Recent Advances in GRAPES
The Authors

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Grape cultivation is very lucrative farming in India. Grape is grown in Maharashtra, Karnataka Andhra Pradesh and Tamil Nadu. India produces 22 lakhs tones of grapes, which is 3.31% of the world production. India has the advantages of harvesting grape at such a time when no grapes are harvested anywhere in the world. In Northern Karnataka two pruning and one crop is the practice, where as two pruning and two crops is the practice in south Karnataka. In Karnataka there is a scope to establish a wine park and lot of demand for table grape, raisin locally and export quality grapes in foreign countries. At present, USA and Turkey together produces 80% of the total raisin in the world. UK is largest importer of raisin. In this book “Recent advances in grapes” all aspects like soil and climates, varieties, propagation, training and pruning, girdling and thinning, irrigation, nutrient management, use of growth regulators, physiological disorders in grapes, pest and disease control, processing, wine making, transport and marketing, scope for export along with related research done on grape in the world is covered.

We sincerely hope that this book will be useful to scientists, teachers, extension workers, students and farmers.

Dr. M.K. Sheikh
Dr. N. Manjula
Dr. S.R. Mulla
Foreword

Cultivation of grape is one the most remunerative farming enterprises in India. The medicinal properties of grapes were mentioned as early as 1356-1220 BC by famous Indian medicine scholars, Sasruta and Charaka in their medical treatises entitles ‘Sasruta Samhita’ and ‘Charaka Samhita’, respectively. Cultivated grapes are believes to have been introduced into the north India by the Persian invaders in 1300 AD, from where they were spread to the south. Indigenous varieties like ‘Rangspay’ ‘Shonltu White’ and ‘Shonltu Red’ are still grown in Himachal Pradesh. It is grown under a variety of soil and climate conditions in sub-tropical, hot tropical and mild tropical regions in India.

Although, India has the distinction of achieving the highest productivity in the world with an average yield of about 30 t/ha, potential for grape production development remains in sustaining productivity and minimizing risks, refining technologies to achieve high productivity with food safety and technologies to produce export quality grapes and raisings. The constraints such as heavy initial investment for establishing a vineyard, recurring coast in vineyard management, narrow genetic base and high risk of losing the crop due to unprecedented changes in weather, soil and water salinity, drought, short period available for ripening in the north, wine not being a popular drink at present, and last but not the least marketing problems need to be addressed.

Since the highest productivity in grapes has been achieved, efforts are needed to extend grape cultivation to newer areas. Suitable rootstocks are to be identified since soil and water salinity and drought are serious impediments in this direction. There
is a need to diversify the utilization of grapes. Further, frequent market glut due to inadequate cold storage facilities need infrastructural backup. Maintenance of quality of table grapes through crop regulation in a priority to increase exports. The scenario of invasive pests, pesticide residue, organic production, tissue culture propagation of newer root-stocks, water-nutrient use efficiency, greater focus on application/use of micronutrients, mechanization and varieties that are self thinning with good horticultural attributes are some of the points to be considered for future.

In this endeavour, the book written and compiled by Drs. M. K. Sheikh, Manjula N. and S. R. Mulla will be useful to farmers, researchers, students teachers and extension workers. I wish them all the best for bringing out such edition.

(N. K. Krishna Kumar)
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Introduction

In India, we are cultivating grape on an area of 1,50,000 acres and producing 12,00,000 tonnes of fruits out of which 70 per cent are sold as table grape and from remaining 30 per cent fruits resins are prepared.

On an average approximately around 60,000 tonnes of resins are produced in India and around 40,000 Tonnes are required for internal consumption. Looking to these figures grape cultivation looks to be not so profitable in India. Therefore, the farmers instead of producing resins they should concentrate on production of export quality grape, and little diversification is also required to cultivate wine varieties and cultivation of off-season crop. The following suggestions are needed to be adopted:

1. They should think of starting a wine park by cultivating 200 acres of grape.
2. The excise duty on wine should be removed and wine should be brought under food item on line with Maharashtra state.
3. The National Research Centre, Pune, should come forward to spare wine variety suitable to the farming community of Bijapur area.

Grape Cultivation

In horticulture, before starting the cultivation of agri horticulture crops, their marketing knowledge and cultivation aspects are essential. The availability of land and the water with good condition suitable for irrigation and selection of rootstocks and ways to take up early crop and sustaining the crop for longer duration in more economical ways are important aspects in order to make the grape cultivation more suitable in Karnataka.
Important Points about Grape Cultivation

1. Grape, after planting, gives crop in two year’s time and if goes on stock cultivation takes upto 3 years.

2. Grape is an assured crop which harvests crop till 10 years and proves to be economical.

3. When you calculate the cost of cultivation and returns, the cost-benefit ratio or the returns are good and assured.

4. Alert mind, knowledge, work in time and correct decision will lead to progress provided the farmer will help in good cultivation of grape.

5. In grape cultivation and round-the-clock-work ought to be there and the labourers can be utilized all the year round.

6. Available land, water, working willingness together helps in bringing about prosperity to the grape farmers.

7. Grape cultivation is a combination of art and science, otherwise the farmers will face problem if they show negligence in any stage of crop cultivation.

Programming

1. How Many Acres of Grape to be Cultivated

How much land you have and out of which how much is available of good land is important? While deciding about how much area you want to bring for grape cultivation, don’t select 35 guntas, 43 guntas, 41 guntas etc.

2. Where to Plant Grapes

Where to take up grape cultivation for example, if you have a land in 2-3 places select only one place and for that purpose get the soil and water examined including roads, and neighbouring areas.

<table>
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<th>Beginning Area</th>
<th>II(^{nd}) Stage</th>
<th>III(^{rd}) Stage</th>
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<td>8 AC</td>
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</tr>
<tr>
<td>Good farmers</td>
<td>10 AC</td>
<td>20 AC</td>
<td>30 AC</td>
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3. When to Plant Grape

In Karnataka there is a practice of ‘April pruning’ for which the rooted cuttings are to be planted in July-August, whereas for October pruning rooted cuttings are planted in December-January.

In Karnataka, grape fruits are available around March. If December last week or January first week is the planting time then, next year in the month of March, first crop comes for harvesting \(i.e.,\) minimum of 15 month duration is required to get the first crop. That is why 4-6 months earlier planting is taken up otherwise there will be a wastage of money for maintaining upto 6 months and a loss will incur.