

PREFACE

Onion is one of the main cash crops grown in the dry zone of Sri Lanka. It is a profitable cash crop which has the potential to uplift the living standard of the rural communities of the country. Both red and big onions are an essential part of the daily diet of Sri Lankans, there exists a relatively constant year-round consumer demand. However, onion production is seasonal which create a market glut. Review of the present status of onion revealed that the country is almost self-sufficient in red onion but over 70% of big onion requirement is imported spending substantial amount of foreign exchange. Government of Sri Lanka has taken a policy decision to increase the local production of onion to reduce the importation to 40% by 2015.

Achieving this target requires strategies such as expansion of onion cultivation in non-traditional areas, off season cultivation and increase of productivity. Department of Agriculture and Provincial Departments of Agriculture have been launching numerous programs to increase productivity and also to expand the cultivation of onion in traditional and non-traditional areas of the country harnessing the agro-ecological diversity. However, the local onion production and extent were not stable during the past several years due to various reasons such as use of poor quality seeds, unexpected rainy weather conditions, lack of knowledge on appropriate crop management practices. At present, many problems have been raised regarding the quality of seeds produced by self-seed production programs due to long term use of seed material without proper selection of mother bulbs and maintenance of purity which have deteriorated the parental stocks in farmer's fields. Imported seeds are of poor quality due to mixing of seed of different varieties, low adaptability to local conditions, poor germination and seedling vigor and low yield and cause many difficulties to growers such as. This demand production of quality seeds, develop high yielding varieties and technologies to increase seed yield and increase storability and to make aware the farmers on appropriate crop management practices.

In order to address the above issues and problems, an international workshop on "Onion Seed Production and Crop Husbandry" was held from 22-24th December 2014 at the Hotel Cinnamon Lakeside, Colombo Sri Lanka with the participation of renowned scientists, administrators, policy makers and private entrepreneurs which provided a forum to share knowledge for the future development of the onion industry in Sri Lanka. Various issues have been discussed and the development of onion industry in Sri Lanka, India, Bangladesh and Korea have presented. This book was made possible due to these workshop proceedings. The first two Chapters provide a detailed description of onion research and crop husbandry in India and Bangladesh, respectively. After introducing the present status and future challenges for onion industry in Sri Lanka in Chapter 3, current status and future challenges of improvement of big and red onions are discussed in Chapters 4 and 5, respectively. Opportunities and prospects of integrated disease and pest management of onion in Sri Lanka are presented in Chapters 6 and 7, respectively. The need and methods for quality control in onion seed and bulb

production are explained in Chapter 8. The experiences of onion breeding and seed production and integrated pest management for quality onion production in Korea are also shared.

Editors sincerely hope that the information in this book will fill the gap between current practices and recent research findings and will be useful in increasing farmer's income and achieving self-sufficiency in both red and big onions in Sri Lanka. Director General, Additional Director Generals, Directorate, Research, Extension and Administrative staff of the Department of Agriculture are gratefully acknowledged for their guidance, presence and support. Deputy Directors and the staff of the DOA Publication unit and Audio Visual Centre are acknowledged for their support in preparation and printing of this publication. Korea Project on International Agriculture (KOPIA) is gratefully acknowledged for their help in strengthening the self-seed production program, improving seed production technology and the productivity of big onion and also in organizing the workshop and producing the subsequent publications.

Editors