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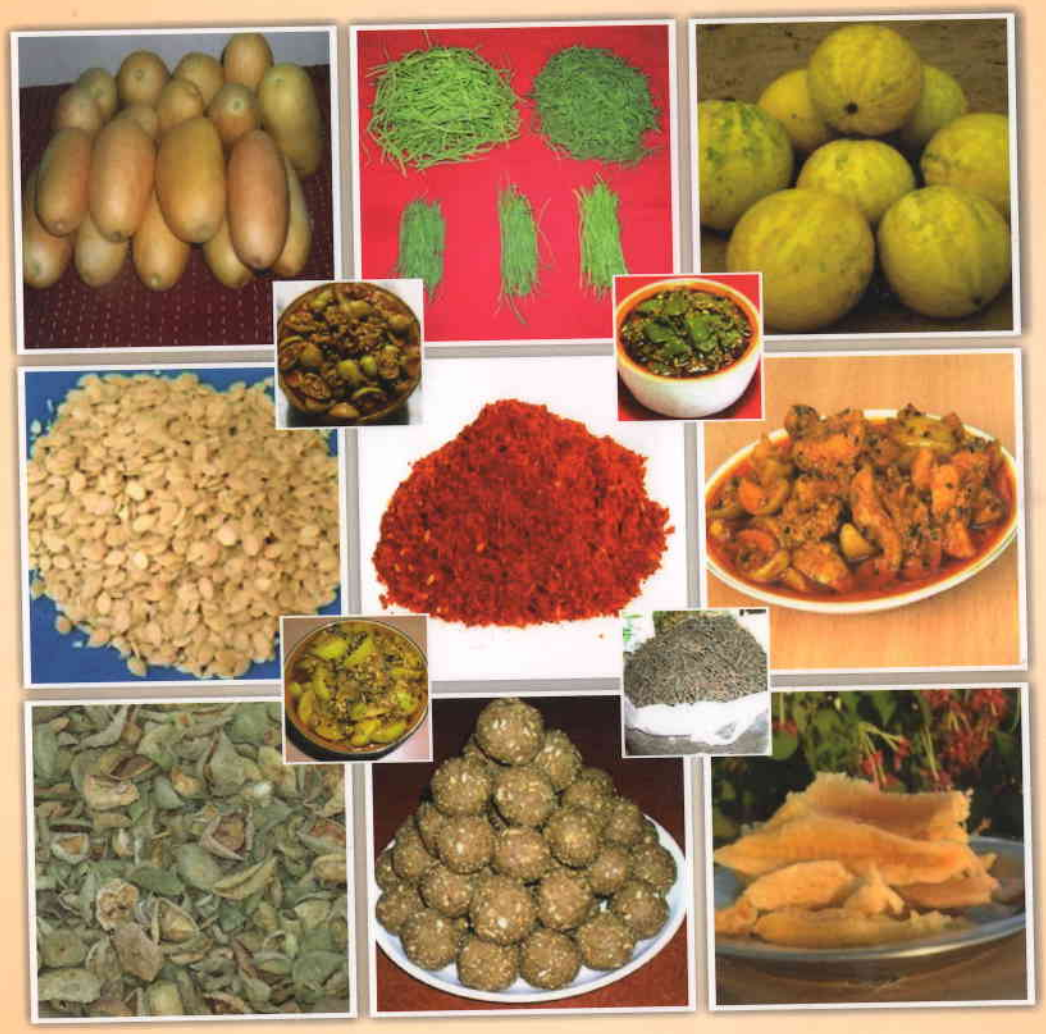
ITKs in Arid Horticulture



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PREFACE

The Indigenous Technical Knowledge (ITK) is socially desirable, economically affordable, sustainable, involves minimum risk and focus on efficient utilization of natural resources. The context of local knowledge systems combining traditional skills, culture and artifacts with modern skills, perspectives and tools is not something that has happened only in the recent past. From time immemorial, new crops were introduced from one part of the world to another and cultural and ecological knowledge systems evolved while adapting these crops, animals, trees, tools, etc., into their new contexts. What may set the traditional ways of dealing with local resources and external knowledge and inputs apart, may be a slower trial and error approach which may not necessarily be unscientific. But, it may not be fully compatible with modern methods of experimentation, validation, and drawing inferences. In spite of advancement in scientific knowledge in agriculture/horticulture, ITK-based practices still remain in use by the vast majority of the farming community, particularly in resource poor situations. In this context, blending of indigenous knowledge with modern scientific technologies is the need of the day to support sustainable development of horticulture and allied sector in our country. Since, information on ITK is seldom documented, it often happens that such information are lost, if not passed on from generation to generation or protected and practiced by the local people. Keeping the above facts in mind, an extensive study was conducted in hot arid regions and the Indigenous Technological Knowledge and related traditional techniques used in horticultural crop production system in the regions were evaluated, collected and documented and a bulletin entitled as ***"ITKs in Arid Horticulture"*** was prepared on same. This bulletin has detailed information about these traditional knowledge and techniques related to production, value addition, plant protection, soil and water conservation, improving soil fertility, growth and yield and productivity etc., of the vegetables and fruits grown in hot arid regions. We believe that this bulletin could be of useful and great importance, for the various researchers/scientists, policy makers, students, field workers, etc. The Indigenous Technological Knowledge and practices as narrated this bulletin, may provide the basic information/baselines to enrich the existing modern technologies or developing new technologies horticultural crop production, particularly in hot arid regions of the country. The blending of indigenous knowledge/technology with modern technology may be boon in developing a memorable innovative technology for wondrous production of horticultural in hot arid regions of the country. We would like to acknowledge and give sincere thanks to all who extended hands for helped us in preparing this bulletin comfortably with valuable information/data. We express our deepest sense of gratitude and sincere thanks to Prof. (Dr.) P. L. Saroj, Director, ICAR- Central Institute for Arid Horticulture, Bikaner who inspired us to prepare this bulletin with providing all essential facilities and precious guidance in successful completion of writing of the bulletin.

Date:
Place:

Authors

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1. Introduction

At present Indian horticulture is confronted with a number of challenges including instability of productivity and diminishing sustainability of natural resources. Hence, it requires the generation of environmentally sound, economically viable and socially acceptable improved horticultural technologies which can make judicious use of available natural resources and practical experiences of farmers/clients to promote the sustainable development of horticulture. These issues have evoked growing interest in the study of indigenous knowledge systems that are based upon the local resources. The Indigenous Technical Knowledge (ITKs) based Traditional Technologies (TTs) are developed based on experiences which gathered momentum through generation after generations and are being developed and improved through informal experimentations. In other words, Indigenous Technical Knowledge (ITK) based traditional technologies of production of a commodity are evolved by the people of a community based on their experience, often tested over long period of use, adopted to local culture and environment. They lay emphasis on minimizing risk and better output or production of the commodity like fruits/vegetables/food grains. Indigenous Technical Knowledge (ITK) has immense potential for innovation, especially at the grassroots level. India is a country populated by a number of indigenous communities, most of which have their own set of unique traditional knowledge and technology base. Many of these knowledge and technologies are at par with the modern knowledge and technology system and have been provided the indigenous communities with comfort and self-sufficiency. Since, information on ITK is seldom documented, it often happens that such information are lost, if not passed on from generation to generation or protected and practiced by the local people. In today's concept of IPR regime, it is more imperative to document and protect our valuable ITK for posterity. In the context of horticultural sustainability, ITK is also required to be properly documented for the benefit of researchers, planners and development officials. Validation of ITK is a logical step to qualify and quantity effectiveness of the practices. Suitable modifications of the local practices, through research and development may help to develop appropriate and acceptable technologies that are more suited to our horticultural/farming situations. Indigenous knowledges are not primitive, left over from the past but on the contrary, are systems of finally tuned and adopted, both biologically and socially, to counter the process of what are often harsh and inimical environment and often represent hundreds, sometimes thousands of years of adaptive evolution in which vagaries of climate, the availability of land, water, the basic need of people and their animals for food, shelter and health have been amalgamated in a system which has allowed society to exist and develop in face-to-face tremendous odds. Various ITKs in horticulture are being used since the human civilization by the farmers, animal owners and other practitioners. In spite of advancement in scientific knowledge in horticulture, ITK-based practices still remain in use by the vast majority of the farming communities, particularly in resource poor situations, without knowing the its scientific rationality. In this context, blending of indigenous knowledge with modern scientific technologies is the need of the day to support sustainable development and economic viable horticulture and allied sector in our country.