

# HORTICULTURE FOR SUSTAINABLE FARM INCOME AND PROTECTION OF ENVIRONMENT

Proceedings Volume of UGC Sponsored  
National Seminar, 2016



Edited by  
Dr. Abdul Haque Ahmed





# Horticulture for Sustainable Farm Income and Protection of Environment



ज्ञान-विज्ञान विमुक्तये

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Bikali College, Dhupdhara, Goalpara, Assam

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## **A Few Words from Principal and Chairperson National Seminar Organizing Committee**

It is a matter of immense pleasure to share a few words about the national seminar in particular and the college in general. Bikali College is the higher educational institution located in one of the most backward parts in the south western Assam in the neighborhood of Meghalaya. The college was established on 14th April, 1982 by the dedicated social workers and academicians of the locality under the patronage of "Bikali Mouza Unnayan Samiti" - a socio cultural organization located at Dhupdhara. The college since inception is under Rangjuli Tribal Development Block, Rangjuli Revenue circle, 36th Dudhnoi S.T. LAC and Guwahati Parliamentary Constituency. It is also under Rabha Hasong Automomous Council. The college has a spacious campus. So far the academic expansion of the college is concerned, it has Arts, Commerce and Science streams. The college has been accredited for the second phase with 'B' Grade in 2010.

The main theme of the National Seminar entitled "Horticulture for Sustainable Farm Income and Protection of Environment with Special Reference to North-East Region" is indeed a vast and vibrant issue for the people of the North East India. Horticulture itself is a subsidiary source of income; even it may be regarded as a life line of earning a living in the hilly terrain and the plain areas of North East India. Throughout the ages horticulture has been well known to the people of North East India and it has been a part of their tradition in the form of Bari (Homestead Garden). In recent decades this culture has gained more impetus and now in a path of commercialization. More and more research works and experiments have been done to increase horticultural productions. This part of North East India, which is being in the neighborhood of Assam-Meghalaya-West Bengal horticultural expansion and people's dependency on this source of income, has been manifold. The Assam - Meghalaya foothills from Rani to Mankachar area of Southern Brahmaputra Valley may be regarded as a horticultural zone. This agro-climatic zone has wide varieties of horticultural species. Mention may be made of ginger, turmeric, pineapple, orange, areca nut, cashew nut, guava, banana, jack fruit, citric fruits and other plantation crops which are abundantly produced in this area. All these horticultural crops have high cash values in national as well as international markets.

Horticulture, as a source of High Value Crops (HVCs) has immense potentiality, especially in all the states of North Eastern Region. The department of Economics of Bikali College has rightly chosen a right issue to be discussed in a national level seminar in this institution.

I wish that the proceeding volume 'Horticulture for Sustainable Farm Income and Protection of Environment', the output of the seminar will attract all the concerned.

**Dr. Malina Devi Rabha**

## Preface

The potential of horticulture has been drawing attention of all the sections of the society as it plays important role for raising farm income in the rural sector from a vast arena of High Value Crops (HVCs) and it also serves as a source of protection of environment. The North Eastern Region (NER) of India is endowed with rich agro-climatic conditions pre-eminently suited for a variety of horticultural crops. Several initiatives along with increased budget allocation have been taken by the government to tap the potential of horticulture sector in this region. Among the initiatives- creation of research and development infrastructure, training of manpower, and marketing supports under mission mode strategies have been adopted since a couple of years. A Technology Mission for Integrated Development of Horticulture (TMIDH) in North Eastern Region including Sikkim was launched by the central government in 2001-02. Presently, the development strategies for horticulture in these states are being initiated under National Horticulture Mission (NHM) since 2005-06. The objective of the scheme is to increase productivity of horticulture crops by dint of area expansion and application of high-tech-horticulture. Government's initiatives have undertaken through a holistic Mini-Mission (MM) strategy which includes application of improved technology (MM I), increasing production and productivity (MM II), enhancing storage and marketing facilities (MM III), and expanding value addition and processing (MM IV). The impacts of such strategies for horticulture development are reflected on the area expansion, production and productivity of most of the crops in the states of North East India. Assessment about the performances of various initiatives for boosting horticulture sector is imperative for further policy measures.

Keeping in view the above perspectives and to discuss all pros and cons of horticulture, an academic event i.e. a national level seminar is organized at Bikali College Dhupdhara choosing the topic "Horticulture for Sustainable Farm Income and Protection of Environment with Special Reference to North East India". The seminar has got response from many parts of thinkers and the seminar organizing committee takes 27 number of research papers to be discussed in 4 technical sessions on 29th June, 2016. The organizing committee has decided to publish a proceeding volume 'Horticulture for Sustainable Farm Income' comprising the selected papers.

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of Bikali College, the distinguished persons of the locality and the media persons are acknowledged for their kind support and cooperation.

Although a total of 27 papers were submitted for discussion in the seminar, only 17 papers were presented and discussed in the event. The Organizing Committee is pleased to publish some of the selected papers in a book form as proceeding volume 'Horticulture for Sustainable Farm Income and Protection of Environment'. All the contributors to this proceeding volume deserve our thankfulness. Mr. Trailokya Deka of B.P. Chaliha College, Nagarbera has rightly done a big job by assisting the total editorial process to bring out this proceeding volume. Special thanks goes to him for making finalisation of this publication.

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that even people engaged in manual wage earner use to consume more high value crops that reduced consumption of main food items as used earlier. Resultantly the increasing demand for horticultural crops has changed the composition of agricultural output and presently about 31 per cent of agricultural GDP is shared by horticultural crops. Such trend has brought immense prospect of horticultural crops which have added advantage of protecting environment.

In regards to problems associated with the development of horticulture sector, professor Bezbaruah specified that due to highly perishability of certain horticultural crops proper infrastructure has to be developed for their timely disposal. Besides of adopting improved production technique in production front, post-harvest management and processing must be taken care of in marketing front. He expected that all the relevant issues would be addressed by the seminar and meaningful recommendations can be outlined.

The first interesting technical session was chaired by Dr. Kalyan Das of OKDISCD, Guwahati. The session began with a paper presented by Mr. Trailokya Deka of B. P. Chaliha College, Nagarbera, Kamrup. The paper focused on the issues of farm management with reference to policy aspects specially MGNREGA. Referring to Morigaon District of Assam, the paper highlighted the positive aspects of MGNREGA through asset creation for the development of agriculture sector in the region. The paper prescribed a few measures for the improvement of farm management in agriculture through MGNREGA.

Papari Nayak, discussed in her paper about the challenges and prospects of horticulture in North Eastern states in general. Her paper focused on pertinent issues that are found to restrict development of horticulture in North Eastern Region. Her paper identified specific constraints such as marketing problems, untrained workforce in horticulture, financial hardships and prevalence of traditional technique of production.

Nibedita Chaudhury's paper dealt in general issues associated with the backwardness of horticulture in North Eastern Region. Absence of improved post-harvest management, handicapped marketing facilities, illiteracy of farmers, lack of proper transport facilities are the prominent causes for slow growth of horticulture in the region as highlighted by her paper.

Nasrin Begum, research scholar, presented a paper on 'Production of Horticultural Crops in NER and The Diversity with Special Reference to Assam'. The paper identified the prominent and prospective horticultural crops in NER in general and in Assam in particular and made an overview of their comparative status.

Mr. Subhas Barman and Mr. Samar Medhi of Dudhnoi College emphasized on problems associated with production and marketing of horticultural crops in their paper and diagnosed need to create awareness among the farmers about the potentiality of these crops. Their paper suggested demonstrative activities in farm level for boosting the growth of horticulture.

Dr. Bonti Bordoloi, Miss. Bichitra Saha and Dr. Sidhinath Sarma over viewed the issues of horticultural crops and referring to Goalpara district their paper found that among the potent areas, this district can be reckoned as one of the prominent areas suitable for growing such crops. The paper stressed on the feasibility of horticulture because the district has huge waste land areas which can be used for growing high value crops as well as protecting environment. The paper mentioned that crops like tuber, spices, various fruits, vegetables, etc. have immense potentiality to grow in this district.

Mrs. Karabi Devi, Deptt. of Posts, also spoke about the prospects and challenges of horticultural crops for agricultural development. Demonstrative supports and government's intervention along with budgetary supports are called for by the paper.

Paper of Abdul Wakil Ali, PhD scholar focused on the marketing problems of selected vegetable crops. Through a case study in selected villages of Matia C.D. Block of Goalpara

made an overview of their production scenario in national as well as regional perspectives. The paper argued that diversity of horticultural crops has a resource for the people of the region and fruit crops have immense potentiality for lucrative earnings of the farmers. However, low productivity and marketing inefficiency have been restricting the development of this sector.

Lakhyajit Rabha, Amal Rabha and Amit Kumar Rabha of Bikali College focused on certain plantation crop for rearing and bearing of silkworm. Their paper outlined the present status of Som and Sualu plants along with the socio economic characteristics of their owners. The paper found that there is contraction of large plantation area, paucity of supportive facilities for expansion of plantation, disease free seeds of Muga, etc. as the major problems.

Pranay Basumatary and Himangshu Kakati of Bikali College Jointly presented a paper on 'Marketing and Institutional Arrangements for the Development of Bamboo Based Products with Special Reference to Rangjuli Block, Goalpara District'. The paper focused on the problems of marketing of bamboo based products. The absence of organized marketing, ignorance about marketing process, weak market channels and transportation problem, etc. are among the major problems in bamboo based product marketing as identified by the paper.

The paper presented by Rajmohan Kalita of Dolgoma Anchalik College concentrated on cabbage farming in Matia Development Block, Goalpara district and found that although it is a lucrative source of earning yet there is a dismal among the farmers. Lack of storage facility and other supportive facilities to the small farmers such as financial support, demonstrative support, etc. are the major problems faced by the farmers as identified by the paper. Session was summarized by Prof. C.P. Suresh with valuable comment on the Presentations.



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