

INFLUENCE OF MANURING AND VARIETY ON THE INCIDENCE OF RICE GALL MIDGE

The rice gall midge, *Pat hydroplosis oryzae* (Woolmason) Mani, (Cecidomyidae, Diptera) is a serious pest of paddy in most rice growing areas of the world, including India. Among the different factors governing the incidence of the pest, nutrition (Israel *et al* 1961) and the strain of the paddy (Ramiah and Rao 1953, Bhat *et al* 1958 and Pai and Rao 1958) have been reported as important ones. The studies reported in this contribution relate to the relative susceptibility of some exotic paddy varieties of Kerala to the gall fly infestation under a low and a high dose of N. P. K.

The studies were conducted in a field experiment at the Central Rice Research

Station, Pattambi, during the first crop season of 1966 following a split plot design with two main plot treatment viz. N.P.K. at 50: 25: 25 and 100:50:50 Kg per hectare, twelve sub plot treatments consisting of twelve varieties of paddy (vide Table I) and four replications for each treatment. Each sub plot measured 30,square metres. The whole quantity of P and K and half the quantity of N were applied as basal dressing and the remaining half of N applied three weeks after transplantation. Results were assessed by counting the tillers showing galls (silver shoots) in one square metre in each plot 30 days after transplantation. Results are given in Table I.

Table 1

Mean number of galls and tillers per clump in twelve varieties of paddy under two levels of manuring.

Sl No.	Variety	N. P. K. 50.25:25	N. P. K. 100:50:50	Mean	Tillers
1.	IR 5-47-2	30.0	25.5	27.75	10.7
2.	IR 51	20.5	17.5	19.00	4.5
3.	IR 2	21.5	20.5	21.00	5.9
4.	Ptb 10	9.5	6.0	7.75	6.5
5.	IR 8-288-3	34.8	29.5	32.00	10.3
6.	NC 1626	18.5	10.0	14.25	7.4
7.	IR 10	36.0	31.5	33.77	10.9
8.	IR 7	23.0	27.5	25.25	6.7
9.	Taichung 65	17.0	30.5	23.75	6.8
10.	IR 5	17.0	15.0	16.00	5.3
11.	IR 48	24.0	25.5	24.75	10.3
12.	CO 29	20.0	20.5	20.25	8.3

Analysis of variance shows that the levels of manuring do not have significant effect on the gall fly incidence. Israel *et al* (1961) had observed higher gall incidence with higher doses of nitrogen and lower incidence with higher doses of phosphate. The present studies however show that a balanced manuring does not affect the gall incidence. Significant variation in the susceptibility of the different varieties of paddy is evident and the varieties can be ranked in the descending order of susceptibility as below :

75 1 8 11 9 3 12 2 10 64

Thus it is seen that the local strain Ptb 10 is significantly more resistant to gall fly infestation than all other varieties.

Tillering of the varieties and gall incidence are not found significantly correlated. Kovitvathi (1963) had however observed that gall incidence was more on high tillering varieties.

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