

Sweetpotato Postharvest Assessment

Experiences
from East Africa



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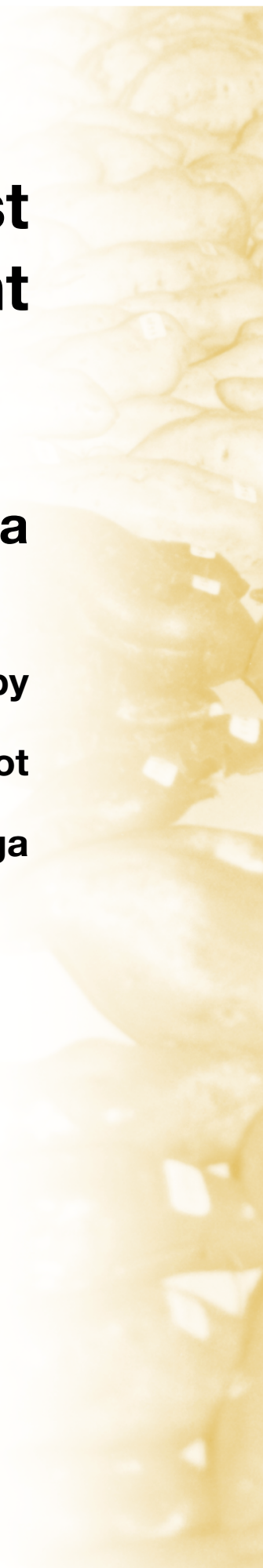
Sweetpotato Post-Harvest Assessment

Experiences from Tanzania

Edited by

Debbie Rees, Quirien van Oirschot

and Regina Kapinga



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INTRODUCTION

The origin and objectives of this publication

This book was produced to summarize work carried out on post-harvest aspects of sweetpotato between 1994 and 2002 within collaborative projects involving the Tanzanian Ministry of Agriculture, the Natural Resources Institute (University of Greenwich, UK) and the International Potato Center, with input from the Kenyan Agricultural Research Institute and the National Agricultural Research Organization of Uganda.

The work arose out of a growing realization that for any crop cultivar to be successful it must not only have good production characteristics but also characteristics that ensure the harvested crop is acceptable/suitable for its intended use. Such characteristics are usually termed *post-harvest* characteristics. Although this term will be used throughout this book, it is in some ways misleading as the distinction between pre- and post-harvest characteristics is not always clear, and so-called post-harvest characteristics are very dependent on pre-harvest growing practices and conditions.

The selection of new cultivars is an important aspect of sweetpotato crop improvement. Sweetpotato is considered to be the most under-exploited of the developing world's major crops. This has probably arisen because of its status as a poor man's crop, and the fact that it is produced almost entirely in developing countries. Breeding initiatives for sweetpotato are at a relatively early stage compared to other staple crops. Given the enormous genetic diversity of sweetpotato worldwide, and the fact that breeding programmes of sweetpotato are relatively new, crop improvements are expected to be rapid. New

cultivars can provide farmers with improved yields, earlier crops, reduced susceptibility to pests and diseases, and improved root quality characteristics, at little or no additional cost. Those interested in the selection of new cultivars include agricultural researchers, development and extension workers and, of course, farmers.

The book is focused primarily towards agricultural scientists and breeders anywhere in the world that work with sweetpotato, although it will also be useful for development and extension workers. The hope is that by learning of our experiences and findings through our work in East Africa, others will be helped to develop methods for assessing the quality aspects of sweetpotato cultivars within their own breeding programmes. We also hope that it will be of use to those working with other crops.

Within each chapter, the trials and experiments carried out to investigate a particular aspect of sweetpotato post-harvest quality are described. The relevance of the findings to other regions of the world is discussed. In most cases some details of the methods used are included (although separated from the main text in shaded boxes). Where a reader has a particular interest in a topic more detailed reports and publications listed in the References section at the end of each chapter should be consulted.

Funding for the work reported here was provided by the Department for International Development, UK through their Renewable Natural Resources Knowledge Strategy (RNRKS) programme, and by the International Potato Center. In addition, all other organizations involved donated staff time and use of field or laboratory facilities.