

## Preface

### Coastal Agricultural Systems

The areas along the vast coastline of India represent diversified conditions in terms of soil, climate, and water resources to influence agriculture, horticulture, forest crops, animal and fisheries sectors. The problems in agricultural and allied sectors in coastal areas are different from other geographical areas. In the coastal areas, horticultural crops, and livestock productions, with special reference to fisheries and aquaculture sometimes dominate over the traditional field crops. Coastal areas, in general, are warm and humid which favour a broad array of commercially important field and horticultural crops. The coastal region provides greater scope for integration of agriculture, horticulture, forestry, animals, fisheries and agricultural engineering for the improvement of socio-economic conditions of farmers.

This special section articulates some of the issues in coastal agriculture in a modest way through 13 research and review articles contributed by scientists engaged in agriculture and allied sectors in coastal areas. Bhattacharyya *et al.* (pages 5 to 27) elucidate characteristics of Konkan soils and their potential for carbon sequestration narrating the formation of soils and their persistence in Konkan region on the west coast of India by describing different soil orders and other variations of soils. They also explain the reason behind the success story of profitable mango cultivation even on apparently hard lateritic rock. On the other hand, Maji *et al.* (pages 28-41) describes the climate change and management options for sustainable soil health and crop production with special reference to eastern coast of India. Bio-shielding coastal saline soils to combat climate change in coastal region of western India have been detailed through a case study by Chinchmalatpure and Thakor (pages 49-62).

The potential of wild fruit resources in coastal ecosystems of Konkan, Maharashtra are narrated by Narkhede *et al.* (pages 42-48). Haldavnekar *et al.* (pages 63-72) have reviewed protocols for clonal multiplication of healthy planting material of important horticultural crops for successful establishment of orchards under changing climate of coastal Maharashtra. The sustainable production technology for climatic aberration in coastal

agroclimate for mango which is a major economical pillar of coastal Maharashtra has been appraised by Haldankar *et al.* (pages 73-87) with special reference to regulation of flowering, prediction models for emergence of vegetative shoot as well as flowering, rejuvenation of old and senile orchards and pre-harvest bagging for production of spotless fruits. The technological interventions for sustainable cashewnut cultivation under climatic vagaries such as improved varieties, nutrient management, pollination improvement and integrated pest and disease management, intercropping, need-based foliar nutrition and irrigation have been explained by Salvi *et al.* (pages 88-96). The varietal selection, integrated nutrient management, multistoried cropping system for sustainable production and appropriate plant protection measures for coconut and arecanut production protocol under aberrant climate of coastal region have been reviewed by Khandekar *et al.* (pages 97-104). Parulekar *et al.* (pages 105-113) analyzed the significance of integrated multistoried cropping of tree spices in coconut plantations. Mhaskar *et al.* (pages 114-120) have portrayed the climate resilient production technology for tuber crops (sweet potato, greater yam, lesser yam, elephant foot yam, *Xanthosoma*, aerial yam and cassava). Various pre- and post-harvest handling and value addition technologies help to control the post-harvest loss and thereby improve the quality and marketability of fruits (Pawar *et al.* pages 121-133).

Aquaculture and utilization of aquatic resources is a key focus area in coastal regions. Mohite *et al.* (pages 134-138) have showed that *Tegillarca rhombea* can be a potential bivalve species from which platelets similar to that of human blood could be harvested and could become a part of the antidote therapy desired for antiplatelet agents. Indulkar *et al.* (pages 139-146) have demonstrated the successful implementation of collaborative project of inland fisheries. This has immensely benefited the tribes by providing an alternate source of income and has also reduced migration to metros and other cities.

The research output for these articles was generated through as many as 40 institutes spread across 8 coastal states of India and 103 scientist authors and numerous supporting staff and research students. This research,

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