

The Japanese Beetle in Indiana

JAMES A. CLARK, State Entomologist's Office

The first Japanese beetle (*Popillia japonica*) reported in Indiana was found in Indianapolis in 1933. The following year, 1934, the Indiana Department of Conservation, Division of Entomology, in cooperation with the United States Department of Agriculture inaugurated a trapping program designed to locate and estimate range of the beetle. Seventeen beetles were found and thirty acres were treated with arsenate of lead to prevent establishment of the beetle in the area. In 1935 the trapping program was extended to other localities of Indiana where the Japanese beetle might possibly be introduced by transportation from New Jersey, New York and Pennsylvania, where infestations were established after introduction of the beetle in 1916. Fifty-nine beetles were taken in Indianapolis in adjacent area to the 1934 treated area, and fifty acres were treated. In 1936 beetles were found in Fort Wayne and South Bend; 1937 in Logansport; 1938 in Elkhart; 1939 in Bluffton, Muncie, Richmond, Warsaw and Whiting; 1940 in New Castle; 1941 in Hammond and Terre Haute; 1948 in Gary; 1950 in Jeffersonville.

A heavy infestation occurred in Richmond in 1942 when a total of five hundred and fifty-eight beetles were taken in traps. This localized infestation was treated and the following year only seventeen beetles were taken. This area was likewise treated and only four beetles were located. Following the treatment in that year no beetles were found by trapping. This example illustrates the fact that control methods are worth-while and effective when properly used to eliminate localized infestations. All beetles found prior to 1951 were localized, and controls used had prevented establishment of the Japanese beetle in Indiana (Table 1).

In 1951 an infestation was found at the southern city limits of South Bend. Over one thousand acres of suburban district is included in the area. Erskine Park Golf Course is the apparent center of the infestation and beetles were most numerous in the northwest corner of the course. One hundred eight-six acres of the most heavily infested area were treated with D.D.T. as a soil treatment. The area was also mist blown to kill as many adults as possible. During the flight period of 1952 an intensive mist-blowing program is planned to prevent as much spread as possible.

Arsenate of lead was used for soil treating until 1948; since that time D.D.T. has been used. D.D.T. has greatly reduced both cost and time needed to apply soil treatment. Both materials give four to five years residual deposit in average soils. To date one thousand seven hundred four acres have been sprayed to control the two thousand eight hundred forty-three beetles taken in traps.

Considering the reproductive potential and the number of beetles introduced into Indiana, this program has been very successful. It is

B.F.—Beetles found 2843
A.T.—Acres treated 1704

TABLE I. Japanese Beetle Data.

	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951																		
INDIANA	BFA	TBFA																																		
Indianapolis	17	30	59	50	30	20	12	1	10	17	76	99	164	102	21	30	6	32	20	20	23	2	13	6	11	6	9	3	33	37	23	21	18			
Ft. Wayne			5	25	18	16	20	18	105	22	52	16	5	9	4	8	96	71								2	7	19	12	240	86	214	81			
South Bend			2	45	50	8	24		12	19																					22	16	*	186		
Logansport			1	9	15	98	38	13	10	5	1	9	6																							
Elkhart				2	5	16	12	3	15	6	9	35	38	16	19	41	15	5	7	1																
East Chicago					1																															
Bluffton																																				
Muncie																																				
Richmond								1	7	13	4	13	558	19	17	33	4	1	2																	
Warsaw								2	59	31	2																									
Whiting									21	17	4																									
New Castle									2	4																										
Hammond									3	9	8	24	33	54	56	2	1																			
Terre Haute									18	32																										
Gary																																				
Jeffersonville																																				
Total	17	30	59	50	37	45	74	67	150	74	293	176	389	207	61	106	591	25	90	96	217	192	21	19	59	21	18	13	37	24	67	64	378	173	285	320

* Beetles numerous

a foregone conclusion that the yearly advance of the heavy infestation in the eastern states will some day cross our state boundaries. Until that time eradication of all known infestations will save the state many times the cost of control.