ENTOMOLOGY

Insect Saboteurs

Japanese beetles and Hessian flies aid the enemy by damaging American food crops. Destruction by other insect pests reported not severe

➤ HESSIAN FLIES and Japanese beetles are enemy helpers destroying American war food crops this year as in other years. A U. S. Department of Agriculture survey just completed shows the Hessian fly, which specializes on wheat, active but under reasonable control. Steps must be taken now to control 1944 activities.

In general, the survey reports "Hessian fly infestations are low throughout the winter wheat belt." There are exceptions, however. Menacing populations of Hessian flies are found in many local fields and areas, including widespread areas in eastern Kansas, southeastern Nebraska, western New York, eastern Pennsylvania, New Jersey, northwestern South Carolina and in certain counties in California.

"For this reason," the report advises wheat growers, "it is advisable to continue to observe the safe-seeding dates and recommended controls for the fly rather than to hazard the chance of a rapid multiplication of the fly during the season with resultant widespread injury to the 1944 wheat crop."

The Hessian fly is of Asiatic origin, but it spread to Europe and was brought to America by Hessian soldiers during the Revolutionary War. In a hundred years it reached the Pacific coast.

War products of American farms have had what might be called an average year with their insect enemies. Mexican bean beetles have done much damage during the past growing season. The screwworm infestation on cattle throughout much of the South, including Texas and Oklahoma, has been severe.

Armyworms which destroy almost any type of vegetation have been severe in peanuts, soybeans and grasses in the South, and reported on Long Island. The cotton boll weevil met hot dry weather, which was unfavorable for any unusual activities. The cotton leafworm spread slowly and the infestation was not serious.

European corn borers have done severe damage in all the infested areas. The corn earworm was not as abundant as usual. The lesser cornstalk borer has done much damage to canning beans in southwestern Missouri and in Oklahoma.

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CHEMISTRY-MEDICINE

Most Carotene in Blood During Month of October

➤ THIS MONTH the amount of carotene in your blood will probably reach its highest level of the year, it appears from studies reported by Dr. Samuel W. Clausen, Dr. Augusta B. McCoord, Berenice P. Farber and Chris P. Katsampes, of the University of Rochester School of Medicine, at the meeting of the American Chemical Society.

Carotene is the yellow pigment of fruits and vegetables which the body converts into vitamin A. You get the vitamin directly from such foods as butter, milk, eggs, liver and fish liver oil, but the vegetable stocks of carotene are an important supply source.

The Rochester scientists examined the blood of seven women and 14 men on the first of each month for an entire year. The men and women were all eating a good average diet during the year. The highest amounts of both carotene and of another vegetable pigment, xanthophyll, were found in their blood in the autumn months, especially October, when fresh vegetables and fruits are cheap.

"Surprisingly enough," Dr. Clausen said, "the concentration of vitamin A in the blood changed little during the different seasons; that is, the vitamin A seemed to be independent of the amount of its provitamin, carotene, which was in the blood. We know, however, that in normal persons there is a large store of vitamin A in the liver. It may be that the healthy body is able to draw upon this store when vitamin A is lacking in the food, and so keep the vitamin A of the blood at the needed constant level throughout the year."

Carotene was lowest in the bloodstream in late spring, April and May, when fresh fruits and vegetables were difficult to obtain. Commenting on this, Dr. Clausen added:

"The vegetables being raised in hundreds of thousands of Victory gardens will help greatly in supplying the carotene needed by everyone."

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From 200 to 400 pounds of *fish* per year can be supplied by a farm pond one acre in extent if properly managed and located where favorable conditions exist.

With the Japanese occupation of the East Indies, annual imports to the United States of over a billion pounds of *cocanut oil* and other fats and oils were cut off.