

1970

N745 : 57 (1) : 44-45

A Note on *Euporellia stali* D., as a Pest on *Asiriya mwitunde*

Among the pests recorded, so far on groundnut, the only serious pest to do havoc on the subterranean portions of the plant happens to be *Sphenotera pertotetti* F. The external symptoms on the plant due to the infestation of this pest, are wilting of the upper portions of the stem, resulting in the gradual death of the plant. Apart from this pest, one other soil borne insect affecting the pods and kernels of groundnut crop had been recorded by Cherian and Basheer (1940) and they have registered maximum infestation upto 13.5 % under Tindivanam conditions. This solitary instance of Demapteran pest, *Euporellia stali* D. was noticed affecting the pods and kernels of groundnut, to a considerable extent, under field conditions, while harvesting the exotic Tanganyikan variety, *Asiriya mwitunde* at Regional Research Station, Tindivanam (Tamil Nadu). To assess the nature and extent of infestation caused by the pest, detailed observations were made.

The crop of *Asiriya mwitunde* was raised over an area of 16.5 cents, to study its performance under rainfed conditions during 1967-68. The crop was harvested in the second week of December, 1967. While pulling out the plants it was seen that the pods were exhibiting holes of different sizes, plugged with excreta, sand particles and discoloured pulp. Examining the affected pods and the soil surrounding the pulled out plants, the presence of the pest was noticed. The insects were very active, fast moving and occurring at localised patches in and around the pods. Generally, one or two insects were seen in each pod. Invariably majority of pods and kernels were found to be affected and the extent of infestation (Table 1) emphasises the importance of this pest. The intensity of infestation was assessed by selecting 100 plants in each of the five localised infested patches, at random in the field. Percentage of infestation on matured and immatured pods per plants in each of the five lots was calculated and the average percentage of infestation was arrived at. It is evident from the data presented, that the extent of infestation on the matured and immatured pods put together was 46.6 % (Table 1). This high percentage of infestation as against 13.5 % recorded by earlier workers indicates that the menace of the pest is on the increase and there is all possibility for the gradual aggravation of the pest in the course of time. While, the matured pods were infested to an extent of 44.1 %, the intensity of infestation in the case of immatured pods was 52.1 %. In spite of heavy infestation *Asiriya mwitunde* has registered an hectare yield of 238 kg, whereas the normal yield would have been 457 kg per hectare if there was no infestation, thereby registering a total loss of 114 kg of oil per hectare. This shows clearly the ravages caused by this insect pest. Under laboratory conditions the

TABLE 1. *Percentage of infestation on matured and immature pods of groundnut*

No. of plants studied	No. of matured pods	No. of Matured pods infested	Percentage of infestation	No. of Immature pods	No. of Immature pods infested	Infestation %	Total No. of pods (matured & immature)	Total No. of infested pods (matured & immature)	Infestation %
Lot 1	294	178	60.5	149	111	74.5	443	289	65.2
Lot 2	313	84	26.9	103	24	23.3	416	108	26.4
Lot 3	249	137	55.0	164	123	73.6	413	260	63.0
Lot 4	348	154	44.3	132	69	52.3	480	223	46.4
Lot 5	336	125	37.2	143	33	23.1	479	158	33.0
Mean	308	136	44.1	138	72	52.1	446	208	46.6

The adult characters of the pest confirm the description given by Cherian and Basheer (1960). It is a cosmopolitan insect having a wide distribution in Bombay, Karachi, Tamil Nadu and Pondichery States. In Tamil Nadu, it has been noted to occur prominently in South Arcot and Coimbatore districts. The earwig is mostly herbivorous, having number of alternate host plants, like, cabbage, cotton and *sorghum*. Since the life cycle of the pest ranges from 56 to 72 days, there may be only one or two broods during the crop period.

Efforts are to be taken to evolve suitable effective control measures with modern promising soil insecticides, such as aldrin, dieldrin or heptachlor to protect the groundnut against the ravage caused by this pest. Besides, it is also quite essential to study the varietal resistance to this pest, taking into due consideration the conducive soil condition favouring the multiplication of this pest, both during rainfed and irrigated seasons. As the infestation of this pest is directed towards the pods and kernels affecting the yield of the crop as well as the quality of the seeds, it is of paramount importance to take up further studies on different aspects of this pest.

Regional Research Station, }
Tindivanam.

G. PURUSHOTHAMAN
G. GOVINDA DAS
S. VENUGOPAL

REFERENCE

Cherian, M. S. and M. Basheer. 1940. *Euborellia stali* Donrn (Forficulidae) as a pest of