

Insects Affecting Potatoes

By
J. A. MUNRO¹
F. GRAY BUTCHER²
KENNETH REDMAN³

A SURVEY conducted by the Department of Agricultural Entomology on the more important insect pests of potatoes in the major potato growing areas, shows rather interesting changes in the relative percentage of the species from year to year as follows:

Year	Potato flea-beetle Percent	Leaf-hoppers Percent	Colorado potato beetle Percent
1940	35.7	44.6	2.1
1941	75.7	2.8	12.1
1942	62.6	9.6	22.2
1943	51.9	21.3	18.7
1944	37.2	43.1	10.0

Reference to the above tabulation shows the leafhopper population to fluctuate the greatest. The leafhoppers included the two species, *Macrostelus divisa* and *Empoasca fabae*. The changing populations indicate why spraying or dusting formulae must be modified at times to give the necessary emphasis to controlling the predominating species.

Messrs. M. M. Regan, A. R. Johnson, and Fred A. Clarenbach, Agricultural Economists of the Bureau of Agricultural Economics, United States Department of Agriculture, have just published Circular No. 721 of the United States Department of Agriculture on "The Farm Real Estate Situation, 1943-44." This publication may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., for 10 cents.

The bulletin contains a table showing the index numbers of estimated value per acre by states and geographic divisions for the period 1912 to 1944, inclusive. The indexes used are based upon the period 1912-14 as being equal to 100. The index numbers of estimated value per acre are as follows for North Dakota: 1912, 97; 1913, 100; 1914, 103; 1915, 103; 1916, 112; 1917, 118; 1918, 124; 1919, 130; 1920, 145; 1921, 141; 1922, 136; 1923, 128; 1924, 114; 1925, 109; 1926, 105; 1927, 100; 1928, 99; 1929, 98; 1930, 95; 1931, 85; 1932, 73; 1933, 66; 1934, 68; 1935, 67; 1936, 68; 1937, 67; 1938, 64; 1939, 57; 1940, 52; 1941,

¹Entomologist

²Extension Entomologist

³Acting Assistant Entomologist

52; 1942, 55; 1943, 58; 1944, 70. The increase from 1943 to 1944 was 21 percent.

This publication also gives us the estimated number of farms changing ownership by various methods per 1,000 of all farms for the period 1940 to 1944. The following set of short tables summarize the voluntary sales and trends on the one hand and the forced sales and related defaults on the other hand:

Voluntary Sales and Trades

Number per 1,000 of all farms in North Dakota

1940	26.3
1941	39.0
1942	58.9
1943	57.2
1944	67.9

These figures include contracts to purchase but not options.

The total voluntary sales and trades for the United States were as follows:

1940	30.2
1941	34.1
1942	41.7
1943	44.7
1944	53.1

The total forced sales and related defaults for the United States as a whole were as follows:

1940	15.9
1941	13.9
1942	9.3
1943	6.6
1944	4.9

In each case these represent numbers per thousand of all farms.

Forced Sales and Related Defaults per 1,000 farms in North Dakota

	Delinquent Taxes	Foreclosure of Mortgages, Bankruptcy, etc.	Total
1940	16.3	33.1	49.4
1941	22.5	27.0	49.5
1942	18.9	23.5	42.4
1943	12.6	16.7	29.3
1944	12.7	8.0	20.7

How Farms Have Changed Hands Expressed in Numbers per 1,000 of all Farms in North Dakota

	Inheritance and gift	Administrators' and executors' sales	Miscellaneous and unclassified	Total all classes
1940	6.2	5.0	1.4	88.3
1941	3.9	4.2	0.8	97.4
1942	3.1	5.4	1.5	111.3
1943	2.7	6.2	1.6	97.0
1944	4.0	8.8	1.1	102.5