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Some Notes on Assessment of Damage and Losses Caused by Pod Fly to Vegetable Purpose Pigeonpea -A Market Survey

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Pigeonpea (*Cajanus cajan* L. Millsp.) happens to be second most important legume crop of India. It is extensively grown in middle and south Gujarat. Inspite of various improvement being adopted for cultivation of this crop, insect pests are still continuing to be major limiting factors resulting into heavy lose to growers. Davies *et al.*, (1975) enlisted about 160 insect pests occuring on pigeonpea. Among these, the pod fly *(Melanagromyza obtusa* Mall.), plume moth (*Exelastis atomosa* W.), gram pod borer (*Heliothis armigera* Hb) and pod bug (*Clavigralla gibbosa* Spin) are of major significance to this crop as they inflict direct damage to pods. The maggot of pod fly feeds on developing grains in the pods and makes them unfit for human consumption and seed purpose. There are many reports on the extent of damage caused by pod fly to pod as well as grain which showed great variability as is evident from the reports of different workers from different parts of the country, important among which are Ahmed (1938), Gangrade (1963), Davies and Lateef (1975), Kapadia and Talati (1983) and Agrawal *et al.* (1985). However, practically very little attention is paid in regard to the market survey on the extent of damage caused by this pest in the region. Considering this, a periodical market survey was made around Navsari zone at Gujarat Agricultural University, with a view to assess extent of damage and loss inflicted by this pest to marketable pigeonpea pods used for vegetable purpose in the area.

To assess the damage caused by pod fly to pods as well as grains, a periodical survey of market was carried out from November, 1984 to March, 1985. For the purpose, 500 grams of samples of pigeonpea pods were procured from the market at weekly interval and the same were brought to the laboratory for assessing pod and grain damage done by pod fly. The grain damage was also recorded from the same samples. Per cent infested pods and grains, as well as weight losses were worked out.

Month-wise average percentage damage of pods and grains as well as weight loss is given vide Table 1. Results revealed that the minimum pod infestation by pod fly was recorded in the month of February (29.11%) and it rose to maximum during March(47.66%). The similar trend in regard to minimum (5.16%) and maximum (15.14%) grain infestation was recorded during same period as recorded for pod infestation. However, the maximum weight loss was recorded in the month of November (8.51%) followed by March (6.56%), January (6.50%), December (5.77%) and February (3.47%). The present findings are more or less in

TABLE 1

Periodical survey on the damage caused by pod fly to vegetable purpose pigeonpea.

Month	Damage percentage *		Weight loss (grain) %
	Pods	Grains	
1	2	3	4
November'84	47.27	10.39	08.51
December'84	40.11	06.73	05.77
January'85	43.11	11.25	06.50
February'85	29.11	05.16	03.47
March' 85	47.66	15.14	06.56
Mean	41.45	09.73	06.16

* Average of 4 week's sample.

conformity with the findings of Singh and Rai (1983), who reported pod and grain infestation as 35.83 to 47.70 and 24.27 to 32.37 per cent, respectively; 11.4 to 86.4 and 27.00 to 100.00 per cent (Gangrade, 1963); 26.83 to 44.25 and 7.77 to 28.55 per cent (Srivasta and Srivastava, 1971). However, there are some discrepencies from the present findings which may be due to variations in agroclimatic condition of the region and various other factors. Ahmed (1938) recorded that the per cent pod damage by pod fly was very low (11.00%) in December and January but rose to a maximum (42.70%) in April. Lateef and Reed (1980) also found that pod fly and hymenopteran attacks tended to increase from December onwards.

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