

ENTOMOLOGY

Chairman: M. CURTIS WILSON, Purdue University
PAUL T. ULMAN, Noblesville, was elected chairman for 1954

ABSTRACT

Is the potato flea beetle becoming resistant to DDT? GEORGE E. GOULD, Purdue University, and L. L. MCCROSKY, Richard Gumz Farms, North Judson.—A large population of flea beetles and extensive foliage injury was observed during 1951 in potato fields receiving eight to twelve applications of the standard DDT spray. In the early part of 1952 season potato fields were checked carefully and again applications of DDT applied at weekly intervals failed to check the beetles. Many commercial growers substituted one of the new organic phosphate compounds in order to clean out the beetles. During 1953 experimental plots were laid out in a commercial field of potatoes grown on a muck (peat) soil to determine if flea beetles could be checked by various strengths of DDT and by other insecticides. The efficiency of the various treatments were determined by counts of foliage injury after the third and sixth applications. Dieldrin at $\frac{3}{4}$ pounds actual chemical per acre per application gave the best protection, followed by heptachlor at the same dosage and DDT at 2 pounds per acre. The schedule of spraying followed by some growers of using DDT at $1\frac{1}{4}$ pounds for applications 1, 2, 4 and 5 and the phosphate insecticide on 3 and 6 had the highest injury count, as apparently the latter material gave a quick but temporary relief from flea beetle feeding.