

CHAPTER I

1. INTRODUCTION

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Mango is one of the six major fruit crops in the world, having a world production of over 15 million tonnes per annum. The world demand for mango is increasing annually, particularly from temperate countries where it is rapidly gaining in popularity. However, compared to the information available concerning production, post-harvest treatment and processing of other major fruit crops eg. bananas and apples, there is a dearth of research-backed recommendations for the mango industry. This is because mango has, in the past, received little attention in research or trade.

Mango has been identified by various market studies of the Caribbean Island States (Hrapsky et al 1985; Commonwealth Secretariat Export Market Development Division 1985; Caribbean Farming 1986) as a high potential crop. On many of the islands, therefore, new mango orchards are being planted. It is hoped that it will become one of the major new crops of the region in an attempt to diversify from traditional export commodities (eg. sugar and bananas) for which there is declining market demand. The local and regional demand for mango in this region is also high and mango has nutritional value too, being rich in vitamins A, B & C and fructose, fibre and proteins. Mangoes, however, are highly perishable fruits and therefore suffer much wastage and post-harvest disorders, thereby restricting their marketing potential. Similarly current Caribbean varieties have low yields and irregular bearing and suffer greatly from disease, particularly anthracnose. Technology aimed at increasing production and reducing post harvest losses of mangoes in the Caribbean is undeveloped. Scientific work is required as a basis for the development and adaptation of appropriate technologies which will reduce post-harvest losses of mango, and which will allow for reliable production of fresh fruit of high quality for export. Technologies can also be adopted to local varieties for mango processing where there is a glut of suitable mangoes, or mangoes unsuitable for the fresh fruit market. These technologies must be developed and implemented in order to make this industry a profitable one.

The Commonwealth Science Council recently carried out a study of the mango industry in the Commonwealth Caribbean countries (Prinsley, 1986). In this study, the major problems facing the mango industry in this region were identified. These included:

1. Post-Harvest Problems

- i) Anthracnose post-harvest damage, causing huge losses and wastage of mangoes.
- ii) Short shelf life of mango.

- iii) No standard indices for harvest maturity or for quality control.
- iv) Restricted experience in processing of local varieties.
- v) The banning of ethylene dibromide by the USA Environmental Protection Agency as a fumigant for fruit fly on fruit entering USA.

2. Pre-Harvest Problems

- i) Fruit set and fruit drop.
- ii) Irregular flowering and fruiting.
- iii) Lack of knowledge concerning nutritional requirements of local varieties.
- iv) Lack of standardised, well known cultural practices.

The development of a coordinated collaborative Caribbean research project concerning the solution of these major problems of the mango industry was therefore recommended. This project was planned and developed further at a CSC project planning meeting in Dominica in March 1987.

At this meeting selected experts in the field presented thorough reviews of research done world-wide concerning the major problems identified in this region. These reviews provided necessary background information to further research in the Caribbean and allowed identification of areas where more research was required.

This volume represents the collection of review papers. It is intended as a handbook for the Caribbean scientists involved in the CSC research programme but should also be of interest to other mango researchers and people involved in the mango industry.

References

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