

Estimation of Losses in Weight of Grains in T-15-15 Variety of Tur (*Cajanus cajan* Millsp.) Due to Tur Pod Borers*

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Euchrysops cneajus Fab. and *Melangromyza obtusa* Mall. commonly known as the blue butterfly and tur podfly respectively are the important pests of tur crop. The damage of blue butterfly larvae was caused by feeding on the developing seeds inside the pods preferably near the base by pushing its body halfway inside the pods. The damage is caused by tur pod fly maggots which fed inside of the developing seeds by making a circular tunnel internally. The damage to the grains by this fly maggot ranged from 11.4 to 86.4 per cent and loss in weight from 0.8 to 3.3 per

cent in different varieties of arhar (Gan- grade, 1963 and 1964). Ahmad (1938) estimated 40.0 to 60.0 per cent damage to grains in Pusa (Bihar) and 63.0 per cent in Delhi.

It was therefore, desirable to estimate such variable losses due to tur pod borers in variety of tur (T-15-15) which yield on an average of 441 kg/ha. The estimated area under this in Gujarat State is 91900 hectares yielding 41800 tonnes of grains. The percentage in loss in weight suffered by the farmers in Gujarat State from these tur pod borers has not been assessed so far.

The crop was sown at the college Farm, Junagadh during Kharif 1974-75. Studies on the extent of grain damage as well as to assess the available grain losses by tur blue butterfly and tur podfly, 100 pods damaged by larvae of the blue butterfly were collected from tur

TABLE 1

Percentage of infestation of grain and loss in weight due to *Euchrysops cneajus* Fab. and *Melangromyza obtusa* Mall.

Grains	Total grains in		Healthy grains in		Damaged grains in	
	Infested pods		pods infested by		pods infested by	
	E. C. Fab.	M. O. Mall	E. C. Fab.	M. O. Mall	E. C. Fab.	M. O. Mall
1. No. of grains in 100 infested pods	338	362	202	235	136	127
2. Wt. of grains gms.	21.943	30.69	21.30	25.33	0.643	5.36
3. Wt. of 100 grains gms.	—	—	10.54	10.77	0.47	4.22
4. Wt. of loss in 100 grains. gms.	—	—	—	—	10.07	6.55
5. % of infested grains	—	—	—	—	40.37	37.85
6. % of loss in wt.	—	—	—	—	95.74	60.82

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field and shelled out when fully dry. Grains threshed out of these pods manually were sorted into healthy and infested ones and percentage of grain infestation was calculated on the basis of total number of grains. Weight of healthy and infested grains was recorded separately and percentage loss in weight was calculated. 100 tur pod infested with tur podfly were similarly processed. The data on weight of healthy grains and damaged grains are presented in Table.

The available loss in weight of 100 damaged grains was 10.07 gms in case of the blue butterfly and 6.55 gms in case of tur podfly. The percentage of infestation of grain by blue butterfly

and tur podfly was 40.37 and 37.85 respectively. The grains loss in weight in the infested pods worked out as high as 95.74 per cent in case of tur blue butterfly and 60.82 per cent in case of the tur pod fly (Table).

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