

ENTOMOLOGY

Farmers Wage Insect War

Hordes of bugs blitz American agriculture. Situation now under control, Department of Agriculture reports. Hessian flies combated by "scorched earth" policy.

► THE FARMERS' annual blitz season is on. Warfare raging from the fruit orchards of California through the wheat fields of the middle West, blazing through Southern cotton and tobacco, threatens even Vermont potatoes and the apple trees of Maine. Defense tactics include aerial attack, machine gun sprays, tanks, poison gas, scorched earth and fatal booby traps.

The enemy? Hordes of Oriental fruit moths, potato fleas, boll-weevils, cotton leaf-worms, Japanese beetles, velvetbean caterpillars and hundreds of other varieties of insect. However, the Department of Agriculture's latest communique reports that everything is under control, with only a little mopping up still to be done.

A fresh infiltration of wheat-eating Hessian flies, sweeping East from Kansas to Pennsylvania, are being thwarted by a drastic scorched-earth policy. Since this newest menace is nourished in its larval stage by the juice of tender young wheat stalks, it can be combated by the ruthless destruction of "volunteer," or random between-crop growths of wheat which offer breeding ground to the thirsty Hessian maggots. It is also circumvented by "delayed seeding," since a touch of frost is harmless to wheat but slows down flies.

Our important wartime crops of peanuts and soybeans have been menaced by white-fringed beetles, leaf-hoppers and velvetbean caterpillars, which can be dusted with cryolite from low-flying airplanes. The white-fringed beetle is a new importation from South America, which research experts in Agriculture's Bureau of Entomology and Plant Quarantine believe is now under control.

The beetle called grape colapsis, fond of soybean in its grub stage, can be foiled by rotation of crops. The cotton season has presented, in addition to the annual boll-weevil menace, an urgent epidemic of cotton leaf-worm, or Alabama ardidacea, which migrates annually from the tropics. Thanks to calcium arsenate, dusted from airplanes, this is now under control, except for the northern edge of the cotton belts. Entomologists are now working on a new

cotton pest—the pink boll worm. Except for a few enemies such as the Gypsy moth, crickets, and grasshoppers, government entomologists content themselves with research, information service, and regulation of harbor and inter-state plant quarantine, letting the farmers carry on the actual warfare.

An ever-present problem are the innumerable pests which eat stored grain, wool, and tobacco in warehouses, requiring a vigilant policy of fumigation and "dusting the air" with arsenate compounds.

Although nicotine bentonite is sometimes used in spraying fruit, the most common defense weapon is arsenic, now being absorbed by the war against human enemies. Although no shortage of arsenic has been felt so far, farmers and government experts are not too hopeful about next year's supply.

Fruit pests alone number between 250

and 300 varieties, while another myriad of species attack potatoes, vegetables and all forms of truck crops. Booby traps composed of poison bait are used for some varieties: spraying, dusting, rotation of crops for others. The corn ear-worm can sometimes be fooled by breeding longer husks on corn. Those worms you'll be finding in your apples this fall are most apt to be youthful codling moths or Oriental fruit moths.

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CHEMISTRY

Chemical Solves Problem Of Protecting Steel Cans

► LACQUERS, used to protect untinned steel cans from corrosion, sometimes have a corrosive effect all their own on the steel, so that something is needed to protect the can from the lacquer. Fortunately an organic chemical has been found which does this. It reacts with the metal to form a thin strongly attached film which the lacquer cannot soften or dissolve.

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Alaska, with its 590,884 square miles of territory, is one-fifth the size of the entire 48 States.



FRONT LINE SURGERY—The same sort of pressure cooker used by housewives in the United States for putting up the vegetables and fruits from their victory gardens serves at the front lines in China to sterilize instruments. This photograph is furnished by United China Relief, which organization is providing funds for such emergency medical work.