

## SECTION I. - INTRODUCTION.

### Soil Fertility and Insect Abundance.

Many workers have speculated on the relation between soil fertility, especially nitrogen, phosphorus and potassium levels and the abundance of certain plant-feeding insects, but the volume of research on this subject is surprisingly small.

It has a practical as well as a theoretical interest. For instance, Andrews (1923) showed that the relative availability of phosphate and potash to the tea bush is an important factor in determining local variations in the population of the mosquito bug (Helopeltis theivora Waterh.). It may, therefore, prove possible to apply fertilisers to a crop which not only increase its growth but reduce the numbers of some pest to a sub-economic level. The inhibiting effect of nitrogenous fertilisers on the reproduction of Heliothrips haemorrhoidalis Bouché mentioned below illustrates the possibilities.

The same principle applied in reverse was used at one stage in the campaign against Prickly Pear (Opuntia spp.). It was found that the insect (Cactoblastis cactorum Berg) introduced to control this weed refused to feed on nitrogen-deficient plants ("yellow pear") but could be induced to attack them if the plants were given a moderate dose of nitrogenous fertiliser (Dodd 1936).