A Note on the Army Cutworm

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The army cutworm, Chorizagrotis auxiliaris (Grote), is distributed throughout the Great Plains. Larvae feed on a wide variety of plants. However, infestation may remain within the area of origin.

During February 1963, an opportunity was afforded for a study of the army cutworm when an infestation increased to injurious proportions in the northeastern section of the Panhandle. However, a few fields had been notably damaged during the previous fall, causing some rescheduling.

Migration.—In most instances larvae appeared to migrate north as they destroyed wheat plants. In few instances did they move in another direction; and many infested fields were observed during February and March. One of these observations included a half-section of wheat land which was divided into three areas. The north 1/2 of the field, heavily damaged by army cutworms during the fall, was not being plowed. In the center the approximate damage had occurred, but this third had been plowed before rescheduling. The 107 acres on the south had not been resown as the damage had not been so heavy. During February and March, however, both the north and south parcels of land were heavily infested but the center portion was not, indicating that plowing is advisable before rescheduling.

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The northern side was damaged slightly from worms migrating south.

During the day cutworms were found under cow chips in grazed fields as well as below the soil surface.

Chemical Control.—During the first part of March several fields were treated for cutworm infestations in Ochiltree and Lipscomb Counties. Much wheat in these counties had been damaged by a combination of drought and winterkilling and insecticides were applied to some fields which should have been abandoned.

Control records were kept on 2 "aero" treated fields—1 in each county. The 320-acre field in Ochiltree County was treated with toxaphene at the rate of 2.5 lb/acre. The 140-acre field in Lipscomb County was treated with 0.3 lb of dieldrin per acre. Wind velocities were 5 to 12 mph and temperatures 60° to 65° F on March 9 when both fields were treated. The carrier for each emulsifiable insecticide was 2 gal of water per acre.

Populations in each field were determined by counting numerous random samples of worms in linear 1-ft areas of drill row. Soil was scraped to a depth of 1 in, beside the wheat plants in the 1-ft sample areas. An untreated field across the road from the toxaphene-treated field and a 10-acre strip in the dieldrin treatment served as untreated checks.

Results of these insecticidal treatments are presented in Table I. Cutworm control was much lower with toxaphene than with dieldrin. Populations were approximately the same in both fields before treatment. By March 29 cutworms were large and many were in their last instar. They pupated during the first 2 weeks in April and had disappeared by April 17.

The toxaphene-treated field and its untreated check were abandoned because of a combination of winterkilling, drought, and cutworm damage. The dieldrin-treated field was harvested but produced only 5 bushels per acre under the adverse conditions. However, its untreated check was abandoned.

Table 1.—Army cutworm populations, percent reduction, and wheat yield following insecticide treatments. 1963.

<table>
<thead>
<tr>
<th>Treatmentb</th>
<th>Dosageb</th>
<th>Initial count</th>
<th>Days after treatment</th>
<th>Yield bu/acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ochiltree County</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toxaphene</td>
<td>2.5</td>
<td>13</td>
<td>75%</td>
<td>60%</td>
</tr>
<tr>
<td>Untreated</td>
<td>12</td>
<td>12</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>Lipscomb County</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dieldrin</td>
<td>0.3</td>
<td>12</td>
<td>95%</td>
<td>90%</td>
</tr>
<tr>
<td>Untreated</td>
<td>14</td>
<td>14</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

a Per foot of drill row.
b Insecticides applied March 9.

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Observations on the Looper Complex of the Noctuid Subfamily Plusiinae

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Loopers of the noctuid subfamily Plusiinae are important pests of vegetable and field crops. Their importance as pests of crucifers has long been recognized. The cabbage looper, Trichoplusia ni (Hübner) especially, has been the subject of intensive research in Louisiana. Infestations of various members of the looper complex on several crops have been observed with increasing frequency during the past decade. Damage to cotton, soybean, alfalfa, sweet potato, and clovers has often been observed which seemed to justify application of control measures.

Reasons for the increased frequency with which these pests have been observed on various crops are not understood. Some possible explanations are: 1) changes in cropping practices; 2) biological upsets associated with insecticide usage; and 3) more systematic surveys for insect damage connected with State-USDA Cooperative Insect Survey and Detection programs.

Infestations in various crops often ascribed to the "cabbage looper" may have involved different species or mixtures of species. Larvae of the genera of this subfamily are similar in appearance and habits and existing keys for their identification are not entirely adequate.

Since economic damage by loopers to several crops is occurring in Louisiana, it has become necessary to determine those species involved. Several collections from various hosts made during the period 1957-63 have been studied. Identification of larvae is based primarily on keys presented by Crumb (1956). Results are presented in Table I.

1 Appreciation is expressed to T. Cleveland, D. F. Clover, W. H. Long, A. McMahon, J. S. Roussel, and W. T. Spink for aid in making collections. Received March 3, 1964; accepted for publication July 20, 1964.
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Table I.—Species occurring in significant numbers in these collections were Pseudoplusia includens (Walker), Trichoplusia ni, and Rachiplusia ou (Gueneé). R. ou was the only species collected from clovers, and with the exception of a single specimen found on cotton in late summer, it was collected only during the spring months.

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