

Crop Damage: A Hazard of Herbicide Use

by

DR. J. R. ORSENIGO

University of Florida

Everglades Experiment Station

Pesticides serve most areas of American Life with benefits ranging from the aesthetic to the economic. Herbicides, chemical tools for weed control, have a vital role in agriculture, domestic and urban comfort, industry and public utilities, public health, recreation, and water control and navigation.

It is important to distinguish between a chemical's *toxicity*, the capacity of injury, and a chemical's *hazard*, the risk or probability of injury. Herbicides are intended to be toxic to vegetation. The use of these chemicals relies on selectivity based on physiological, mechanical and/or timing principles which minimize hazard to the treated crop or to nearby vegetation in non-crop applications. The degree of inherent toxicity of an herbicide to vegetation depends on the specific chemical—plant situation. Herbicide hazard is related directly to the selection and manner of using chemicals in a particular situation. What are the hazards to near-by crops when herbicides are used for control of aquatic vegetation?

AGRICULTURAL CROP HAZARDS

The most common and most important hazard concerns visible damage in which crop appearance, quality and yield are affected. Misuse of herbicides can be especially hazardous in vegetable crop areas. The most toxic and hazardous chemical in general use, 2,4-dichlorophenoxyacetic acid (2,4-D), will be used as an example. The potency of 2,4-D is both well documented and well known. Plant response to its inherent toxicity depends on the particular species. Members of certain families, i.e., the *Malvaceae* and *Solanaceae*, are highly susceptible. Injury is most severe during periods of good growth, especially in young plants.

Damage to susceptible crops is first characterized by epinasty and/or deformities of expanding and new leaves. Later, new foliage may develop normally. Plants without visible symptoms, and those apparently recovered, may have sustained damage not manifested until harvest when losses in yield and quality are detected. After exposure, snapbean or tomato may not have clear, definitive symptoms of 2,4-D injury or may develop new, apparently normal foliage and may experience normal flowering and fruit set. But, at harvest, the bean pods may be deformed and lack seed; the tomato fruit may be misshapen and lack well-developed locules or