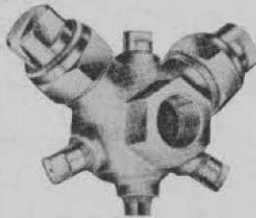


# Jet Nozzles Prove Effective In Insecticides Experiment

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**E**FFECTIVENESS of boom sprayers and large fertilizer spreaders in applying insecticides for grub control has been well established. But little was known regarding the efficiency of a cluster of jet nozzles attached to a low pressure sprayer. Effective results obtained with this type of sprayer, it was agreed, would simplify the application of insecticides in turf areas.



Jet nozzle head used instead of a boom sprayer in applying insecticides.

In order to obtain information on this sprayer's effectiveness, an experiment was made on a golf course near Madison, Ohio in September, 1954. In this test the cluster of jet nozzles, which replaced the boom on the sprayer, laid down a band of insecticides approximately 32-ft. in width.

Emulsifiable concentrates of dieldrin, aldrin, heptachlor, endrin and isodrin were applied at the rate of 3-lbs. of the actual toxicant per acre to plots varying in size from one to two acres. Two treated bands 32-ft in width, separated by an untreated buffer strip 32 feet in width, were laid down in ten of the fairways. In this way each of the five treatments was replicated four times. The sprayer was adjusted to deliver 15½-gals. of the spray material per acre.

The effectiveness of the various treatments was determined by taking population counts in the center of the sprayed band and at 15 ft. to the right and left of the center, or near the margin of the treated area. Four counts of this type were taken at random in each sprayed strip. Counts 30-ft. from center were taken in the untreated buffer portions of the fairway for comparison with those in the treated areas. The following table shows the results obtained when the plots were sampled 8 months and 12 months after application.

## Effectiveness of a Cluster of Jet Nozzles Used in Applying Insecticides to Turf for Japanese Grub Control.

Average Population per Square Foot

Toxicant	May 19-25, 1955 <sup>1</sup>				September 19-29, 1955 <sup>2</sup>					
	Left side		Right side		Left side			Right side		
	Un-treated	Treated	Un-treated	Treated	Un-treated	Un-treated	Treated	Un-treated	Un-treated	
	30 ft. from center	15 ft. from center	15 ft. from center	30 ft. from center	30 ft. from center	15 ft. from center	15 ft. from center	15 ft. from center	30 ft. from center	
Dieldrin	12.3	2.4	7.8	.6	13.5	17.1	.0	.0	.0	14.7
Aldrin	10.8	5.4	7.5	3.9	11.7	21.9	2.4	.9	.3	18.0
Heptachlor	20.1	2.7	3.3	4.2	17.4	17.7	.0	.3	.3	20.7
Endrin	11.4	1.2	3.9	1.5	8.4	20.4	.0	1.5	.0	18.6
Isodrin	15.6	3.9	3.0	4.8	9.9	12.9	1.2	.3	1.5	23.7

<sup>1</sup>May record was taken on larvae that were in the soil when applications were made.

<sup>2</sup>September record was taken on a new generation of larvae and showed residual effect of the treatment.

## Wins the Tournament But Not the Check with 289 in Wisconsin Open



Tommy Veech (left) of Milwaukee shot a 289 to win the Wisconsin Open, held in July at Merrill Hills CC, Waukesha. But Veech, who turned pro in March, was ineligible to receive prize money since his PGA probationary period had two months to run. Manuel de la Torre (center) and Boots Porterfield (right), low scoring eligible pros with 292's, split top prize money. They're getting their checks from Walter Moynihan of Miller Brewing Co., co-sponsor of the Open. Veech, now on the staff of Burke Golf Equipment Corp., is shown accepting the winner's trophy from Frank McNamara of Merrill Hills.

It is evident from the data that this type of application is effective in reducing the grub population throughout the width of the insecticide band. The apparent high population in the treated areas, found in the May survey, is approximately that which can be expected when the time of application is taken into consideration. In the September survey, which was made 12 months after application, it can be seen that the average population was very materially reduced in all treatments. It can be assumed that these or still lower levels of population will be maintained in these treated areas for several years if they behave in the same manner as they have in other tests elsewhere in the State.

These results indicate that this method of applying insecticides for grub control can be used effectively in turf areas where it is impracticable to use a sprayer with a boom or a large fertilizer spreader.

### Manpower, Water Savings Effected Through New Presidio Sprinkling System

Leigh Hulbert, supt. of the Presidio GC, San Francisco and Ken Stohl of the George M. Philpott Co., Inc., Sacramento, have collaborated in designing what is said to be a new system for watering courses. Recently installed at the Presidio, it operates on an alternating basis and early results show a big savings in manpower and complete utilization of water. The system also enables Hulbert to conserve on hose and continue to operate with a 550 gpm pump which previously had been overburdened in supplying water

for the entire 18-hole layout.

The Presidio system is blocked out in three sections with main lines leading to each from the pump house. Flow of water into the main lines is regulated by clock valves. Fairways and greens on the 1st, 4th, 5th, 8th, 12th and 13th holes, for example, make up one section, and the remaining 12 holes are divided into two sections. When section one is scheduled to be watered it is only necessary to set up sprinklers on six holes in the evening and pre-set the pump and valves to start operating, say at midnight. Hulbert has his system set up to rotate watering of two holes simultaneously in 15-minute cycles which continue for whatever time the clock is set.

Removal of sprinklers in the morning and replacement in a different section that evening enables the Presidio supt. to alternate watering so that the entire course can be covered in three days. Simple adjustment of valves allows the three-section rotation to be changed any time it is considered feasible. During the daytime all valves are opened to permit hand watering of any part of the course.

Early estimates indicate that savings in manpower and water will soon pay for the cost of changing over to the new system.

### Golf All the Way

Nobody who plays or dines at the Rio Hondo CC, Downey, Calif., is allowed to get away from the golfing atmosphere. The club's menu is printed inside a 9-in. diameter reproduction of a golf ball and match book covers also carry out the golf theme.