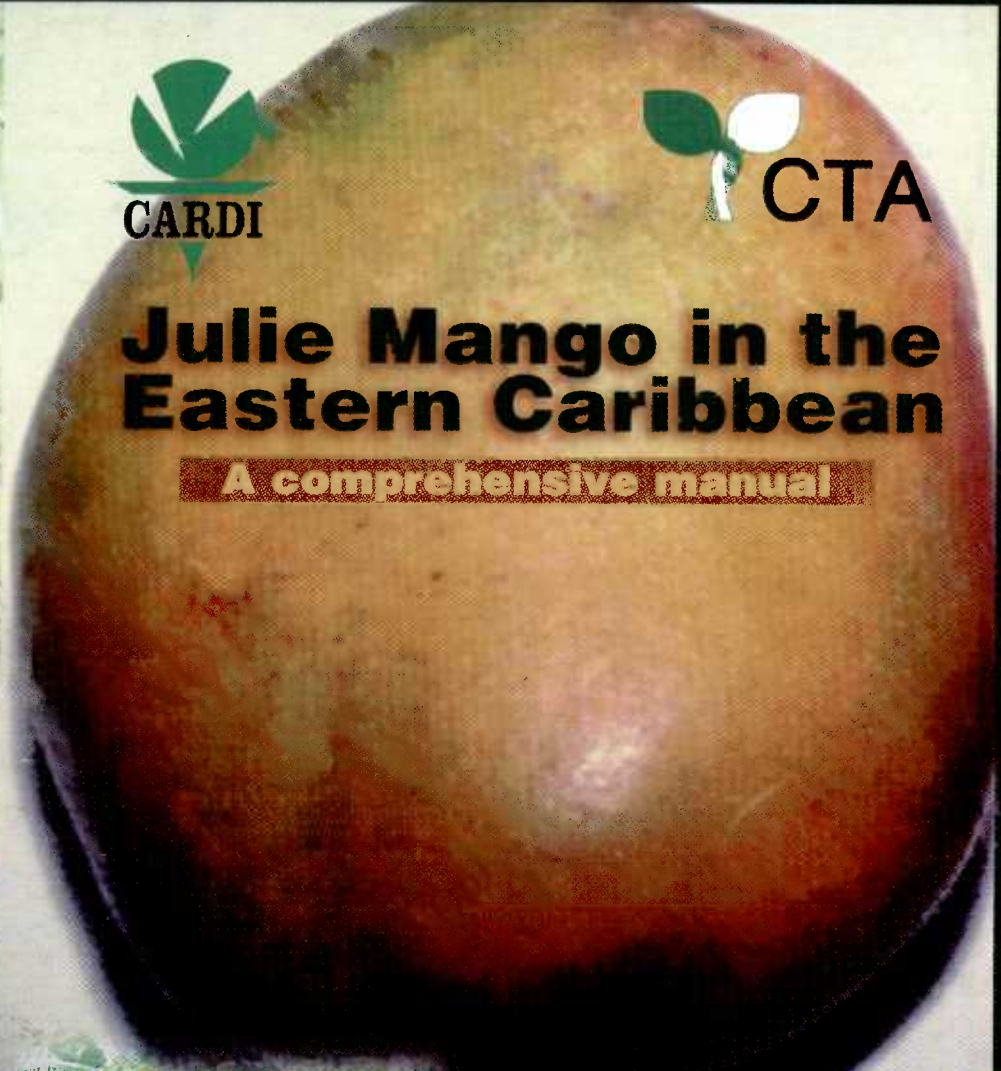




Julie Mango in the Eastern Caribbean

A comprehensive manual



JULIE MANGO
IN THE EASTERN CARIBBEAN

A comprehensive manual

Caribbean Agricultural Research and Development Institute (CARDI)

The Technical Centre for Agricultural and Rural Cooperation (CTA)

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Photographs

All the photographs are placed in the centre of the manual, for economy in printing.

Acknowledgements

This Julie Mango Manual is the culmination of years of effort. It presents a set of technologies developed for production of the Julie mango in a number of member countries of the Organisation of Eastern Caribbean States (OECS).

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Preface

Mango is a very important fruit in the Caribbean. During the season of mango fruit many people in the region consume a large number on a daily basis. The fruits contain extremely high amounts of vitamin A and are very rich in other important nutrients such as calcium, iron, thiamin and vitamin C. In common with many tropical fruits, mango's nutrient composition indicates vast superiority to fruits such as apple, grape and pear which have to be imported into the Caribbean.

Caribbean people not only consume mangoes, but they are very knowledgeable about the various varieties. This knowledge extends to strong views about the rank preference of varieties. Although, to my knowledge, few formal scientific surveys have been done I suspect that most people would rank 'Julie' as the favourite variety.

This manual is a very comprehensive account of all aspects of producing and marketing Julie mango. The various chapters were written by CARDI scientists and their collaborators and were compiled by Gregory Robin of CARDI, Dominica. The writers are giving readers their

knowledge gained from mango production and marketing in the OECS countries, but most of the information is readily transferrable to other Caribbean countries.

It is hoped that publication of this manual will stimulate increased production of Julie mango. This will not only improve the nutritional status of Caribbean people but also increase the trade in the commodity with a particular thrust towards extraregional markets.

Last but by no means least, there is potential for a viable processing industry utilising mango. The opportunities include cottage industries and large scale operations. The manual does not overlook these possibilities and the chapter on processing contains much of the information necessary for the entrepreneur who wants to know how to manufacture mango products.

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Introduction

The Exportable Fruit Crops Research and Development Windward Islands Project (EFCP) began in April 1989, initially for three years and was extended to August 1993. Subsequently a second phase ran until August 1996.

The overall objective was to develop regional technical capabilities which, through research, would lead to methods for increasing the potential of exportable fruit crops in the Windward Islands. The crops covered were avocado, coffee, grapefruit, mango, passion fruit, and sapodilla. Activities focused on improved agronomic practices, control of pests and diseases and reducing postharvest losses.

The specific objectives were:

- to develop appropriate methods for the control of pests and diseases.
- to develop economically sound cultural practices which would improve production of quality fruit.
- to introduce disease-free germplasm and evaluate varieties and cultivars for yield and marketability.
- to establish practices aimed at reducing postharvest losses in the field, in transport and by handlers/shippers.
- to publish recommendations arising from research and disseminate these to Ministries of Agriculture.
- to initiate training programmes for technical and professional workers, as part of an outreach programme.

The majority of the funding was provided by the UK

Overseas Development Agency (ODA) through the Natural Resources Institute (NRI) and the British Development Division in the Caribbean (BDDC).

Strategically, project research activities were confined to Dominica to build on the research effort initiated by the Ministry of Agriculture Orchard Crop Management and Research programme which was financed by BDDC. Results were to be transferred to other Windward Islands.

Co-operative linkages were established between this project, the Agricultural Diversification Coordinating Unit (ADCU) of the Organisation of Eastern Caribbean States (OECS), the Inter-American Institute for Co-operation in Agriculture (IICA), The University of the West Indies (UWI) and other CARDI projects, to transfer relevant technical findings to the OECS through a series of regional workshops.

Training activities were also mounted in Dominica by the Ministry of Agriculture to train local farmers and extension officers. Specific institutional strengthening activities were effected with the UWI and the Natural Resources Institute (NRI) to upgrade the skills of CARDI's staff.

The USAID-funded West Indies Produce Support Project (TROPRO) with Israeli technical assistance and with collaboration from the Dominica Ministry of Agriculture initially validated and then helped to extend the technologies emerging from the development project.

INTRODUCTION

The major constraints to production and marketing of mango were identified as fruit fly, anthracnose, gall midge, postharvest losses, irregular flowering and fruit set resulting in low productivity. Also, trees were often established in unfavourable agro-ecological zones, and orchards were poorly managed. Attention was focussed solely on Julie mango as this is the mango most commonly grown for export. The main results of the first phase are summarized in Annex 1.

During the second phase of the project, technologies emerging from Phase I - pruning, fertilizer use, fruit fly trapping, application of a rationalized spray programme to control anthracnose, and hot water treatment, were initially evaluated on three farms in Dominica. During the latter stages of the on-farm validations, the technological package was extended to 25 farms using the 'Task Force' approach. These farms also served as model farms, and formed the nucleus for the supply of high-quality export fruit.

In turn these activities contributed to the Joint Regional Marketing Programme, the objectives of which were to increase the profitability and foreign exchange earnings of

fresh produce exports, working in conjunction with private sector exporters.

CARDI continues to monitor approximately 30 farms for fruit fly and anthracnose so that a management strategy can be planned, as well as to forecast crop production for the Dominica Export Import Agency (DEXIA).

This manual is a compilation of technologies from many parts of the world that have been successfully adapted and validated in the Eastern Caribbean. CARDI's own research in the Windward Islands has contributed significantly to this information.

It is the most comprehensive source of information available to technicians and extensionists in the East Caribbean. It is hoped that the manual will act as an important resource for extension workers and students and assist the subregion's farmers, exporters and processors to develop Julie mango to its full potential.

Project staff are listed in Annex 2.