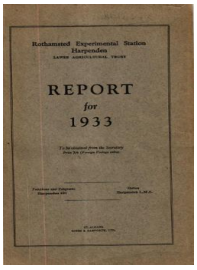
This work is licensed under a Creative Commons Attribution 4.0 International License.

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readible, or you suspect there are some problems, please let us know and we will correct that.

Report for 1933

Full Table of Content



Insecticides

Rothamsted Research

Rothamsted Research (1934) *Insecticides ;* Report For 1933, pp 41 - 41 **- DOI: https://doi.org/10.23637/ERADOC-1-3**

This work is licensed under a Creative Commons Attribution 4.0 International License.

INSECTICIDES

The work has been chiefly concerned with insecticide plants. Those containing rotenone and the pyrethrins are most valuable because, although highly poisonous to insects, they are comparatively harmless to human beings and domestic animals. Curiously enough, rotenone is highly poisonous to fishes also. There is an increasing demand for this substance which, so far, cannot be made synthetically on the large scale; it therefore has to be extracted from plants.

Pyrethrum (*Chrysanthemum cinerariaefolium*) is a valuable insecticide, its flowers containing two important active principles—the pyrethrins I and II. Experiments are made in collaboration with the Plant Pathological Department of the Ministry of Agriculture to ascertain the effect of soil, season, manuring and other cultural operations on the yield of pyrethrin per plant and per unit area. The plant is perennial in habit, but requires a period of dormancy otherwise it gives poor yields of flowers; generally speaking the climatic conditions of this country appear to suit it better than those of tropical countries. The possibility of obtaining by cross-fertilisation new and more potent strains than the old ones is being examined.

Unfortunately, pyrethrum dusts quickly lose their efficacy when exposed to air and light. Methods have now been devised for partially overcoming this.

Two groups of tropical plants, *Derris* spp. and *Lonchocarpus* spp., contain rotenone as well as other insecticidal substances, and are included in the investigations. Some of this work is done in association with the East Malling Research Station and with the Department of Agriculture of the Federated Malay States: it is clear that Malay can produce excellent samples.

The increasing demand for rotenone and similar insecticides and the fact that the British Empire can supply the necessary plant materials either from the tropical or the temperate regions makes it very desirable that this work should be developed much more intensively than is being done at present. F. Tattersfield has struck a very valuable line of work and his results are being closely watched by insecticide makers at home and in the United States. With more assistance he could make much more rapid progress than is possible at present. Messrs. Geo. Monro kindly provide funds for a technical assistant, while a substantial subscription has recently come from the well-known firm of Messrs. S. B. Penick & Co., of New York. The Department is still understaffed and could work to much greater advantage if more funds were available.

BEES

The useful investigations carried out by D. M. T. Morland over the last eleven years on the technique of honey production are now bearing fruit, and his services are increasingly in demand among bee-keepers. Considerably more work has been done this year on the factors determining the rate of accumulation of honey in the hive, as measured by continuous weighing, and on internal economy of the hive, studied by closely watching the activities of marked bees in a glass hive. New and interesting observations are being made which