

Preface

Clusterbean has become the most important export commodity in the farm sector. It is a drought tolerant leguminous crop of arid and semi-arid regions having a vast range of diverse and unique applications. It has a special place in the commercial scene due to the gum content in its seeds. India's share in the production of clusterbean seed is about 82 % and the country earns thousands of crores of rupees by exporting clusterbean products. Although the crop has attained the status of a number one agriculture export commodity in the farm sector, the productivity, production and expansion of the crop to non-traditional regions which are suitable for its cultivation require more attention. The clusterbean processing industry in India is fragmented; food safety alarms are growing in the export front because the technology of processing is not well developed. The high fluctuation in productivity and export are major concerns.

The present work provides in-depth information about the crop, its cultivation, genetic improvement, plant protection measures, management of abiotic stresses, molecular aspects, etc., and unites the value chain for the benefit of all the stakeholders of the crop, i.e. students, teachers, researchers and industrialists. This book is organized into seven chapters: Chapter 1 introduces the crop and gives the basic introduction, including prospects and constraints. Chapter 2 covers genetic improvement and variability of the crop and includes various tools and techniques used for the genetic improvement and creation of variability in the crop. Chapter 3 is dedicated to clusterbean gum and its by-products and covers the properties of gum and its application. Chapter 4 is devoted to the cultivation of the crop. Chapter 5 presents the plant protection aspect of the clusterbean. Chapter 6 addresses physiological and abiotic stress-related aspects of the crop. Chapter 7 covers the reviews of the genetic markers and the biotechnological works accomplished. The study has systematically referred to the research papers and data from industry and markets. It may prove a very useful book for industry as well as for the research community.

Rakesh Pathak

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Pathak, R.

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