SCIENCE NEWS

Science Service, Washington, D. C.

TOTAL WAR AGAINST INSECT PESTS

TOTAL war against man's insect enemies, with the avowed object of total extermination instead of mere "control," was offered as a possible and practicable program before the New York meeting of the American Association of Economic Entomologists, in the address of its retiring president, Professor E. O. Essig, of the University of California. Man has unintentionally wiped out a number of animal species, like the dodo and the passenger pigeon; there seems to be no good reason why he should not be able to repeat the performance intentionally with other species he finds obnoxious, if he will only plan carefully enough and follow through with sufficiently long and intensive campaigns of eradication.

Success in at least one such campaign was cited by Professor Essig. About twenty years ago the Mediterranean fruit fly, a terrible menace to certain fruit and vegetable crops, especially the citrus fruits, was accidentally introduced into Florida. Drastic measures were necessary, but by thorough cooperation among federal, state and private interests the last traces of the fly infestation were wiped out in a short time.

Similar success appears to be in sight in campaigns now being waged against other insect pests. Among these, Professor Essig mentioned the Mexican fruit fly, pink bollworm and sweet-potato weevil in the South, and the pear psylla in the Pacific Northwest. Prospective victims suggested by the speaker for future anti-insect blitzes include Japanese beetle, gypsy moth, browntail moth, all kinds of malaria mosquitoes, bedbugs, lice, fleas and houseflies.

A powerful agent in these postwar wars to make crops less costly and personal life safer and more comfortable is the now known DDT. At the meeting, the first official pronouncement of organized entomological science on this insecticide was offered, in the form of a special committee report.

DDT has tremendous possibilities, the report emphasized; but there are also some difficulties attending its use that need further investigation without loss of time. For this reason, adequate funds and personnel for research were pointed out as desirable, together with the assignment of sufficient quantities of DDT for experimental purposes.

DDT's promise spreads broadly over three fields: public health, household comfort and agriculture. In the first category come the triumphs already scored by DDT against such plagues as malaria and typhus. Household comfort will be promoted by the abatement or even the complete wiping out of such insects as flies, fleas, bedbugs and "nuisance" mosquitoes. DDT can be useful to agriculture not only in combating field and orchard insects, but also in protecting forests, livestock and poultry.

DDT is poisonous to man and the warm-blooded animals generally if swallowed in sufficient quantity, or absorbed through oil on the skin. However, as commonly used at present, there seems to be an adequate margin of safety. Cold-blooded animals, like fish and frogs, and beneficial insects are more sensitive; their protection was cited as one of the desirable objectives of research.

ITEMS

SOVIET blood will soon be prepared for fighting shock in Russian wounded through use of four complete plasma processing units given to the U.S.S.R. Red Cross and Red Crescent Societies by the American counterpart of this organization, the American Red Cross. Professor Peter G. Strelkov, of the U.S.S.R. Academy of Sciences, flew to this country to arrange for its use in Russia, and Captain John Reichel, Jr., of the Office of the Surgeon General of the U. S. Army, will accompany the apparatus to Russia to aid in its installation and use. Professor Vladimir Lebedenko, Washington representative of the Soviet Red Cross, in receiving the apparatus in presentation ceremonies stated that the 4,000 pints of blood daily that will be processed by the four units will supply the Russian armies and civilians in reoccupied areas as well. The equipment was paid for from war relief funds given the Red Cross by Congress.

THAT the post-war personal airplane may become as easy to fly as it is to tune a push-button radio, is predicted by Oliver L. Parks, president of Parks Air College, at East St. Louis, Ill. Progress in the design and development of airplanes and electronic devices will make this easy flying possible. In the future it is entirely possible that a pilot will be able to take his plane off the ground, bring it to the desired altitude, set its nose in the proper direction, and by push-button controls, tune it into a beam directed at the city of destination. With the aid of an automatic pilot the plane would fly on the beam. Such a device would not have to be expensive, according to Mr. Parks, since the price of automatic pilot devices has gone down by several hundred per cent. during the war.

GAS turbines in railroad locomotives may be widely used in the future. Investigations show that they have sufficient natural advantages to assure them a place of recognition for such use, was reported by J. T. Rettaliata, of the Allis-Chalmers Manufacturing Company, at the New York meeting of the American Society of Mechanical Engineers. The speaker gave details of a 4,800 horsepower electric-drive locomotive, powered by two gas-turbine units. Its top speed when hauling 15 cars weighing 1,000 tons is 95 miles per hour on a tangent level track. Its maximum speed with a single engine in operation, he said, would be approximately 70 miles per hour. Operation of the locomotive is economical. "The absence of water in the cycle is a natural advantage for railroad service. The low maintenance record associated with the oil refinery gas-turbines of similar design encourages the present contemplation that the service charges on locomotive units will be correspondingly moderate. As is characteristic with all equipment of the turbine type, lubrication costs should be exceedingly small; it is estimated that they will be less than one per cent. of the fuel costs."