

Afidentula minima Gorham (Coccinellidae: Coleoptera), a New Pest of Fingermillet and Its Intensity of Damage in South Gujarat

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Fingermillet is main staple crop of the tribal areas of South Gujarat. Even though considered hardiest crop being grown under dryland condition without any serious insect pest problem, last year during August-September 1981, severe incidence of a new insect pest in beetle form has been seen in the fields of fingermillet crop of Dharampur and Vansda Taluka of Gujarat State. The beetles were collected and identified as *Afidentula minima* Gorham. Review of literature revealed that this beetle has not been recorded as a pest of any crop at any place in India upto now. Thus it is the first record of this pest on fingermillet crop in Gujarat as well as in India.

TABLE 1

Percentage infestation of *Afidentula minima* Gorham on fingermillet in Dharampur and Vansda Taluka of Bulsar District of Gujarat State during September, 1981.

Village	Infestation on plant basis				Infestation on leaf basis			
	Plot No.	Number of plants damaged out of 400 plants	Per cent infested plants	Average per cent of infested plants	Plant No.	Number of leaves damaged out of total leaves	Per cent infested leaf	Average per cent of infested leaves
Lakadamar (Ta. Dharampur)	1	330	82.5		1	16/18	88.88	
	2	370	92.5	88.33	2	7/11	63.63	

Further no information is available in literature about the *Afidentula minima* except record of genera *Afidentula* by Pang and Mao (1977) in Tibet Autonomus Region.

Since the occurrence of this insect is newer one, a survey was undertaken to know its infestation level as pest in field condition during Sept., 1981 in Dharampur and Vansda Taluka of Bulsar District. Fingermillet fields infested by this beetle were examined during survey and the intensity of infestation was worked out on plant basis as well as on leaf basis. For this purpose ten plants each at forty spots of the selected field were observed for damage and number of plants damaged by beetles were recorded at different locations. Similarly five plants infested by beetles from each location were randomly observed and number of infested leaves as well as total number of leaves per plant were recorded. The percentage infestation on plants basis and on leaf basis are worked out and shown in Table 1.

TABLE 1 (Contd.)

	1	2	3	4	5	6	7	8	9
		3	360	90.0		3	8/12	66.66	73.68
						4	9/13	69.23	
						5	12/15	80.00	
NaninahiyaI	1	340	85.0	88.73	1	8/12	66.66		
(Ta. Dharam-	2	370	92.5		2	6/10	60.00		
pur)					3	10/16	62.50		56.16
					4	7/14	50.00		
					5	5/12	41.66		
Panas	1	40	10.0		1	2/10	20.00		
(Ta. Dharam-	2	10	2.5	5.0	2	3/12	25.00		
pur)									
	3	10	2.5		3	1/16	16.66		19.69
					4	2/13	15.38		
					5	3/14	21.42		
Karanjveli	1	350	87.5		1	7/12	58.33		
(Ta. Dharam-	2	340	85.0	86.25	2	6/11	54.54		
pur)									
					3	8/15	53.33		55.24
					4	7/14	50.00		
					5	6/10	60.00		
Bartad	1	50	12.5		1	2/10	20.00		
(Ta. Vansda)	2	60	15.0	13.33	2	3/14	21.42		
	3	50	12.5		3	1/7	14.28		19.17
					4	4/17	23.52		
					5	2/12	16.66		
Mahuvach	1	180	45.0		1	2/7	28.57		
(Ta. Vansda)	2	170	42.5	43.75	2	5/12	41.66		
					3	3/9	33.33		38.37
					4	6/14	42.85		
					5	5/11	45.45		

From the Table 1 it can be seen that the fingermillet crop is severely damaged by the Coccinellid beetle. The average infestation varies from 5 per cent to 88.75 per cent on plant basis and 19.17 per cent to 73.68 per cent on leaf basis.

Thus it seems that *Afidentula minima* Gorham causes severe damage to the fingermillet which may ultimately results in reduction of the yield.

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REFERENCE

- Pang, X. F. and J. L. Mao (1977). Notes on the Epilachninae, Tibet Autonomous Region (Coleoptera: Coccinellidae) *Acta Entomologica Sinica* **20** (3): 323-328.