

Occurance of Mango Flea Weevil
Rhynchaenus mangiferae Marshal (Curculionidae : Coleoptera) in Gujarat
and its Relative Damage in Important Varieties of Mango.

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The Mango orchards in South Gujarat suffers from many insect pests out of which mango stone weevil (*Cryptorhynchus mangiferae* Fb.), mango shoot borer (*Chlumetia transversa* Wlk.), and mango flea weevil (*Rhynchaenus mangiferae* Mshll.) are of recent occurrence. Of these three, the last one i.e. mango flea weevil attacking mango leaves in South Gujarat has not been reported earlier. The incidence of leaf mining grubs were found in an orchard near Gandevi Taluka of Valsad District in Gujarat State during March, 1979. The infested leaves with grubs were brought to the laboratory and were examined for emergence of adults. The adult were found to be weevils which were identified as *Rhynchaenus mangiferae* Marshal. by Commonwealth Institute of Entomology, London. Thus this is the first record of this pest in Gujarat.

Review of literature revealed that the pest is reported by Ayyar (1922) in South India where it is active during March to July. Similarly Singh (1945) has reported the pest to be a serious problem in mango in Uttar Pradesh. Vishakantaiah, (1976) has studied the detail biology of this pest in laboratory

and field during 1967-68. According to him both grubs and adults caused damage to leaves, the incidence being high during the two major flushing seasons January-March and May-July. He has also reported Raspuri variey, the most susceptible one for the attack of *R. mangiferae* Mshll.

Severe attack of this weevil was observed in mango orchard of Agricultural Experiment Station, Paria during March '81. To workout the extent of damage caused by this pest in different mango varieties, a three tier survey was undertaken. For the purpose, three orchards of Alfanso variety and one orchard having different varieties of mango were selected. Number of trees infested by this pest out of total number of trees were counted. Out of these total number of trees infested, ten randomly selected infested trees were critically observed for extent of damage as under.

Five tertiary branches on each randomly selected and infested trees were observed and number of shoots of pencil size thickness with leaves infested by weevil were counted out of total number of shoots present on a branch. Then five infested shoots were examined for number of infested and total number of leaves per shoot. Lastly five infested leaves were observed for the quantitative damage in terms of percentage.

The data on infestation of flea weevil on different varieties of mango as observed and stated above are reported in Table 1.

TABLE 1

Percentage infestation of flea weevil *Rhynchaenus mangiferae* Mshll. on different variety of mango in April 1981. (Agricultural Experiment Station, Gujarat Agricultural University, Paria, Dist. Valsad.)

Sr. No.	Name of Variety	%Percentage of Infestation				Quantitative damage on leaves in terms of percentage damage.
		Tree	Branch	Shoot	Leaves	
1.	Alfanso	100.00	93.00	67.64	53.32	17.70
2.	Nilam	91.66	46.66	25.00	10.40	4.00
3.	Rajapuri	100.00	80.00	42.39	33.33	85.00
4.	Banarasi Langdo	100.00	68.00	46.66	25.08	85.00
5.	Keshar	100.00	48.00	38.23	20.07	85.00
6.	Dadamiyo	90.00	76.00	53.84	18.18	5.20
7.	Sardar	100.00	100.00	59.48	25.33	5.80
8.	Karanjio	100.00	64.00	38.70	24.62	85.00
9.	Totapuri	100.00	32.00	16.88	8.12	4.60

From the data in Table 1, it can be seen that the variety Alfanso is the most susceptible variety with 53.32% leaves attacked by the weevils. The next susceptible variety in descending order are Rajapuri, Sardar, Banarasi Langda, Karanjio, Keshar, Dadamiyo, Nilam and Totapuri.

Thus it can be said that the mango flea weevil is a serious pest of mango and may cause a good deal of damage to the leaves ultimately reducing the photosynthetic capacity of the tree.

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REFERENCES

- Ayyar, Ramkrishna T. V. 1922. Weevil fauna of South India with special reference to economic species. Imperial Agricultural Research Institute, Pusa. Bull. No. 125: 21, Calcutta.
- Singh, S. M. 1945. *Rhynchaenus mangiferae* Mshll.—a serious pest in Uttar Pradesh. *Curr. Sci.*, **23** (8) : 270-271. Bangalore.
- Vishakantiah, M. 1976. Studies on the biology of the mango flea weevil *Rhynchaenus mangiferae* Mashll. (Coleoptera: curculionidae); *Mysore J. of Agric. Sci.* **10** (2) : 318-331.