

Damage Reduction of \$4 Billion Possible

Remarkably low residues from systemics possible following early use on food crops



Mid-morning break finds C. P. Clausen (left), University of California, Riverside, in discussion with H. M. Armitage, California Department of Agriculture, and D. W. Dean, USDA, San Francisco. Dr. Clausen, an invitational speaker at the meeting, says biological control will make steady progress in contrast to recent sharp advances chalked up by chemical methods

LOS ANGELES.—Entomologists took an end-of-100-years look at professional entomology (first state entomologist was appointed in 1854) here Dec. 7 to 10, decided they have made marked strides against man's foremost enemy, insects, and look for even more progress in the coming years. A definite possibility, according to George Decker, Illinois Natural History Survey: reduction of insect damage to crops and animals by 50%, equivalent to increasing agricultural production \$2 to \$4 billion annually, by using present knowledge. These and other aspects of the entomologists' battle against insect pests were brought out at the first annual meeting of the Entomological Society of America (Society was formed last year through combination of American Association of Economic Entomologists—1889 to 1952—and Entomological Society of America—1906 to 1952).

The country's present insect tax equals the entire agricultural output of the five New England states plus New York, New Jersey, and Pennsylvania. Put another way, it equals the annual appropriations by the Federal Government for Agriculture, Commerce, Interior, Treasury, Post Office, and Labor Departments combined, Decker says. Meanwhile, here are some of the many problems being worked on:

Systemic Insecticides. The possi-

are extremely slight in citrus and deciduous fruits, walnuts, potatoes, and cotton. Tests were made two to four weeks after commercial rates of field application.

Some specific residues Metcalf reports: walnuts, 0.011 parts per million (after 30 days); potatoes, 0.052 parts per million (after 33 days); pears, 0.05 parts per million (after about 30 days).

DDT Resistance. Insect resistance to chlorinated hydrocarbons continues to cause concern. Ralph March, University of California, Riverside, says one of the most frequent questions he gets is: "Will flies become susceptible again if DDT and similar insecticides are temporarily abandoned?" His answer: an emphatic no.

Describing experiments which have been under way since 1948 to determine how long resistance remains, March notes Riverside workers find DDT resistance remains about two years, after which it begins to decline. However, a nucleus of susceptible flies remains even after five years, and this nucleus would serve as a resistant source if DDT were used again. With lindane, there is virtually no decrease in resistance over a four-year period; similar results are obtained with dieldrin.

As to future prospects for fly control, March says he is most optimistic over results from mixtures of chlorthion and diazinon. Commercial control is obtained for periods of four to eight weeks, and the fly picture looks better than it has for the past few years.

"To Ernest N. Cory in recognition of long and meritorious service as secretary of the American Association of Economic Entomologists" reads the inscription on the watch being presented to him by Charles E. Palm (left), society president. A similar watch was presented in absentia to L. M. Peairs for his service in the field of entomology

