

PROSPECT OF FLORICULTURE IN NEPAL

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ABSTRACT

Floriculture business in Nepal is emerging as an income generating enterprises in the vicinity of urban areas of the country . The diversified climatic factors of the country and present situation of domestic and international markets indicate that there is a good prospect of Horticulture Development in Nepal.

Private sectors involvement in floriculture business is in increasing trend. About 110 private nurseries are successfully running the business in 25 districts of the country and Horticulture is being done in about 30 hectares of land. Demand of cut flower is highest for rose followed by Gladiolus Chrysanthemum, Carnation and tuberose 40 percent of demand is met by domestic production.

To trap the countries potential of Horticulture Development, this sub-sector should be promoted by developing man powers providing infrastructure facilities and strengthening good research back through clear-cut natural policy and government incentives.

INTRODUCTION

Due to the variety of agro-climatic regions from the lush tropical regions of the terai through the regions of the temperate hill regions and up to the sub-alpine regions of high mountains, the kingdom of Nepal abounds in land and resources that are conducive to the production of a wide range of horticulture items including their seeds.

Flower plants are symbol of the beauty and tranquillity. Besides their aesthetic value they are also important for their economic uses such as cut flower, dried flower, extracting perfumes, vegetable dyes and other products. from the religious point of view, in Nepalese society. One can not think of any religious/traditional ritual of ceremony being performed with out ornamental flowers being a relatively remote and landlocked with few natural resources it becomes more important of Nepal to specialize in the production of low-weight high value items like floriculture seeds. There is a large and flowering plants round the year specially in Kathmandu and there is also good international market for horticulture produce. As tourism is an important industry in Nepal accounting for same 20% of countries foreign exchange earning the reproduction of fresh flowers within the country constitutes an important back-up resource to bring in more tourist and there by earning more foreign exchange, the backward and forward linkages provided by the horticulture industry would boost-up the village economy of the country tremendously.

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REVIEW

The Ranas were responsible of flowers in their majesty's gardens plants were brought from Japan, England and many other countries of the world.

In the year 1970, there was an effort to boost up the floriculture in Nepal by Indian and mission on the request of HMG/N with the results a floriculture was deputed and work on floriculture progressed to same extent in the year 1972 with establishment of Brihat Bagbani Kendra at Sarlahi, the organized activities of floriculture started in government sector with the introduction of hybrid tea and floribanda, roses along with beugainvillea and lots of seasonal flower. Sarlahi farm is whole and soul responsible for ?? six hundred varieties of roses twenty varieties of Bougainvillea along with dozen varieties of Canna and seasonal flowers. The world renowned rose varieties were collected from different nursery of Lukhnow, Calcutta, Rose Garden of New Delhi and the Swan Nursery of Sydney, Australia. The concept of encouraging flower garden and importance of flower appeared due to His Majesty's special tour to five development regions of Nepal.

With the objective of enhancing the horticulture business in Nepal collectively, Floriculture Association Nepal (FAN, 1994) was established in November, 1992. Activities conducted by FAN have definitely shown tremendous positive impact in the commercial production of cut flower in the country. FAN had organized national level floriculture trade fair/exhibition to create awareness in floriculture sub-sector. This has initiated an increase in the sales of flowers/ornamental plants and has also changed the habit of local in utilizing flowers/ornamental plants in the daily life. FAN had also conducted a systemic year round production program of cut flower like rose and glades in which 10 enterprises initiated commercial production in Kathmandu valley, Birgunj, Hetauda and Janakpur so that flowers would come to the market of Katmandu in all season. The market for floriculture have been opened up and the market in the Kathmandu valley and Pokhara have been expanded.

Research work in floriculture is very much lacking and horticulture research is not a mandate of Nepal Agriculture Research Council (NARC) which is the sole agent responsible for agricultural research and technology generation. The responsibility research work is being shouldered by the Department of Plant Resources which have done some works in horticulture research aspects however it is too meager to think about technology development for commercial cultivation. *In vitro* propagation has been standardized in some flowers such as Orchids, Chrysanthemum, Gerbera, Carnation, Lily and Gladiolus.

Nepal seems to be exporting ornamental plants since last one decade. The main items of export were orchid plants and flower seeds to Japan and Germany. The limited amount of export has found to be declined and only orchid is exported to India for medicinal purpose. During 1985 Nepalese seeds exported to the tune of Rs. 8781 thousand but in 1990 the plant export declined to Rs 113 thousand (TPC, 1993).

PRESENT STATUS

Floriculture is being done in about 30 hectares of land in Nepal and commercial floriculture has been widely practiced in Kathmandu as a part-time business and hobby. There are more than 110 private nurseries successfully being run in 25 districts of the country out of which 60 are located in Kathmandu valley (FAN, 1994).

In case of government sector Horticulture Center Sarlahi, has maintained.....type of different ornamental plants and sells about 10,000 roses plants and every year as per its annual target. in the same way horticulture center Godawari has maintained 20 types (121 varieties) of different ornamental flowering plants and Horticulture center Kirtipur has also maintained 17 types (105 Varieties) of different ornamental / flowering plants Botanical garden of Godawari has also maintained plants. An International Non government organization, Mustang Development Service Association (M.D.S.A.) has successfully demonstrates the production of tulip on cool temperate zone of Mustang .

Some of the important items of the flowering plants/ornamental commonly available in the country are as follows .

Table 1. Some common flori products available in Nepal

Flori products plant species used in floriculture business

a. Cut flowers:	Rose, Chrysanthemum, Gladiolus, Aster, Gerbera, Tuberose, Carnation, Orchids, Dahlia, Daises, Freesia, Anthurium, Gypsophila, Lilies, , Stock, Sweet sultan, Lupin, Iries.
b. Cut foliage:	Asparagus, Ferns, Maranta, Aspidistra, Thuja, Crotons.
C. Pot. foliage:	Monstera, Philodendron, Tupidantes, Dieffenbachia, Dracena, Maranta, Aglaonema, asparagus, Croton, Acalypha, Syngonium, Ivy, Cordyline, Araucaria cookies, Ficus, Camphor tree, Thuja, Juniper, Pothos.
d. Pot flowering:	Bougainvillea, Hibiscus, camellia, Orchid, Dahlia, Poinsettia, Azaleas.
e. Herb. perennials:	Geranium, Orchid, Dahlia, Gerbera, Chrysanthemum, Acalypha, Poinsettia, Cyclamen, Saintpaulia.
f. Shrubs:	Bougainvillea, Hibiscus, camellia, Thuja, Rhododendron, Azaleas, Ixora, Mussanda, Calliandra, Hydrengia, Jatropha, Bruenflesia, Fuchsia, Cassia biflora, Lagerstormia, Murrya, Jatropha.
g. Trees:	Araucaria (Christmas tree) Ficus, Gravellia (Silver oak tree) , Prunus (Cherry tree), Salix tree, Magnolia, Deodar, Maples, Pines. Spruce, Calistmon (Bottle bush). Cassia species.
h. Seasonal :	Phlox, Salvia, Calendula, Zinnia, Pansy, Primula, Helichrysum, Lilies, Hippeastrum, Antirrhinum, Marigold, Balsam, Hollyhock, Larkspur, Cineraria, Coreopsis, Petunia, Candytuft, Verbena, Solidago, Gomphrena, Lupin, Ranunculua.

The major domestic markets for floriculture products are Kathmandu, Pokhara and Bhaktapur which are turning in to potential markets for Horticulture products as well organized whole sale markets, however does not exist in country flower and ornamental plants are sold by producers directly from the nurseries and retail shops or show rooms (currently there are about 10 show room in Kathmandu Valley) . Few traders who operate in temple complexes, footpath in market places sell seasonal local varieties of flower. Some operate there business in a mobile cart and sell mostly potted flowers and ornamental plants . For year 1997, total estimated value of turn over of horticulture products (cut-flowers, potted plants, foliage plants /seasonal used in landscaping etc.) in

Nepal is Rs. 50 million (FAN, 1994). Estimated value of turnover of cut flowers is about is about Rs. 20 millions. The major clients of floriculture products are hotel, travel agencies foreign missions INGO's business houses, banks, pilgrims and general publics. The trends of purchasing of floriculture products by local people is also increasing. A recent trend shows that there is a great demand of cut flowers in the country, demand of cut flowers is highest for rose flower by Gladiolus. Chrysanthemum, carnation and tuberose (Fan, 1994). Of the total demand of the 40% constitute domestic production and rest of 60% constitute the import.

Table 2. Demand of Cut flowers

Type of cut flowers	Number of stick demanded
Carnation	200000
Rose	900000
Chrysanthemum	300000
Gladiolus	750000
Tuberose	125000
Total	2275000

source : FAN, 1994.

PROSPECTS

Since Nepal is a land of extreme with a lot of variation in altitude, temperature and humidity within a small space of geography, wide range of wild flowers are available and also a wide range of ornamental plants can be grown.

There is a large internal demand of floriculture products which is growing every year in Nepal because of increasing number of tourists, hotel industries and increasing awareness about the floriculture products. Green house cultivation could therefore, be promoted to meet the large and sustained demand for ornamental and flurry plants round the year specially in Kathmandu. The high labor requirement of ornamental plants can also can be meet in Nepal as there is abundance of labor supply. Even the Seed production of most of the flowers is possible in the country owing to cheap labor and natural isolation (Shrestha et al. 1995)

There is also a good international market for floriculture produce and for an agricultural country like Nepal, export of floriculture produced can be an effective and particle means of reducing the foreign trade deficits.

THE NEED FOR FLORICULTURE PLANTS AND SEED PRODUCTION

The international trade in floriculture is presently US \$ 3000 million. With the increase in standard of living everywhere, this figure is likely to increase further. All the western countries the oil-richer middle east countries and Asian countries like Japan, Singapore, South Korea, Thailand etc. use huge quantities of various ornaments plants and flower to decorate their homes and offices. Although all these countries have their own large scale trade in floriculture on scientific lines, they also have their limitations . In all these countries labor costs and glass house heating costs are high as results of which the final cost of production per unit reaches astronomical figures. It is for this reason that more and more produced of ornamental house plants are seeking production areas in the under developed countries where climatic conditions are such as

to minimize or obviate the need for expensive computerized green house and where labor is cheap and available in plenty. The country like Nepal where plenty of labor in cheaper wages are available can take this opportunities.

The world imports of cut-flower in 1985 was US \$ 1297.00 million. The federal republic of Germany was by far the largest import market importing cut flowers valued at US \$ 467.35 million. The united states was the second biggest import market and the most dynamic , with imports expanding from US \$ 128.58 million in 1981 (10.0 % of the world total) to US \$ 283.64 million in 1985 (21.9%). France was the third biggest importer from developing countries (22.8% of the total). With a share of 65% in 1985.

The Federal Republic of Germany is also a largest import market for cut foliage. One the world imports totaling US \$ 155.8 million, this country imported as much as US \$ 53.4 million or 34.4% of the total. The second biggest import market was the USA followed by the Netherlands, the largest exporter of cut -foliage in 1985 was Italy followed by the USA, Canada, Denmark, Costa Rica and Guatemala. Since the Federal Republic of Germany is the largest importer of cut- flowers and cut-foliage and there is already direct flight to Hongkong, Bangkok, and Delhi from where immediate transfer to flights terminating in Frankfurt are possible, Nepal should concentrate in the Federal Republic of Germany for exporting its cut-flowers and cut-foliage production in the beginning .

Kathmandu the capital is now connected by regular air service to important centers of air traffic in the Asian region such as Hong Kong, Singapore, Bangkok, new Delhi, Colombo, Dubai etc. and also to Frankfurt immediate transfer to flights terminating at major airport in the USA, Europe and other places can be made for fast deliveries of these perishable items. Concentrating in the federal republic of Germany for exporting cut flowers and cut foliage in the beginning.

Flower seeds of high quality, both open pollinated types and F1 hybrids have a good demand worldwide, rather than establishment its own line of breeding Nursery men will have contract growing arrangements with reputed seed producers from various parts of the world wide like USA, Germany, UK, Japan, Holland etc. this arrangement will have great foreign exchange earning potential as the entire contracts grown seeds will be exported on a buy back system. The indigenous flora of like Rhododendrons, primal, mecanopsis, Gentian, Corydalisa etc. also have good demand over seas as seed material.

The Netherlands dominates the world export trade in cut-flower. Collection followed (12%) then Iseral (5.7%) and Italy (5%) . The three main Types of flower imported are carnations, roses and chrysanthemums.

PROBLEMS AND RECOMMENDATIONS

PROBLEMS

1) Lack of government policy and incentives: A clear cut national policy on floriculture development is very much lacking, government role on research and development floriculture products and its promotion activities including man power development have not been well defined. Specific policy for marketing of floriculture products on the basis of their quality and standard and development of monitoring system is also lacking. Similarly, the financial incentives from the government to this sub-sector is also lacking.

2) Lack of infrastructure facilities: Infrastructure facilities for post harvest care and handling such as good refrigerated van transport ornamental flower plant product examining laboratory and wholesale market facilities are also lacking.

3) Lack of trained manpower: There is a serious shortage of trained manpower in floriculture sub-sector. The technician divisions of Department of agriculture and research stations under Nepal Agriculture Research Council (NARC) do not have qualified trained man power. Even in the private sectors there is also no qualified manpower in the floriculture sub sector. In such a situation, it is major to think about giving technical back stopping to the growers involved in this sub-sector.

4. Lack of research work : It is worth while to mention there that floriculture research work is very much lacking in the country. There is no responsible institute to carryout research work in floriculture research is not a mandete in this institution and it dose not have its own research station and man powers dealing in floriculture. Due to the lack of responsible research institute and research scientists in floriculture no significance work has been done in solve the technical problems faced by the growers involved in thus sub-sectors.

RECOMMENDATIONS

1. Government policy should be formulated in protecting and promoting floriculture business in the country and specific policy should be came up regarding man power development, marketing of floriculture products based on quality standards and monitoring system.

2. Financial incentives such waiving of import duly on inputs required for floriculture business provision of soft loans at concentrate and concession on air freight of floriculture products.

3. Establishment of basic infrastructure like good refrigeration facilities, refrigerated van and arrangement for expeditious movement of floriculture products should be done at the Tribhuvan International Airport.

4. Adequate laboratory facilities with modern equipment and skilled manpower should be provided at plant quarantine check post to examine the floriculture product.

5. For the promotion of floriculture products, an organized wholesale market with proper storage facility should be established in Kathmandu.

6. Manpower in floriculture sub-sector should be developed by providing higher education opportunities and through training (in country and abroad) at the higher level and growers level.

FAN in affiliation with Department of Forestry and Botanical Research of HMG (Royal Botanical Garden and National Herbarium, Godawari) Institute of Agriculture and animal Science, Rampur should conduct various training to produced skilled manpower required for floriculture.

7. FAN in affiliation with NARC should carry out monitor, co-ordinate and evaluate floriculture research activities.

8. Research work should be directed towards standardization of a agro-techniques for growing cut flower such as rose, gladiolus, carnation, chrysanthemum and other ornamental plants both in the field and under protected condition.

9. Identification of indigenous ornamental plants for export.

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