

PART I

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INTRODUCTION

The aim of this study is to present an up-to-date literature review on the coconut palm covering all aspects from the seedling stage to the production of ripe nuts for harvest, with a large section devoted to pests and diseases. The second section of the project (and a considerably smaller amount of time) has been devoted to a report on the cultural methods employed by the coconut estate managers and coconut peasant farmers of Trinidad, and an outline of the problems of the local industry.

The Coconut Research Institute of Ceylon is engaged in technical investigations on production, diseases and pests and processing, and publishes more or less regular reports of the work being carried out there. In India two coconut research stations are doing technical work on breeding, manuring and cultivation of the coconut palm. A station in Indonesia is doing some work on breeding, manuring, cultivation, diseases and pests, and the Agricultural College of the University of the Philippines has also carried out some technical and agricultural investigations on the coconut. The bulk of new information is provided by these stations, therefore, whilst minor producing countries carry out work on particular local problems. (South Pacific Commission, 1957).

It will be apparent from the ensuing Literature Review that there is a great need for more research on the coconut palm, not only on some of the very pressing disease problems of certain countries, but on the general nutrition and physiology of the plant. The fact that Sampson's (1923) very commendable book is still the

chief reference for a great deal of botanical and physiological information on the coconut palm is witness to the deplorable lack of research in these fields in the last forty years.

It is heartening to know that a new Research Institute with very general terms of reference is to be set up shortly in Jamaica. In addition an FAO team will carry out detailed investigations of a suspected virus disease in the Philippines which may provide some very useful fundamental information on the palm.

A large section of this literature review is devoted to pests and diseases as these have attracted more widespread interest than any other field of research connected with the palm. The reason for this is the wide variety of pests and diseases which exists, and the extreme severity of losses caused by them in different coconut producing countries. A good number of pests are peculiar to a limited area so that they assume very considerable local importance and a great deal of effort may be expended in relatively unimportant copra-producing countries to overcome a formidable threat to the local industry. Examples of this are the corread bug causing early nutfall in the British Solomon Islands, and the Stem Borer, Melipotina insulare of the Seychelles.

Mineral Requirements of the Coconut

Samuelson (1954) quotes the following figures relating to removal of soil nutrients in the nuts for palms on the Malabar Coast producing 120 nuts/season. (Table 1).