

A Note on Screening of Different Sorghum Genotypes to the Tussock Caterpillar *Euproctis Subnotata* Walker Under Field Condition

Among the different insect pest of sorghum, the tussock caterpillar *Euproctis subnotata* walker is one of the serious pest of the crop (Usman 1963). This pest is generally being controlled by spraying and dusting of the insecticides. Not much work has been done on screening of the sorghum genotypes to obtain resistant lines to the tussock caterpillar, the present investigation was carried out with an objective of screening the sorghum genotypes for the reaction of the tussock caterpillar at Agriculture College, Dharwad during 1984.

Twentysix sorghum genotypes were selected to study their relative susceptibility to the tussock caterpillar *E. Subnotata*. The genotypes were collected from the sorghum research project, Agriculture College, Dharwad. The genotypes were sown on 9th July 1984, with the row spacing of 50cm and 15cm between the plants. Each genotype was sown in a single row of 3 meters length and was replicated twice.

All the package of practices recommended for raising the crop were followed except the plant protection measures. Varietal susceptibility to the tussock caterpillar was assessed by estimating the density of the population of the tussock caterpillar at weekly intervals by counting the larvae on five selected plants in each row. Four sets of observation were taken at weekly inter-

vals after the plants being infected by the tussock caterpillar. Average of all the observations taken at weekly intervals was worked out for each genotypes and statistically analysed data has been tabulated.

When the tussock caterpillar incidence was maximum based on the grain damage to the ear head casual grades from one to ten were given to different genotypes. Such varietal earheads with varied amount of ear head damage representing different ear grades are presented.

The ear grades assigned to the different genotypes were, 1 (0-10%), 2 (11-20%), 3 (21-30%), 4 (31-40%), 5 (41-50%), 6 (51-60%), 7 (61-70%), 8 (71-80%), 9 (81-90%) and 10 (91-100%).

The maximum number of larvae per plant was found in SB-2202 which ranged from 2.75 to 2.79 with an average of 2.83. This was followed by CSH-5 ranging from 2.70 to 2.85 with an average of 2.77. The least number of larvae per plant was recorded CS-3541 x 4D-12 which ranged from 0.25 to 0.50 with an average of 0.28. This was followed by 2219A x SB-1079 varying from 0.40 to 0.45 with an average of 0.42 larvae per plant.

The ear grade "3" was assigned to SB-2202, SB-2413, CSH-5, CS-3541 x BS-81-3, 2219A x SPV-196, 2219A x SB-2413, 2219A x SB-6203, 323A x SB-

Table 1. Incidence of the tussock caterpillar, *Euproctis Subnotata* on different sorghum genotypes and grain yield under field conditions

Sl. No.	Genotypes	Mean number of larvae per plant (Average of five plants)		Visual grade	Days to 50% flowering	Mean grain yield per ear in grams (average of five ears)	
		Range	Average			Range	Average
1.	SPV-386	0.45-0.80	0.62	1	70	26.80-41.40	39.80
2.	SPV-389	1.05-1.25	1.15	2	70	26.80-30.00	28.40
3.	CS-3541	0.75-1.25	1.00	2	75	33.60-37.20	34.00
4.	SB-1079	0.40-0.65	0.52	1	66	39.8-42.00	40.90
5.	SB-2202	2.75-2.92	2.83	3	70	25.40-27.40	26.90
6.	SB-2407	0.75-1.20	1.05	1	97	20.00-22.00	21.00
7.	SB-2413	2.40-2.95	2.67	3	69	21.00-26.00	23.50
8.	SB-2415	0.35-1.10	0.72	1	72	42.00-43.80	42.90
9.	SB-2509	0.95-1.15	1.05	2	70	31.00-33.00	32.00
10.	CSH-1	0.85-1.25	1.05	2	68	34.00-40.00	37.00
11.	CSH-5	2.70-2.85	2.77	2	68	21.00-24.00	22.50
12.	DSH-1	0.25-0.65	0.45	1	69	38.00-41.00	39.50
13.	CS-3541 x BS-81-3	2.50-2.75	2.62	3	68	24.60-31.60	28.00
14.	CS-3541 x 4-D-12	0.25-0.50	0.28	1	69	37.40-38.60	38.00
15.	SPV-104 x CS-3541	0.80-1.00	0.90	1	69	19.50-22.50	21.00
16.	2077A x SB-5501	0.35-0.55	0.45	1	70	23.00-24.80	23.40
17.	2219A x SPV-196	2.00-2.15	2.37	3	70	22.00-23.00	22.50
18.	2219A x SB-1079	0.40-0.45	0.42	1	66	36.80-38.00	37.40
19.	2219A x SB-2413	2.10-3.30	2.70	3	67	25.00-27.20	26.20
20.	2219A x SB-2415	0.35-0.60	0.47	1	70	23.40-29.20	26.30
21.	2219A x SB-2202	0.40-0.65	0.52	1	68	23.20-30.00	26.40
22.	2219A x SB-6203	2.38-3.45	2.91	3	66	23.00-23.90	23.80
23.	296A x SB-5501	0.52-0.85	0.68	1	67	23.00-23.80	23.40
24.	296A x SB-50	0.60-0.65	0.62	1	69	28.00-35.20	33.60
25.	323A x SB-5501	2.25-2.95	2.60	3	68	17.00-21.00	19.00
26.	323A x SB-535	1.15-1.30	1.10	2	67	27.20-28.20	27.70
S. Em. \pm			0.30				3.45
C. D. at 5%			0.78				7.10

5501, indicates the maximum amount of grain damage. The sorghum genotypes SPV-386, SB-1079, SB-2407, SB-4215, DSH-1 and CS-3541 x 4-D-12, SPV-104 x CS-3541, 2077A x SB-5501,

2219A x SB-1079, 2219A x SB-2415, 2219A x SB-2202, 296A x SB-5501, 296A x A-550 proved to be resistant to the tussock caterpillar and were assigned "1" grade indicating little damage.

The highest grain yield per ear (damaged and healthy) recorded in SB-2415 which ranged from 42.00 to 43.80 with an average of 42.90 gms. This was followed by SB-1079 ranging from 33.60-37.20 gms with an average of 34.00 gms. The entries which recorded the lower yield per ear were 323A x SB-5501 (19.00 gm) and SB-2413 (23.50 gms).

Based on the incidence of the tussock caterpillar per ear head grades assigned to different sorghum varieties and mean grain yield per ear, the present investigation recorded CS-3541 x 4-D-12 and 2219A x SB-1079 were found to be less

susceptible to the tussock caterpillar. The genotypes SB-2202 and CSH-5 were found to be highly susceptible to the tussock caterpillar by recording more number of caterpillar per ear, this is in conformity with Kulkarni *et al.*, (1976) where they recorded more number of larvae on these genotypes. There was no relation between days to 50% flowering and resistant genotypes to pest.

Acknowledgement

Thanks are due to the authorities of the University of Agricultural Sciences for having provided the facilities for carrying out the present investigation.

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(Received March, 1989)

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Karnataka J. Agric. Sci., 3 (1 & 2) : (133-135) : 1990

Age of the Seedlings in Relation to Coriander Blight - Caused by *Colletotrichum Gloeosporioides*

Coriander blight incited by *Colletotrichum gloeosporioides* (Penz.) Penz. & Sacc., is one of the major disease occurs in an epidemic form in Karnataka (Naik, *et al.*, 1988). To screen the germplasm and to understand the epidemiology of the disease there is very necessity of identifying the most critical

susceptible stage of the crop for infection. In this direction a pot-culture experiment was planned and the results obtained are discussed here-under,

Earthen pots were filled with sterilized soil and planted with a susceptible local coriander variety. In all ten treat-