

PREPARATION OF PROJECT PROFILES FOR FLORICULTURE INDUSTRIES IN THE NORTH-EASTERN REGION



EXECUTIVE SUMMARY

TITLE OF THE STUDY

Preparation of project profiles for floriculture industries in the North Eastern Region

The entire floriculture sector in NER is poised for a transformation and has considerable potential to be realized, thus becoming an integral aspect of Amrit Kaal of India, ushering in new waves of prosperity, livelihood development and economic empowerment of the farming community of the entire region.

NER has an outstanding and rich bio-diversity, with Mother Nature cradling a wide range of flora and fauna, many of which are rare and unique. The floral species contribute a lot to the richness of highest diversity in the NE states. The region is home to some of the rare orchids (many of which are banned for domestic or international trading in terms of collection from their wild habitat and trading) and flowers of high commercial value and high demand in domestic as well as in international markets.

Global Floriculture Scenario

Global floriculture sector has been consistently posting growth over the last decade and the global market is currently estimated to be about US\$ 55 billion, growing at a Compound Annual Growth rate (CAGR) of 7%. All the major exporters in the floriculture sector are some of the countries with lower land area under flower cultivation. India and China are the top 2 countries in terms of area under floriculture but their share of global trade is minuscule compared to the leading exporters. Supply chain efficiency, technological advances and sound export ecosystem within a country appears to be major factors of growth other than just area under cultivation. Countries like Kenya and Ethiopia exported US\$ 625.7 million and US\$ 229.5 million worth cut flowers in 2022, which is staggeringly high when compared to large Countries like India, which is yet to mark its significant presence in global floriculture market. It is important to note that while the Netherlands is the largest exporter of cut flowers (US\$ 4.5 billion in 2022), it is also one of the top importers of the same (US\$ 2.4 billion). This is an indicator that a large part of the imports is exported to different nearby countries to meet the consistent demand.

Indian Floriculture Industry Scenario

Floriculture in India is being viewed as a high growth industry. The Government of India has identified floriculture as a sunrise industry and has accorded it the coveted status of a 100% export-oriented sector. As we have seen in the previous chapter, there is a steady increase in demand for flowers globally. According to 3rd Advance Estimate, about 2.83 lakh hectares of area was under floriculture in 2021-22. Production of flowers is estimated to be 23 lakh tonnes of loose flowers and 8.33 lakh tonnes of cut flowers in 2021-22 (3rd Advance Estimate). These mainly consist of cut flowers, pot plants, cut foliage, seeds bulbs, tubers, rooted cuttings and dried flowers or leaves. The important flowers are rose, carnation, chrysanthemum, gerbera, gladiolus, marigold, tube rose etc. States like Tamil Nadu, Karnataka, Madhya Pradesh, West Bengal, Chattisgarh, Andhra Pradesh, Gujarat, Uttar Pradesh, Assam and Maharashtra have emerged as major flower producing states in the Country.

Floriculture Export from India- Opportunities Still Untapped

The Indian floriculture industry has been gradually shifting from traditional flowers to cut flowers for export purposes. Dedicated agency like Agricultural and Processed Food Products Export Development Authority (APEDA) is undertaking active initiatives to promote and develop floriculture export from

India. In 2021-22, India exported more US\$ 21.11 million worth flowers to various export destinations which increased to US\$ 22.48 million in 2022-23. Apart from consistent global demand for various cut flowers, factors like several recent and favourable policy initiatives, impetus on development of export-oriented production of cut flowers, policy reforms like the new seed policy, increased adoption of technology, e-commerce etc. have emerged as growth drivers of export of floriculture from India. Some of the top destinations in terms of value of floriculture export from India are USA, UAE, Malaysia, Singapore, The UK, Canada, Saudi Arabia, Spain, Kuwait and Germany. Fresh cut flowers & flower buds suitable for bouquets or for ornamental purposes constitute the largest segment within the floriculture export portfolio. Among the cut flowers, roses occupy the highest exported cut flower.

Floriculture in NER- Opportunities Galore, Unrealized Potential

In the context of floriculture trade dynamics, NER has been long considered as a potential powerhouse, although that potential is yet to be tapped, despite several initiatives, targeted interventions and attempts have been made both in the past as well as in recent years. Entire NER, cradled by Mother Nature's bountiful bio-diversity, has tremendous potential for floriculture development and its commercialization into a 100% export oriented business unit within NER. Within NER, Guwahati being surrounded by the other states, has the potential to get transformed into the 'Netherlands' of NER acting as a nucleus point for catapulting it into the floriculture export market ecosystem. A centralized availability of regular air, rail, road and river links with potential domestic markets of Siliguri, Kolkata, Delhi, Mumbai etc. and proximity to the export markets in South-East Asian Region; availability of manpower, technology adoption, supply chain management, hi-tech packaging solutions etc. can all make the region a potential hub for floriculture export development.

Each of the 8 NER States has their distinct niche and competitive advantages. Some of the star and most commercially bankable flowers in NER are dendrobium, rose, tuberose, chrysanthemum, anthurium, gladiolus, marigold, gerbera, cymbidium, lily, vanda, mokara orchids, other orchids etc. NER has tremendous potential for floriculture development and its commercialization into a 100% export oriented business unit within NER. Within the region, Guwahati being surrounded by the other states, has the potential to get transformed into the 'Netherlands' of NER acting as a nucleus point for catapulting it into the floriculture export market ecosystem.

Floriculture Value Chain in NER and Price Spread

The entire floriculture value chain of NER is a complex interplay of various players, right from growers to the final retailer establishing the last mile connectivity with the customers. The value chain is also intricately related to various input providers, reputed research and development agencies and important Government departments and non-government bodies active in the downstream of the supply chain as facilitating and support agencies. Similarly, a host of important players in the upstream including the likes of agencies like APEDA, organized players in floriculture business within NER and also outside including buyers in overseas markets, flower shops etc. play critical role in providing a stable and vibrant market for the growers of various flowers across NER States.

The price spread across the entire floriculture value chain in NER is a complex and dynamic interplay of various factors and as the produce moves from farmers to the ultimate consumer, the price spread varies according to the particular marketing channel it flows through and also according to the flower species. Each of the NER States has specific hubs or clusters in the respective States. These hubs need an integrated value chain approach to make the sector more competitive. A focused and market driven highly business oriented strategies need to be in place along with adoption of latest technologies. There are multiple channels of marketing in the floriculture sector within the north eastern region. Considering the price at consumer's level as 100%, producer or farmer usually has a share of 30 to 40%, local whole

seller's share usually ranges between 5 to 15% across different marketing channels, and distant retailers usually have a share of 20 to 25% while anything between 5 to 25% can be accounted as post harvest loss value, depending on distance, types of flowers and efficiency in post harvest management, proper packaging, handling etc. In case of integrated value chains usually established by organized private players in floriculture business who has buy back or contract farming arrangements with the growers, the organized players usually have a margin of 50 to 55% while the growers get a share of about 35 to 40% of the ultimate price paid by the consumer.

Major Floriculture Clusters in Different NE States

Entire north eastern region represents a kaleidoscope of various important 'floral hubs' (flower production clusters) spread across all the 8 States. Ziro-Hapoli, Itanagar, Bomdila, Dirrang, Tawang, Namsai and Pasighat can be considered as important clusters in Arunachal Pradesh. Out of this, Ziro-Hapoli is one of the most prominent. Flowers like cymbidium, gladiolus, liliun and rhododendron are the most important species which can be grown in this cluster with an export oriented approach. In the next 3 years, starting from 2025-26, atleast 500 hectares of additional area can be targeted to bring under commercial cultivation of these flowers with a potential of generating minimum Rs 50 crores of additional revenue.

In Assam, major floriculture clusters are Hajo / Kulhati, Naogaon (mainly comprising of places like Pakhimoria, Khagarijan, Barhampur, Juria, Batadrava, Dolong ghat, Kathiatoli, Roha), Sonitpur (mainly comprising of places like Dhekiajuli, Pub Choiduar, Naduar, Choiduar, Barchala, Balipara etc.), Tezpur, Silchar, Dibrugarh (places like Barbarua, Lahoal, Panitola, Tengakhat, Khowang, Joypur) and Jorhat (places like Baghchung, Titabar, Dhekargarah, Kaliapani, Selenghat). Of these, Hajo/Kulhati is the most important cluster which has approximately 2 lakhs population and a total estimated cultivation area of 23,000 hectares. Commercially important flowers like tuberose, gerbera, gladiolus, jasmine, anthurium, foliage plants including gypsy can be grown in larger area on a commercial basis, with support from Government initiatives like Assam Floriculture Mission. Alone in this cluster, additional 1000 ha of area can be brought under commercial floriculture.

Meghalaya has two major floriculture zones: the temperate zone and the subtropical zone. The entire eastern and western Khasi Hills and the upper parts of Jaintia Hills district fall in the temperate zone, while Ri-Bhoi and the Garo Hills fall in the subtropical zone. In terms of agri-climatic conditions and temperature, the State is blessed with congenial conditions for increased cultivation and heightened commercial activities in floriculture sector. New and commercially highly profitable flowers like lavender can be introduced and grown in additional areas. Already many commercial farmers have started cultivation of such flowers and this can be further proliferated with the active support of Government agencies- both from the State and also from the Centre.

In Tripura, farmers mostly grow flowers like marigold, gerbera, rose, anthurium and gladiolus on a commercial scale. Rose and marigold are cultivated in open field while flowers like gerbera and anthurium is cultivated under green house condition by many of the farmers. The State Horticulture department is providing support to the flower growers in the State by providing them subsidized greenhouse structures and also providing them with free of cost seedlings of the flowers, besides other important support mechanisms. Important flower production clusters in Tripura are mainly in the districts like Sepahijala, Gomati and few places in the South district.

There are several areas in Manipur where flowers are grown for commercial purpose. There are flower production pockets across the State in places like Ukhrul, near capital city Imphal, Chandel etc. However, Senapati district has been traditionally a front runner in flower production in the State. Within Senapati district, Mao Maran subdivision is considered to be one of the vibrant floriculture production

cluster in Manipur. This cluster is characterized by cultivation of traditional flowers and cut flowers under both open field conditions and protected environmental conditions. In Mao Maran, flowers like geranium, gladiolus, liliun, rose, petunia, orchids and foliages are the most important ones, which can be further brought under cultivation potentially over 25 ha and generating additional revenue of atleast Rs 25 crores in the next 3 years starting from 2025-26.

As a small State in NER, in terms of commercial floriculture, the entire State can be taken into consideration for developing market driven strategies and policy implementation. The biggest advantage of Sikkim is its sharing of a large international border along with access to Siliguri, one of the largest commercial hubs in entire East and North Eastern Region.

Nagaland has niche and specific competitive advantages in orchids and other export oriented flowers. With recent and strategic focus of the State Government through its horticulture department; Nagaland can aim big to capture floriculture market outside the state as well as abroad. Rose and Lillium are the two important flowers in terms of quality and demand in the State. Anthurium, Carnation, Heliconia, Alstromeria, orchids and other exotic flowers also have potential. Major flower production clusters can be further strengthened in terms of commercial capacity in places like Kohima, Mokokchung, Phek, Tuensang, Zunheboto, Dimapur, Mon and Tuensang.

The people of Mizoram are in fact flower growers by default, they are great flower lovers and almost every house including those in the remotest villages passionately grow flowers, even if may be in just few pots. , Mizoram has started taking new strides in commercial floriculture. Flowers like anthurium, bird of paradise, rose (especially the Dutch varieties), dendrobium and other orchids, liliun, carnation, gerbera are important flowers to be focused in Mizoram to tap the commercial opportunities of the floriculture sector within the Country as well as in the Global market. anthurium growers in the State have formed a society in the name of Zo Anthurium Growers Society. Since 2006, Anthurium Festival is being organized as an important and very popular annual event in the State with support from Central Government and State Tourism Department.

The Market Ecosystem in NER- Present and Future

North East lacks an integrated, hitech, regionally and globally linked and professionally managed centralized flower market. Guwahati is the central hub of the entire region, which has also a connection to Siliguri market, one of the largest commercial hub in the neighboring West Bengal State. However, Guwahati still lacks adequate, scientific and modern market ecosystem as far as floriculture is concerned. The area near Sukeshwar temple in Pan Bazaar near the banks of The Brahmaputra comes alive with fragrance and buzz of buyers and sellers of various flowers. While flowers like the lilies, gladiolus, gerberas, chrysanthemum are sold for decoration purposes and for social events, marigold, tube rose etc. goes as offering to Gods and Goddesses in various local temples and also for decoration in various social events.

A quick survey and estimate of the total sales indicates a minimum flower market of about Rs 100 crores annually. While there are a number of small and medium retailers, Guwahati market has also several flower outlets in the form of florists and decorators. Particularly in the setting of NER, a model like Royal Flora Holland (RFH) can be considered to be feasible model that can be localised and developed in Guwahati for the larger benefit for the floriculture in NER. Royal Flora Holland is a market hub or an integrated marketing platform located in Almeer in the Netherlands. Revenue from international supplies are to the tune of US\$ 1 billion in RFH with an auction revenue of US\$ 667 million. The auction agency made a total revenue (from flowers and plants) via Floriday, which is its B2B digital platform, worth US\$ 2.4 billion in 2023. Flower traders from more than 50 countries participated in whose auctions in Floriday. As an organization, Royal Flora made a total revenue of US\$ 5.5 billion.

One of the most prominent floriculture trader in entire NER is Zopar Group. With almost two decades of presence across the entire North Eastern Region, the Group comprises of Zopar Exports, Zopar Floritech and Zopar Flowers and Gifts. It also offers consultancy and implementation support to many of the State Governments in NER, thus contributing its knowledge and expertise for the larger benefit of the floriculture sector in NER and income enhancement of the farmers through floriculture.

The Unsung Beauties! ... Flowers with Untapped Potential in NER

Gypsophila is valuable as an important cut flower in commercial floriculture production and is mostly used to add as a filler to flower bouquets. Gypsophila species can be regarded as one of the most important avenue of product diversification in the floriculture sector in NER. If almost every home in rural Assam is accustomed to have is hibiscus plant. It grows and thrives very well in local agro-climatic condition and has become a part of almost every baari (house courtyard) of Assam. This flower has largely not been able to attain its commercial potential because of various reasons. While most of the focus has been on growing flowers like marigold, rose, gladiolus, gerbera, tube rose etc. on a commercial scale, hibiscus has mostly remained confined to growing of one or two plants in the home gardens of Assam families. Besides its floral value, hibiscus has tremendous scope in terms of its prospects to integrate it on a commercial scale with other industry segments where it is used as an essential ingredient for a number of popular products including hibiscus tea, various herbal medicine products, cough syrup, hair care products etc.

Various parts of North East, particularly States like Assam and Manipur has many wetlands where lotus grows naturally. Economic value of lotus as cut flower is still untapped because of lack of focus in terms of systematic commercial approach. In Imphal market, lotus is an important flower which is always in demand, including the seeds of lotus. Similarly in Guwahati flower market, demand of lotus increases on various religious and social occasions, so much so that price of a single lotus flower sometimes even crosses Rs 200. Another significant advantage of promoting lotus cultivation is in the form of restoration and productive use of the wet lands which are found in many places in Assam, Manipur etc.

The sweet fragrance and beautiful appearance of night-flowering Jasmine (*Nyctanthes arbor-tristis*) blossoming on the trees or carelessly yet decoratively lying on the ground below the trees has been a source of motivation of various songs and poetries. It's known as xewali or sewali in Assamese, sefali or sheuli in Bengali, singarei in Manipuri, or parijat in Hindi. There was a time when atleast one tree of this flower used to adorn the courtyard or home garden of every traditional household in NER. Through various agro-forestry based models, converging various initiatives like Assam Floriculture Mission, Assam Agro-forestry Mission, available schemes in the medicinal plants sector from agencies like National Medicinal Plant Board / Min. of AYUSH and various other important initiatives, this flower can regain its lost glory and also can be immensely beneficial to the wellness and health of general people through its medicinal properties. The flower has of course its inherent commercial value due to its sweet aroma and stunning beauty. Besides its floral beauty value, Mothers and Grandmothers and ancestors in Assamese culture has been using both sewali flowers and leaves as an integral part of its traditional cuisine. Sewali pakori (both flowers and leaves), fish head curry with sewali flowers / leaves, khar (sour) with sewali flower, fried rice with sewali flower / leaves etc. are some of the traditional delicacies served with pride in Assamese culture.

Understanding the Business Dynamics of Few Selected Flowers

Flowers like gladiolus, lilium, rose, vanda, anthurium, carnation, cymbidium, dendrobium, gerbera can be taken up for commercial cultivation under protected cultivation. The focus should be more on establishing market linkages with domestic players in floriculture business, establish export linkages in

South Asian, Middle East markets. Importance should also be on establishing supply chain linkages for various Government events, workshops, seminars etc. where flowers are needed regularly, and gladiolus is usually one of the important flowers for such events.

Flowers like marigold and tuberose should be considered on a commercial scale of cultivation based on open field cultivation approaches. Focus should be mostly the local markets, particularly markets like Guwahati. The most important and strategic aim shall be to increase supply from within North Eastern region so that need to bring marigold at higher rates and incurring higher transportation cost from States like West Bengal is reduced. Particularly important for States like Assam where Guwahati market has a huge daily demand of marigold.

The approximate capital expenditure to be incurred in protected cultivation of the particular flowers mentioned above is about Rs 20.6 lakhs for a unit of one acre area, of which 20% can be invested by the commercial grower as his / her own equity, and the remaining can be availed as soft term loans from various banks under priority lending initiative of the banks. All the focused flowers mentioned and to be grown under protected cultivation can earn revenues ranging between Rs 20 lakhs to Rs 30 lakhs annually from unit area of 1 acre. Marigold and tuberose fetch about Rs 1.25 lakhs and Rs 3.6 lakhs per acre as gross revenue under open field cultivation. However, scaling up opportunity of marigold is considerably higher since the demands in local markets always remain high and always remain almost insatiable. Critical financial ratios like IRR, NPV etc. of each of these flower species when grown on proven technological basement, market driven approach and entrepreneurial acumen are indicative of a sustainable, profitable and lucrative business models for a large number of agri-preneurs of NER.

To conclude, Prime Minister Shri Narendra Modi had introduced the Nation to the dynamic and futuristic vision 2047 of Amrit Kaal or the Period of Elixir. A new dawn is in the making and is waiting to be ushered in and the Country is surging ahead to fulfill its aspirations. The hallmark of this Amrit Kaal is inclusive growth and realization of the true potential of various parts of our Country in the context of business and economic development too, apart from social and human development aspects. Entire North Eastern Region is set to play a catalytic role to achieve this vision by 2047. It has gifts of nature and resources in abundance and the entire region is aspiring to touch the sky. Among various sectors of the economy in NER, floriculture stands out apart, as a shining star, with promises galore.