

# Pesticide Laws and the Golf Course

By William H. Bengeyfield, Western Director, USGA GREEN SECTION

In her highly controversial 1962 best seller, "Silent Spring", authoress Rachel Carson vigorously stirred an already simmering pot in the agricultural community. Miss Carson, who died of cancer last spring, was a brilliant and effective writer. Her last book influenced a considerable sector of the American public in opposing and pointing out the perils of pesticides and other chemicals used in modern agriculture. We, in golf course maintenance, are a part of agriculture and we will inevitably be affected by the chain of events developing in this long bubbling controversy. We would do well to be alert to the changing temperatures.

## The Crusade

Every crusade of this type, i.e. forced controls through legislation, follows a certain pattern or progression toward its goal. First, there is an emotional appeal to the general public. Newspaper stories and magazine articles on the chemical poisoning of children, pets, wildlife, etc. is high voltage material. It is big news because it is unusual. Deaths caused by accidents in the home or automobile are not quite as "big" because they are not quite unusual (though there are more of them).

A second impetus in the crusade comes from groups that, in addition to believing "it is in the public interest," may have their own interest at heart as well. For example, it would not hurt your business as a commercial applicator if there was legislation requiring everyone using agricultural chemicals to be licensed. The home owner would have to call a local spray man to kill a nest of ants or control

the black spot on his roses. Similarly, the golf course superintendent would either have to be licensed (probably for an annual fee) or hire someone else to spray fungicides, insecticides or herbicides for him. It's hard to imagine how one would operate a golf course under these conditions.

To illustrate the degree to which some thinking has reached, one leading and influential commercial applicator has publicly proposed legislating water soluble arsenic materials completely off the market!

The third step of the crusade is gaining legislative action. It is on this plateau that most states stand today. Laws have been proposed on the local, state and federal level that, if passed, would place a tremendous burden on the user of chemicals and might well cause harm not only to agriculture but to public health as well. Virtually all state legislatures are considering some type of increased control over the sale and application of agricultural chemicals. In one extreme case, one state has considered bringing chemical fertilizers under its hand. We in turf management have an interest and must be directly concerned with such laws.

No reasonable person would oppose sound legislation in agricultural chemical control when and if a real need exists. But opposition is required when pressure groups and government agencies take arbitrary and discriminatory action. Parke C. Brinkley, of the National Agricultural Chemical Association, stated the following before the Ribicoff Committee in Washington:

"To deny a grower the use of a compound which he has used safely and effectively and force him to use

another at a higher price would place a cost burden on him and the ultimate consumer. Further, who would say where the line would be drawn to separate 'low' (toxicity) and 'high' (toxicity) materials?"

At the federal level, Congress has resisted pressure groups and has not taken untoward action. It is reviewing the entire problem with cool consideration. The same cannot be said for some states. California is one of them and an example for all to see, study and heed.

### **Sodium Arsenite Regulated**

As early as January 1, 1962 (Miss Carson's book did not appear until October, 1962) the California Department of Agriculture placed sodium arsenite under regulation as an "injurious material." This category is reserved for "any material (the Director of Agriculture) finds and determines to be injurious to persons, animals, or crops other than the pest or vegetation it is intended to destroy." It would seem almost any agricultural chemical is eligible. The sodium arsenite restriction followed a public hearing in Sacramento in May, 1961.

In order to use sodium arsenite in any phase of California agriculture (including the killing of weeds under a proposed asphalt pavement), the user must now obtain permission from his County Agricultural Commissioner. (The Commissioner is appointed to this office, not elected.) He does have certain guide lines he must follow before issuing a permit. Among these is the determination that the property to be sprayed must have "a good and sufficient fence or otherwise made inaccessible to grazing animals, pets and children."

When the California Department of Agriculture made its ruling on sodium arsenite, it either overlooked or ig-

nored the fact that this chemical has been safely used on golf courses in the state and throughout the nation for the past 40 years. As far as the USGA Green Section knows, it has never been responsible for a death when so used. Nevertheless, the Director of Agriculture determined it "injurious" and, therefore, under control. In treating fairway weeds, cost of control went from approximately \$1 per acre for sodium arsenite to over \$100 an acre when pre-emergence materials are substituted (if the golf course was not fenced). Because of the ruling, several California golf courses have been denied the use of sodium arsenite for weed control.

When the Western Green Section Office learned of the new state regulation, a letter of inquiry was directed to H.E. Spires, Chief, Field Crops and Agricultural Chemicals for the California Department of Agriculture. His reply follows:

"Sodium arsenite was placed under regulation as an injurious material effective January 1, 1962, in view of its history over the years as the causative factor in accidental deaths. Very frequently children were poisoned by exposure to this material, as were grazing animals.

"The problem of complying with the regulations pertaining to injurious materials where applied to golf course fairways was recently brought to our attention for the first time by the Greens Committee of a golf course in San Diego County.

"Under the provisions of the Agricultural Code, permits to use sodium arsenite are issued by the County Agricultural Commissioner. San Diego County Agricultural Commissioner informed us that he learned that the fairways to be treated on this golf course are accessible to children who

play in the area and to horses on adjacent bridle paths. This caused him to be of the opinion that the proposed usage did not conform to the requirements of the regulations and a permit was not in order.

"If a golf course is fenced or the treated area is not accessible to children, pets or grazing animals, the applicant would be eligible for a permit insofar as this provision of the regulation is concerned.

"You have the privilege of petitioning the Director of Agriculture to hold a hearing to amend the regulations; however, it appears that persons contemplating the use of sodium arsenite would prefer to conform to the existing requirements. The conditions of the permit are only those which careful users would observe to prevent accidents and the subsequent liability that would be incurred."

There are a number of points in Mr. Spires letter on which I would like to comment; accidental deaths is one. No one could possibly defend an accidental death, whether it be man or child; yet it is a fact we must all live with from the day we are born. Furthermore, it seems most unlikely that any federal or state government will ever legislate "accidental deaths" out of existence. This would be asking too much.

Becoming overly and emotionally concerned with accidental deaths of children due to agricultural chemicals is easy to do. However, there are more accidental deaths of children due to swallowing aspirin and other medicine chest items than from all agricultural chemicals. Even bee stings have a high accidental death rate among children. It is a fact that the chemical tools of agriculture have a safer accident and fatality record than mechanical tools; yet we do not hear of legislation out-

lawing or regulating the use of tractors or harvesters. But that day may also come.

When one looks at the national health picture, it is difficult to detect any catastrophic trend that may be attributed to the wide use of pesticides in agriculture. The opposite is true. A child born in 1940 had an average life expectancy of 62.9 years. Those born in 1959 have life expectancy of 69.7 years.

### **The Privilege To Petition**

Mr. Spires advises that we have "the privilege of petitioning the Director of Agriculture to hold a hearing to amend the regulations." Unfortunately, the golf course superintendent or any turfgrass association for that matter lacks the funds for a legal or lobbying staff to follow through the legalistic maze. And more regulations are on the way, for Californians at least. A University weed specialist, writing in "California Turfgrass Culture," (October 1963) commends the sodium arsenite ruling and advises "we should consider substitutes for lead and calcium arsenate in crabgrass control in turf." Apparently, they are next.

### **"There Ought To Be A Law"**

It's typically American. When someone or some group becomes stirred up, their first thought is, "there ought to be a law against that." And the average legislator in any State House seems eager to write a new law, usually with his name attached. Perhaps we have reached the point in agriculture where there are enough laws already and they cover most situations. They may need enforcement but not through growing governmental controls.

Anyone interested in golf course maintenance has a stake in the problem of agricultural chemical controls.

The outcome will directly affect you and your program. As best you can, be alert to pending legislation. Be aware of pressure groups. Resolve to handle all chemicals carefully and

condemn those who do not. Through intelligent cooperation with all concerned, a solution—short of rigid and largely unnecessary new laws—will be found.

## Development, Labeling, Distribution of Turfgrass Pesticide Chemicals\*

By Dr. J. Everett Bussart, Chief Entomologist, Velsicol Chemical Corporation, Chicago, Illinois

I wonder what thoughts the title of this paper brings to each of you.

To business executives it probably creates visions of new uses for chemical products and the economic implications involved. To salesmen it may raise expectations for new lines of persuasion to complement those that may have lost their freshness. To technologists it could recall memories of endless laboratory and field testing. To theoretical scientists it may give hopes of a new "break-through" in the scientific field. To the consumer, it may give a feeling of satisfaction to know a new potent chemical is available. Or, it also may bring confusion as to availability and proper use for this material. At any rate, it is a subject that is much broader than the simple title may imply.

When invited to present this topic, I thought of the extremely broad subject and could hardly visualize discussing this topic in 30 minutes. Then I considered the part Velsicol Chemical Corporation has had in the turfgrass chemical control program. As you know, chlordane and heptachlor have wide acceptance of usage in the various insect control programs. Also, chlordane has gained acceptance as a pre-emergence application for crab-

grass control. Just at this time we are evaluating other chemicals for use in the Turfgrass Pesticide Chemical Control Programs such as a fungicide for the control of various diseases of turf and also some selective herbicides. Hence, with products now being used as well as others being evaluated in the Turfgrass Control Programs, I believe you can realize we have faced this topic various times and I speak from experiences in the various steps necessary in placing a new product on the market.

First, let us look at the subject in relation to the broader aspects of the producing and consuming public with which a pesticide is ultimately concerned. Turfgrass pesticides must be used under a variety of soils and climate and management practices that are constantly changing. As a result, the circumstances under which a turfgrass pesticide is used are never the same from state to state or even from one town to another and even within a given area. The control of the pests has to be attempted under these diverse conditions.

Furthermore, living things have great powers to adapt to environmental change and the agricultural environment is changing both naturally and through the efforts of man. Thus,

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