

<b>1.</b>	Floriculture, with special reference to marketing in national & international markets	Sycom Project Consultants Pvt. Ltd., Delhi	2000
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## **EXECUTIVE SUMMARY**

### **INTRODUCTION**

The North-Eastern Region of the country has for long been recognized as nature's gift to the country in view of the wealth of ornamental plants. The availability of this native wealth made people regard this region to have considerable potential for floriculture development. A study of the region and its inherent strengths makes one realize the tremendous negative approaches adopted in this regard. There has not been any serious or sincere effort made by the government either at center or in any of seven states of the region to exploit the tremendous potential that truly exists there. On the contrary, the continuous erosion of the natural wealth by unscrupulous people through collection of plants from forests and their trading in the country and abroad, has encouraged negative commercialization of floriculture from the region. While occurrence of beautiful natural flora in the region has led to a love for ornamental plants in the region, its easy availability has resulted in very low appreciation of their economic value among the people. The region abounds in wealth of Orchids, Rhododendrons, Primulas, various kinds of Lilies etc., but till date no attention has been paid to using these material for any scientific conservation, improvement and exploitation of its commercial worth.

### **AGRO-CLIMATIC CONDITIONS**

In view of its spread from the tropical to extra-tropical regions and diversities in physiographic conditions, India experiences a varied type of agro ecological conditions. The seven states – Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Meghalaya having hill and dales topography constitute the northeast India. Except the southern half of Mizo hills, the entire regions lies within the sub-tropical belts. As a part of South East Asia, the climate of Northeast is obviously southeast Asiatic monsoon. The weather and climate of North East India is however itself a type – which is not comparable with the other parts of the subcontinent. This distinctive weather and climatic quality, physiography, the alternating pressure cells in North-West and North-East and Bay of Bengal; their periodic oscillations; predominance or maritime tropical air masses (Mt.) and local mountain and valley winds. Due to its peculiar physiographical made up and ineffective Northeast Monsoon, the climate of different parts has assumed regional characters. There have not been much serious attempts at delineation of the entire region into specific agro-climatic zones. However NARP of Indian Council of Agricultural Research has classified region in to seven distinct agro-climatic zones on the basis of altitude, rainfall pattern, temperate variations as follows: Alpine Zone, Temperature, Sub-alpine zone, Sub-tropical hill zone, Sub-tropical plains zone, Mild-

tropical hill zone, Mild tropical plain zone. The diversity of the agro-climatic conditions prevailing in the North Eastern Region is suitable for cultivating a variety of floriculture crops in different seasons.

## **STATUS**

There is very little organized production of flowers or other floricultural products in any state of the region. Floriculture is yet to graduate from the hobby growing to a commercial activity. The region has a range of climate suitable for production of most of commercially important flowers for most part of the year. Food based agriculture getting priority all through has led to little attention being given to this potential sector of agri-business. There is also tremendous knowledge gap for effective commercialization of floriculture activity in the region as a whole. In spite of close proximity to the seven states, there is hardly any interstate technology sharing or transfer. Each state has their own ideas for floriculture development, but that too has failed to grow due to low priority in terms of resource allocation. The present area under floriculture in the seven North Eastern States is 1173 ha of which Assam itself accounts for 55 per cent share. The major floriculture crops grown in different states are Assam (Marigold, Tuberose, Gladiolus, Orchids and Rose), Arunachal Pradesh (Cymbidium), Manipur (Gladiolus, Anthurium), Tripura (Marigold), Mizoram (Rose, Anthurium), Nagaland (Cymbidium, Gladiolus) and Meghalaya (Cymbidium and Gladiolus).

There are only a few organized sector commercial floriculture units in the region such as ICL Flora Exotica, Guwahati, Nana-Koo Agro Pvt. Ltd., Ziro-Hapoli and Oriental Orchids Ltd. (tissue culture unit), Imphal. North-Eastern council, which could have been the common nodal agency to network the local efforts to obtain meaningful results, has played very weak role, perhaps due to their priority of general / civic infrastructure development. The supporting infrastructure for commercial floriculture is presently lacking in the region. There is no entrepreneurship for floriculture, partly due to absence of proper guidance. The region has one State Agricultural University (Assam) and a Central Agricultural University (Manipur) and a network of ICAR Research Centres for providing the technology support, though at present little floriculture technology is available with them.

## **TRANSPORT**

Lack of proper transport facilities is one of the major reasons for a low level of commercial floriculture activity in the region. There are a number of National Highways in the region connecting the state capitals. However the quality of the State Highways and other roads connecting the district headquarters is quite poor, specially in states of Manipur, Nagaland, Mizoram, Arunachal Pradesh and Tripura. The rail network in the region is mainly concentrated in the state of Assam. There are twelve airports in the region of which six are located in Assam. AAI and NEC have together been funding upgradation of these airports. Guwahati airport is the only airport in the region with night landing facilities. The international flights, which are expected to commence in 1 – 2 years time from Guwahati are expected to provide an opportunity to tap the export market for flowers.

## MARKET INFRASTRUCTURE

The market infrastructure in the NER is very poor. There are no integrated post-harvest management facilities, collection centers or auction centers. There is only one Refrigerated Van in the entire region, which is used by a Private Sector Unit for transportation of cut flowers to the nearest airport. In many states there are no retail markets for flowers, even the major market related activities are confined primarily to the respective state capitals. The only active flower markets in the region are Sukreshwar Ghat (Guwahati) and Ima Market (Imphal). There are no cold storages (for temporary storage) for flowers in the region.

## POTENTIAL

The region has tremendous potential for floriculture development and also commercialization of this activity. The climate suitability, native wealth suited for novelty product development, geographical location of Assam (more particularly Guwahati) – being surrounded by the other states, making it the nucleus point for development of the region; availability of regular air / rail / road links with potential domestic markets of Kolkata, Delhi and Mumbai and proximity to the export markets in South-East Asian Region; availability of manpower (which could be developed into skilled force), all make the region a potential region for development.

## POTENTIAL AREAS FOR FLORICULTURE PRODUCTS

The potential areas and floriculture products identified for development of commercial floriculture in the North Eastern Region are as follows:

TABLE 1.1  
STATES, POTENTIAL AREAS AND FLOWERS RECOMMENDED

State	Potential Areas Recommended	Plants Recommended
<b>Assam</b>	Guwahati	Dendrobium, Rose, Tuberose, Chrysanthemum, Anthurium
	Hajo and Kulhati	Gladiolus, Anthurium, Tuberose
	Nagaon / Sonitpur	Rose, Gladiolus, Gerbera
	Jorhat	Rose
	Silchar	Gladiolus, Chrysanthemum
	Dibrugarh	Rose
	Tezpur	Rose, Gladiolus, Tuberose
<b>Meghalaya</b>	Upper Shillong / Shillong	Cymbidium, Carnation
	Barapani / Umiam	Carnation, Gladiolus, Lilium
<b>Arunachal Pradesh</b>	Ziro-Hapoli	Cymbidium, Gladiolus, Lilium

State	Potential Areas Recommended	Plants Recommended
	Itanagar	Dendrobium / Vandas, Anthurium, Foliage Plants
	Bomdilla	Cymbidium, Gladiolus, Lilium
	Tawang / Dirang	Cymbidium
	Namsai	Gladiolus, Cymbidium
	Pasighat	Anthurium, Gladiolus, Dendrobium, Foliage Plants
<b>Nagaland</b>	Kohima	Cymbidium, Gladiolus
	Wokha	Cymbidium, Gladiolus
	Mokokchung	Cymbidium, Gladiolus
	Dimapur	Dry Flowers, Gerbera, Gladiolus
<b>Manipur</b>	Imphal	Gladiolus, Dendrobium, Carnation
	Thoubal	Gladiolus, Anthurium
	Senapati	Gladiolus, Anthurium
<b>Tripura</b>	Agartala	Chrysanthemum, Gladiolus, Anthurium, Dendrobium
	Udaipur (South District)	Chrysanthemum, Gladiolus
	Kailashahar	Chrysanthemum, Gladiolus
<b>Mizoram</b>	Aizawl	Rose, Anthurium, Gladiolus
	Lunglei	Rose, Anthurium
	Kolasib	Anthurium, Gladiolus

A summary of the financial indicators of the project profiles are provided at Chapter – 8 of this report and the individual project profiles have been provided in the state-specific reports.

### **ACTION PLAN**

The action plan suggested in the report contains recommendations of improving market infrastructure, technology support to growers, integrated post-harvest management, development of collection and auction centers, infrastructure development etc. Development of a floriculture park in Assam is also recommended, which would showcase the technology and production aspects for commercial floriculture, for the entire region.

It is recommended to set up collection centres with integrated post-harvest management facilities and two auction centers (Guwahati and Silchar). The recommended collection centers are tabulated below:

TABLE 1.2  
**RECOMMENDED COLLECTION CENTRES  
 (TO BE IMPLEMENTED BY THE YEAR 2005)**

S. No.	State	Location of Proposed Flower Collection Centres in the NER
1.	Arunachal Pradesh	Itanagar, Roing / Namsai
2.	Assam	Guwahati, Jorhat and Silchar
3.	Manipur	Imphal
4.	Meghalaya	Shillong
5.	Mizoram	Aizawl
6.	Nagaland	Dimapur
7.	Tripura	Agartala

The proposed Market and Distribution Infrastructure network for the region is illustrated at Figure 1.1

The implementation of the recommended action plan is expected to lead to increase in the commercial floriculture activities. The area under floriculture is project to go up to 2150 ha, 3900 ha and 6950 ha in the short term, medium term and long term respectively.

TABLE 1.3  
**AREA UNDER FLORICULTURE (HECTARES)**

S. No.	State	Present	Short Term	Medium Term	Long Term
1.	Arunachal Pradesh	10	50	100	250
2.	Assam	650	1000	1500	2500
3.	Manipur	157	300	500	1000
4.	Meghalaya	10	50	200	500
5.	Mizoram	71	200	500	1000
6.	Nagaland	250	500	1000	1500
7.	Tripura	25	50	100	200
	Total	1173	2150	3,900	6,950

Note: The figures provided for short term, medium term and long term are based on the projections for new commercial floriculture units with the assumption that required infrastructural and other facilities are provided as laid down in the action plan.