

TABLE II (Continued).

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Palur	17-1-33	17-1-34	1'65	15'40	84'30	0'95
	6-2-33	14-2-34	1'60	17'10	89'50	1'06
(371-380 days old).						
Anakapalle	1-4-33	9-4-34	1'54	21'00	90'20	1'05
(381-390 days old).						
Anakapalle	5-11-32	28-11-33	2'00	15'56	89'90	1'02
	1-12-32	26-12-33	2'20	18'80	90'07	0'98
	3-1-33	20-1-34	1'35	19'30	91'40	1'02
	2-2-33	20-2-34	1'52	20'55	87'30	1'07
Maruteru	20-9-32	13-10-33	3'90	18'20	90'50	0'99
(391-400 days old).						
Anakapalle	2-9-32	4-10-33	3'55	13'20	70'20	1'14
Samalkot	1-3-33	9-4-34	1'53	22'20	90'10	1'08
	9-9-32	6-10-33	3'15	17'00	82'70	1'05
Maruteru	19-8-32	12-10-33	3'00	18'08	86'16	1'05
(less than 200 days old).						
Anakapalle	2-9-32	10-2-33	1'02	13'40	64'90	0'79
Samalkot	1-10-32	31-3-33	1'05	12'30	63'00	0'71
	8-12-32	24-6-33	1'30	12'80	68'20	0'87

Research Note

A new and important weed host of the cotton stem weevil (*Pemphres affinis* F.)

In the course of an intensive field study of the alternative food plants of the weevil, various species belonging to Malvaceae, Tiliaceae and allied orders were collected and examined. A few among them such as *hibiscus vitifolius sida spinosus cecrhorus olitorus* were noted to harbour a small but varying proportion of weevil stages. But the highest infestation was observed in a hitherto unrecorded weed host *malvastrum coromandelianum* (Garcke). This weed is widely distributed and abundant on all wastelands, sometimes also associated with cultivated crops, in borders of fields, along road sides, tank bunds, sides of water channels, fences and other neglected places.

The younger plants were generally free and not attacked while the majority of the medium sized and large ones were infested. The mode of attack of the weevil is approximately similar to that in cotton. The nature of the injury and the character and course of the tunnels are also roughly similar. In a small number of cases galls are also produced. As many as three galls have been noted to be developed in the same plant. A small percentage of mortality is also seen to be caused among such plants. A maximum of nine attacks with six live grubs of varying stages has been noted in a single plant. The following table presents the data obtained in regard to the weevil population in the different lots of this plant material.

Total No. of plants examined.	% of attacked plants.	Total number of live stages.				Emergence apertures.	Mere infestations	No. of infestations per 100 plants.	No. of live stages per 100 plants.
		Larva.	Prepupa.	Pupa.	Adult.				
558	42	116	9	2	7	14	154	54	24

In view of its abundance and intense susceptibility to weevil infestation (with a maximum of 65%), *Malvastrum coromandelianum* appears to be in certain seasons, the foremost weed host of the cotton stem weevil capable of maintaining fairly large populations in the absence of cotton. The importance of such offseasonal hosts is all the greater because the pest populations even in country cottons during this part of the season are seen to be rather insignificant. Further studies in this line are in progress.

I am thankful to fieldman Royappan for the collection of host plants.
Cotton breeding Station, }

3-10-'36.

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Agricultural Notes.

1. In the costal tracts of Tekkali taluk, Vizagpatam district, where the villagers are able to get fuel from various topes, and where the soils are in bad need of manuring, ryots do not at all waste cattle dung by using it as fuel, but add every bit of it to their fields after careful conservation. Soils are frequently spread over the floor of the cattle sheds for catching cattle urine; and the urinary earth, dung and litter are carefully conserved in pits with great care. It is refreshing to note in this tract where Departmental propaganda was not undertaken till recently the practices in the conservation of cattle manure have been developed to a high degree of perfection. Possibly the availability of fuel, and the hungry nature of the soils requiring manuring are responsible for the adoption of these commendable practices that are proving uphill tasks in other areas.

2. *Erythrina* (*Erythrina indica*) is the popular hedge plant round each holding as it supplies not only the necessary standards to each cultivator, but also timber for boat building. It is claimed that unlike other trees *Erythrina* does not affect the neighbouring crops and can conveniently be planted wherever props for fences are required. In places where white-ant attack is so serious as not to allow any posts in tact even for few months, the introduction of *Erythrina* standards by raising nurseries in the beginning, if necessary, may be encouraged. Its seeds can be got in the tract for mere asking.

3. With the annual depredation of Red Hairy Caterpillar (*Amsacta albistriga*) the villagers in the tract had emigrated largely to Burma. The members left at home find it difficult to cultivate the fields far away. Only the fertile plots adjoining the villages are cropped. The others are being gradually planted with cashewnut, which is not only proving to be a profitable hardy fruit tree for the poor soils, but also is free from the caterpillar pest. This practice can be copied by farmers of other tracts where similar conditions prevail.

4. The introduction of cashew nut did not prove to be an unmixed blessing as the poor patches of fields planted with them affect the neighbouring plots by the spreading roots of cashew. To overcome this, ryots dig deep trenches along sides of fields as is done on Government Farms for experimental plots, and these trenches serve also to trap *Amsacta* caterpillars during the period of their ravages.

5. It is our common experience that filling up gaps in live hedges with any live plant material is difficult, but in the above tract *Pandanus* is freely made use of. The stems when closely planted in the gap immediately serve as barrier and take root quickly. The live fences round each holding support vegetable creepers of bittergourd and *Agakara* (a variety of bitter gourd), by the sale of which a fair income is derived. These creepers are almost of perennial nature—bitter gourd continuing from year to year with self sown seed, and *Agakara* with underground stems.