

KERNELS OF *THEVETIA NERIIFOLIA* JUSS.—A POTENT INSECTICIDE

INVESTIGATIONS were recently started at the Entomological Laboratory, Agricultural College and Research Institute, Coimbatore, to determine whether indigenous vegetable poisons could subserve as potent insecticides as well. The existence of contact insecticidal properties of a high order in the seeds of *Thevetia neriiifolia* Juss. has come to light. Aqueous infusions were found to be toxic against insects infesting plants. These were prepared by soaking mashed kernels in water for 24 hours and filtering the extract. It was then sprayed with the addition of an equal quantity of soft soap. Trials against caterpillar pests such as *Prodenia litura* F., *Papilio demoleus* L., *Deilephila nerii* L., *Spodoptera mauritia* B., *Laphygma exigua* H.B., *Eupterote mollifera* W., *Euproctis* sp., etc., and bugs of different species of Aphids, Tingids and Psillids have given very satisfactory results. The optimum concentration for getting a high mortality in most of these insects would appear to be $\frac{1}{4}$ to $\frac{1}{2}$ oz. of the kernel in one gallon of water (0.16% to 0.31%). Mealy bugs like *Pseudococcus virgatus* C. and hard-boiled scales like *Saissetia nigra* N. however, require higher concentrations varying from one to two ounces per gallon. With the added advantage of its cheapness and easy availability, this vegetable poison is bound to prove an important source of a very effective insecticide. Further studies are in progress.

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GENETICAL STUDIES OF ERI SILK- WORMS—(*ATTACUS RICINI* BOISD)

In a consignment of live Eri silkworms received from the Silk Farm, Coonoor, two different types of worms were met with. While both were similar in size, colour, position of setæ,

etc., one had prominent black spots on the body (Fig. 2) while in the other the black spots were absent (Fig. 1). To find out whether this variation was brought about by differences in sexes the two types of caterpillars were sorted out, fed separately and allowed to pupate. When the moths emerged both sexes were found in both the groups and they were phenotypically alike. Their breeding behaviour was then observed. Eventually moths from the

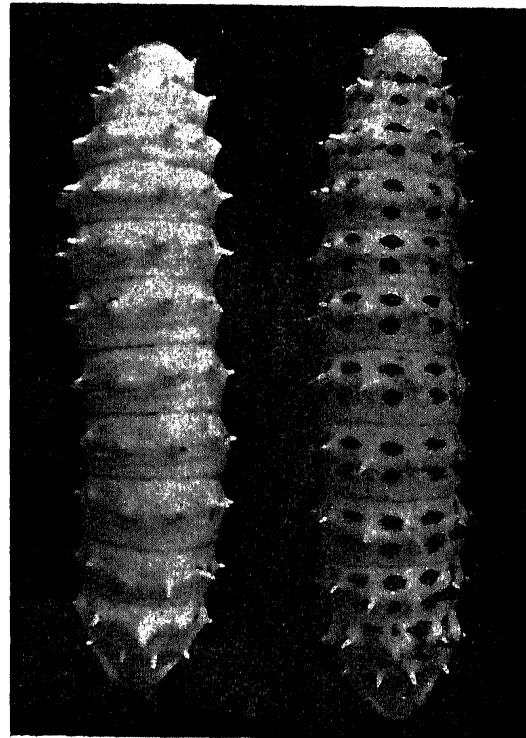


FIG. 1

FIG. 2.

'spotted' were crossed with those from the 'non-spotted'. F.1s were all spotted. In the F.2s spotted and non-spotted segregated in a simple monohybrid ratio (245:84). This was further confirmed by the results obtained by back crossing the F.1 with the recessive (177:162). It was concluded that spotted character in Eri silkworms is controlled by a simple pair of Mendelian factors (S, s) spottedness behaving dominant.

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