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Phagostimulatory Response of *Helicoverpa armigera* Hubner Larvae to Entice*

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During the course of studies on evaluation of Entice, a liquid feeding stimulant against cotton bollworms, it was found that the plots treated with Entice alone, exhibited more damage of defoliators including *Helicoverpa* on cotton leaves. With this idea, an attempt has been made to study the phagostimulatory behaviour of cotton bollworm, *Helicoverpa armigera* Hubner larvae to cotton leaves treated with phagostimulant during *kharif* 1990.

Phagostimulatory response of *H. armigera* larvae on cotton leaves treated with 'Entice' manufactured by M/s. Fermone Chemicals Inc. Texas, USA, (Specially prepared cotton flour, disaccharide, vegetable lipid oil, alcohol, Alkoxylate and polysaccharide by 33.965% A.I.) was studied on potted cotton plants. For the purpose, 20 potted plants about four month old were selected and all the squares, flowers, bolls and damaged leaves were removed. Three leaves selected randomly were treated with 5% Entice solution and tagged. Water spray served as control. The treated plants were caged by cylindrical cages prepared out of mosquito nylon net (Plate-1) after the release of five laboratory reared 10 to 12 days old larvae of *H. armigera*.

Observations on leaf area consumed by the larvae were recorded after 24 hours. Leaf area consumed in per cent was assessed by visual gradation following 0 to 10 Scales as under :

Grade	*Extent of consumption*	Grade	*Extent of consumption*
0	No consumption	6	26 to 30% Consumption
1	1 to 5% Consumption	7	31 to 35% Consumption
2	6 to 10% Consumption	8	36 to 40% Consumption
3	11 to 15% Consumption	9	41 to 45% Consumption
4	16 to 20% Consumption	10	46 to 50% Consumption
5	21 to 25% Consumption		

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TABLE 1

Effect of Entice on leaf area consumption by *H. armigera* larvae in field.

Plant No.	Per cent leaf area consumed		Consumption index	
	Treated	Check	Treated	Check
1.	35.00	8.33	7.00	1.67
2.	31.67	7.50	6.33	1.50
3.	23.33	15.00	4.67	3.00
4.	18.33	8.33	3.67	1.67
5.	15.00	10.00	3.00	2.00
6.	16.67	11.67	3.33	3.00
7.	30.00	0.00	6.00	0.00
8.	20.00	5.00	4.00	1.00
9.	21.67	16.25	4.33	3.25
10.	18.33	10.00	3.67	1.33
11.	23.33	8.33	4.67	1.67
12.	10.00	8.75	2.00	1.75
13.	31.67	0.00	6.33	0.00
14.	16.67	13.33	3.33	2.67
15.	25.00	0.00	5.00	0.00
16.	38.33	15.00	7.67	3.00
17.	16.67	13.33	3.33	2.67
18.	33.33	5.00	6.67	1.00
19.	25.67	16.67	5.33	3.33
20.	20.00	10.00	4.00	2.00
Mean	23.58	9.12	4.72	1.83
Calculated 't':		6.99**		8.24**
	Table 't' at 5% 2.025 at 1% 2.713			

** Highly significant.

Another investigation was undertaken in the laboratory by confining individual larva on treated leaves in petriplate (20 cm. dia. x 4 cm. ht.). The turgidity of treated leaf was maintained by swabbing the petiole end with cotton wad and wetting it frequently. Only half of leaf was smeared with 5% freshly prepared Entice solution on the abaxial surface, while the other half remained untreated (Plate-2). After air drying the treated surface, a single 10 to 12