

**TOBACCO, *NICOTIANA TABACUM* L., A POSSIBLE TRAP CROP FOR THE CUTWORM, *SPODOPTERA LITURA* (F.)<sup>1</sup>**Herminigildo S. Torreno<sup>2</sup>

The culture of a plant aimed to attract a pest away from the main crop is gaining popularity lately as a component of integrated pest management. The planting in a small number restricts the population of the pest in a limited area that becomes easier to control either by chemical, physical or mechanical means. Bottrell, (Agribusiness Worldw. 10(8): 14-17, 1988) reported that the use of trap crop has been successfully integrated with other methods for the control of the bollweevil, *Anthonomous grandis*, on cotton in Nicaragua. Similar principle maybe adapted for tobacco to trap the cutworm *S. litura*, the idea of which was conceived while on a collection trip in the last week of June 1988.

A farmer's field (about 15 m x 30 m) in the vicinity of Batac, Ilocos Norte was noted having the common cutworm virtually infesting only the leftover tobacco (flue-cured type) plant despite the availability of the following crops growing side by side with each other:

Corn, *Zea mays* L.

Mungo, *Phaseolus aureus* Roxb.

Eggplant, *Solanum melongena* L.

Saluyot, *Corchorus olitorius* L.

Patola, *Luffa cylindrica* Roem

Except patola, these crops have been identified in the country as host also to this polyphagous cutworm (H.S. Torreno, PTRTC unpubl. report 1986; L.M. Rueda, Crop Protect. Newsl. 3:2, 1981; B.P. Gabriel, Insects and Mites Injurious to Philippine Crop Plants, 250 pp., 1975).

Corn appeared to be the main crop being planted in rows throughout the field.

Eggplant was intercropped only on the other half of the field while patola without trellis, occupied the other half.

Mungo was sparsely planted without a pattern all over the field and so with saluyot which seemed, as usual, grew voluntarily (Being a favorite delicacy prepared as stew by the local folks, saluyot is considered here as a vegetable).

All the crops were in their rapid vegetative stages. The more or less 20 hills of tobacco were obviously, a leftover crop planted late as they only had their top leaves and not yet flowered. Others were ratoons. They were also

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Table 1. Number of cutworm per quadrat/plant intercropped in a farmer's field.

SAMPLE Plant/Quadrat	INTERCROP					
	Tobacco	Corn	Mungo	Eggplant	Patola	Saluyot
1	1	0	0	0	0	0
2	2	0	0	0	0	0
3	2	0	0	0	0	1
4	1	0	0	0	0	0
5	0	0	0	0	0	0
6	2	0	0	0	1	0
7	1	0	1	0	0	0
8	1	0	0	0	1	0
9	1	0	0	0	0	0
10	0	0	0	0	0	0
11	2	0	0	0	0	1
12	1	0	0	0	0	0
13	3	0	0	0	0	0
14	2	0	0	0	0	0
15	1	0	0	0	0	0
Mean <sup>1</sup>	1.27 <sup>a</sup>	0 <sup>b</sup>	0.07 <sup>b</sup>	0 <sup>b</sup>	0.13 <sup>b</sup>	0.13 <sup>b</sup>

Means followed by the same superscripts are not significantly different at 5% level (LSD).

CV = 20.78% (transformed)

severely infected with TMV and thus greatly stunted.

What was so interesting was the seemingly occurrence of full grown cutworm only on tobacco. Sampling was therefore done to determine the population density of the larvae on each of the crop as a measure of their host preference. Fifteen sample plants each of corn, mungo, saluyot, eggplant and tobacco were examined thoroughly for the presence of cutworm, whereas 15 one-sq-m. quadrats were used as sampling unit on patola.

The number of larvae per plant (Table 1) clearly shows tobacco, despite its physiological state, as the most preferred host of the pest. This finding is rather peculiar because corn and the other intercrops were in their supposedly most susceptible stages. Presence of few larvae on patola, mungo, saluyot during counting may even be construed as incidental while in search for pupation site as there was no trace of fresh feeding activity or frass observed. Non-statistical significance of their density on these crops further supports this interference.

It is but logical to verify in an experiment this high preference of the cutworm on tobacco to really establish the usefulness of this plant as a trap crop; either for other hostcrops or in synchrony with the planting of the commercial crop itself.