

Results indicated that feeding on sugarbeet foliage by beet armyworms did not result in a root yield reduction. Variable factors such as plant stand losses, heavier and more persistent infestations and secondary infections could alter these results.

Table 3. Mean Root Yields from Monthly Yield Samples

Treatment	Date of Yield Sample*							
	Dec. 3		Jan. 7		Feb. 12		Mar. 10	
	lbs/root	T/A	lbs/root	T/A	lbs/root	T/A	lbs/root	T/A
Treated	0.266	2.93	0.458	5.04	0.734	8.07	1.21	13.31
Untreated	0.228	2.51	0.442	4.86	0.728	8.01	1.22	13.40

\*No significant statistical differences occurred at any of the 4 yield dates.

### Greenhouse Evaluation of Plant Mortality from Feeding of Beet Armyworms

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Economic thresholds of beet armyworms in sugarbeets has not been clearly defined. This is due, in part, to the lack of adequate information on the amount of damage done to seedling beets by this insect.

To aid in evaluating the degree of beet armyworm damage, a greenhouse experiment was conducted to determine the number of larvae required on a single plant to cause mortality of that plant. It was hoped the results could be a tool in assessing field populations that would result in determining more precise economic population levels.

Fifty pots were set up in the greenhouse for each test. The test was repeated five times. When seedlings emerged in the pots, they were thinned to one plant per pot. Four days after emergence, 10 plants were selected to be infested with a given number of first instar larvae. Each 10 plant group was infested with either 1, 2, 3, 4 or 5 larvae per plant.

Larvae were allowed to remain and develop on the plants until their larval development was completed, approximately two weeks. The plants were then held to determine if recovery would occur. Each larva was counted daily and those missing or dead were replaced with one of the same age.

Table 1 shows the percent plant mortality for each of the five separate tests and the mean percent mortality for the total tests. Only one plant died in the 1 larvae/plant treatment and the remaining 49 plants appeared healthy although feeding signs were visible. In the 2 larvae/plant treatment, a total of 4 plants died, but again, the surviving plants did not appear to be stunted to any degree. Surviving plants in the 3 larvae/plant treatment did show stunting of the leaf foliage but recovered rapidly when the larvae were removed. In the 4 and 5 larvae/plant treatments, the surviving plants were badly stunted and slow to recover.

It is important to remember that this test was conducted in a controlled greenhouse environment. Larvae were not exposed to predation or adverse climatic changes. On the other hand, the greenhouse conditions were ideal for rapid recovery of damaged plants. However, these results can be used as a very broad threshold in the field to aid in assessing field populations and damage estimates.

Table 1. Percent Plant Mortality

Treatments Larvae/plant	Test 1	Test 2	Test 3	Test 4	Test 5	Mean %
1/plant	10.0	0.0	0.0	0.0	0.0	2.0
2/plant	10.0	0.0	20.0	0.0	10.0	8.0
3/plant	20.0	10.0	10.0	20.0	30.0	18.0
4/plant	40.0	50.0	30.0	40.0	50.0	42.0
5/plant	70.0	60.0	30.0	70.0	80.0	62.0