RELATIVE EFFICIENCY OF SOME PLANT PRODUCTS IN CONTROLLING INFESTATION BY THE ANGOUMOIS GRAIN MOTH *SITOTROGA CEREALELLA* OLIVfER (GELECHIIDAE: LEPIDOPTERA) INFESTING STORED PADDY IN KERALA

The Angoumois grain moth *Sitotroga cerealella* Olivier is a major pest of stored unhusked paddy in Kerala. Some of the plant products (Vide Table 1), the insecticidal properties of which have been indicated by Frear (1948), were tested for their efficiency in reducing the pest incidence.

Paddy grains of the variety TKM-6 with 14.3% moisture content were utilised for these experiments. The seeds were thoroughly cleaned and all the underdeveloped and pest-damaged grains were removed by soaking in supersaturated sodium chloride solution. The latent infestation by S. *cerealella* was controlled by fumigation with aluminium phosphide tablets. Rhizome bits of sweet flag and chopped leaves of the other plants were dried in sun and these were thoroughly mixed with grain at one per cent on a w/w basis. The treated grains were subjected to natural infestation by S. *cerealella* for a period of three months by distributing them in a godown severely infested by the moths. The grains were exposed in gunny bags of size 30 cm X 20 cm, there being four replications for each treatment. Ths percentage damage sustained by the grains after three months of storage was ascertained from random samples drawn from different treatments, by counting grains which revealed circular holes through which adult moths have escaped and those which contained different stages of the pest. Results are furnished in Table 1.

It is evident that all the plant products when mixed with grains significantly reduced pest infestation, the efficiency being in the following order.

Azadirachta indica > *Vitex negundo* > *Adhatoda vasica* > *clerodendron infortunatum* > *Acorus calamus*

Among the different plant products, A. *indica* leaves are relativelv more effective then A. *vasica*, C. *infortunatum* and rhizome bits of A. *calamus* in reducing moth infestation, while the pest control attained by admixture of 1 *indica* and *V negundo* are on par.

Table 1

Extent of damage caused by S *cerealella* to TKM-6 paddy grains mixed with different plant products

Sl No.	Treatments	Mean percentage infestation
1	Sweet Flag, *Acorus calamus* Linn. (Araceae, *Vayambu**)	3.00
2	*Vitex negundo* Linn. (Verbenaceae, *Karinochi)*	1.90
3	*Azadirachta indica* Linn. (Meliaceae, *Veppu*)	1.15
4	*Clerodendron infortunatum* Linn. (Verbenaceae, *Vattaberivelam*)	2.10
5	*Adhatoda* Vasica Nees (Acanthaceae, *Adalotakam)*	2.05
6	Untreated control	3.95
	SEm	0.4315
	CD (p = 0.05)	0.9061

*Family and local names respectively

REFERENCE

D. E. H. Frear. A Catalogue of Insecticides and Fungicides. vol. II: Chemical Fungicides and Plant Insecticides, 1948, pp. 63, 71, 82. (The Chronica Botanica Company of Waltham, Mass., U. S. A.).

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