



# LITCHI

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## Preventive Practices & Curative Measures

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## **Preventive Practices**

## **and**

## **Curative Measures**

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## Preface

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India is the second largest producer of litchi. Bihar, West Bengal, Tripura, Assam, Uttarakhand, Jharkhand and Punjab are the major litchi producing states. Litchi area is further expected to increase in many other states with the advancement of entrepreneurship among the farmers. Shahi, China, Culcutta, Bedana, Late Bedana and Longia are being considered among the most superior types of litchi in India. Most of the commercial cultivars of litchi are location specific with long gestation period. Commercial litchi farming is done by large farmers, however, the scenario is changing gradually due to participation of small and marginal farmers. The productivity of litchi is low for many reasons including poor initial planning, inferior planting material, poor orchard management practices, unscientific post harvest practices and natural calamities. When the tree is full of vigour, vegetative dominance prevails over reproductive phase in certain varieties and locations, which adversely affects flowering, fruit set and fruit growth. High fruit drop and post harvest losses along with poor management of pests, diseases and disorders and poor upkeep of orchard affect the economic production of litchi. In order to avoid loss and to increase profitability, it is necessary to take steps from initial stage so that the vigour, growth and fruiting capacity of the plant is maintained.

There are two types of losses in litchi cultivation. First, arising due to grower's negligence/ mistakes in planning, management of orchard and harvest and the second, arising due to natural factors such as, pests, diseases, disorders and adverse climatic factors. Mistakes may occur in setting up of an orchard, selecting varieties, planting, fertilizing, drainage, irrigation systems, shaping, weed control, mulching, pruning and canopy management, use of growth regulators, harvesting, packing, marketing and quality management. Natural problems such as, pests, diseases and fruit disorders may occur by their own and may aggravate further due to negligence of farmer. Number of books and information bulletin on litchi are available presently, however, most of them are reference based which

## Preface/vi

fulfil the need of academicians, researchers and students. The present book has been prepared to educate farmers and orchardists so that they can take proper step from very beginning to avoid problems in litchi cultivation. This book has been prepared in action mode as "loss preventive practices and curative options" in such a way as the farmers can easily understand the technology and initiate appropriate and timely action. The manuscript is based on the research and experiences of the authors' vis-à-vis the available published literature on the subject. We hope that large number of farmers who are engaged in litchi cultivation and beginners will be immensely benefited from this book. We acknowledge the litchi workers whose published reports/works/research papers/book/monograph in India and abroad have been referred / consulted for the preparation of this book. Special thanks are due to workers at RAU, Pusa, Samastipur, GBUAT, Pantnagar, FAO and NRC, Litchi, Muzaffarpur for their valuable help to bring out this publication. Thanks are also due to Shri K. Gouri Sankara Rao for helping in preparation of this manuscript.

## Authors

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# LITCHI

## Preventive Practices & Curative Measures

Commercial litchi farming so far is done by large farmers who are capable of sustaining long gestation period and failure of crops. When the tree is full of vigour, the dominance of vegetative phase prevails over reproductive phase in some varieties and at some locations which adversely affects flowering, fruit set and fruit growth, and sometimes fruit drop due to high competition for photosynthates also become limiting factor to litchi production. Besides, there are many pests, diseases and disorders which affect the economic cultivation of litchi. It has been observed that orchardists owner or contractors are active in their orchards only when flowers or fruits are present on the trees for rest of the period, they take little care of their orchards. To maintain vigour, growth and productivity, it is necessary to perform proper operations throughout the year. The main reason behind poor productivity and low profitability of litchi is the poor knowledge of farming community.

In litchi, some problems arise due to growers negligence and others are brought about by pests, diseases, disorders, plant physiology and climate. Growers' negligence/mistakes may occur in setting up an orchard, drainage, irrigation systems, selecting varieties, planting, fertilizing, shaping the plant, weed control, mulching, pruning and canopy management, use of growth regulators, harvesting, packing, marketing and quality management. Other problems such as pest, disease and fruit disorders may occur by their own or may aggravate due to negligence of farmers. Many books and information bulletin on litchi are available, however most of them are of facts oriented which often lack in operational guidelines. This book has been prepared in problem solving mode in such a way as readers can easily understand and adopt the litchi technology which have been developed by different knowledge groups for betterment of the litchi industry. We hope that this book would serve the purpose of farmers and those who are engaged in litchi industry.

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