ENTOMOLOGY

Chairman: A. M. VANCE, Purdue University

Dr. W. P. Allyn, Indiana State Teachers College was elected chairman of the section for 1948.

ABSTRACTS

The entomologist in pest control. LEE C. TRUMAN, Arab Pest Control Co., Indianapolis.—Several years ago Purdue University began conducting conferences which were designed purely as training sessions for men in the field of commercial pest control. The response of the industry has been entirely beyond expectations. These training conferences have since been started at several Universities and State Colleges over the country. The pest control industry and those who employ firms in the pest control industry are generally looking for individuals who can apply a technical knowledge of insects to the practical application of control measures. The well trained and versatile entomologist who chooses to go into commercial pest control work has before him an almost unlimited field for expansion.

Problems and observations of a Kansas pest control operator. H. R. SHUYLER, Purdue University.—The author discussed a number of difficult problems in pest control which were encountered during the past year in and near Wichita, Kansas. Problems of a difficult nature and those which arise infrequently require study, effort, and observation over and above that given the everyday job.

Entomology at Purdue University. J. J. DAVIS, Purdue University. —The status of entomology at Purdue University with special reference to the new four year curriculum for commercial pest control operators was explained. A brief report on the research activities of the Experiment Station and Extension Division was given.

The relation of particle size to the toxicity of DDT dusts. R. P. MULLETT, Purdue University.—Various particle sizes of DDT mixed with the same particle size of pyrophyllite, at a 2 per cent dilution, were tested against the adult Mexican bean beetle for a comparison of the toxicity of these various dusts. The best results were obtained when the particle size was 44-53 microns.

A new sticker for sprays and dusts. B. ELWOOD MONTGOMERY, Purdue University.—During the past summer tests of a sticker for sprays and dusts have been carried on in experimental plots at Lafayette and in the spray schedule of several growers in the state. This sticker has shown great power of holding the residue resulting from dusts applied when leaves are wet with dew or from sprays. No injury from the material has been noted, although injury to potatoes from

copper dust was increased slightly by the addition of the sticker. The sticker was compatible with all dusts and sprays tested. Entomological tests of the residue were very limited but a lead arsenate spray containing the sticker showed considerable toxicity to tomato hornworms even after considerable rainfall while the same spray without the sticker had very little toxicity.

Preliminary report on the relative attractiveness of different wave lengths of radiant energy to corn borer moths. H. O. DEAY and J. G. TAYLOR, Purdue University.—Five sources of radiant energy were tested in 1947 to determine their relative efficiency in attracting corn borer moths to traps. Four of these sources radiated their maximum energy at one of the following wave lengths: 2537 Angstrom units (germicidal lamp), 3654 (ultra violet), 4357 (blue), and 5250 (green). The other source was a mercury vapor lamp radiating principally at the mercury lines of 3131, 3654, 4047, 4358, 5461, and 5780 A. The percentages of first generation moths caught by each source of radiation were: green 2.9, blue 15.4, germicidal 15.4, mercury vapor 17.6, and ultra violet 48.5. Sixty-seven per cent of the total captures were females. A new type of light trap was designed and built.

Sulfa-drugs for the control of American Foulbrood. B. ELWOOD MONTGOMERY, Purdue University.—American Foulbrood is a bacterial disease of the brood of honeybees, for which no control has been known previously. Experiments have shown that small amounts of some of the sulfa drugs are effective in eliminating foulbrood infection from colonies. However, some of the sulfa compounds including sulfathiazole which is the form most readily available to beekeepers, are quite toxic if fed in too large amounts. Present recommendations are for the use of sulfa-drugs for preventive measures only. Three feedings containing one-half gram each of sulfathiazole should be given at ten day intervals during the spring brood rearing season.