

REVIEW ARTICLE

STATUS OF FLORICULTURE SECTOR IN NEPAL

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ABSTRACT

Flowers are adorable creations of the god useful for all occasions from birth to death of human life. Thus, the tendency of people to accept flower on all occasion make it a great potential sector to contribute largely to the national GDP. The floriculture business is increasing 6-9% yearly over the last 20 years. About 20% cut flower, 60% ornamental plants, 90% seeds, and 20% as a whole floral product demands is fulfilled by imports with 12-15% increasing demand annually. Among them, only 14 % of farmers are contacted in extension and 31% received training regarding production, marketing promotion and linkage, entrepreneurship development, and leadership development. 80% share of floriculture export is occupied by propagation material, especially to India, and importing live plants and cut flowers majorly from India i.e., 38.40%. This is due to weak accessibility of information on technology and technical experts, low price export and high price import, weak export marketing management, promotion, and country singularized export. Policy for investment guarantee, import substitution, and export promotion; infrastructure development for wholesale markets, cold storage, refrigerated van, and collection center; package program for irrigation, greenhouse, transport, packaging, manpower development, and seeds; research and development for local spices, manpower development, production location, diseases, and pests, marking network, etc. are the essential need of floriculture sector development in Nepal.

KEYWORDS

Floriculture, Flower, Cut flower, Packaging, Ornamental, Plan

1. INTRODUCTION

Floriculture is the branch of horticulture that deals with the cultivation of ornamental plants, flowering plants, cut flower, foliage plant, bulbs/tubers/seeds/rhizome. The Commercialization of this sub-sector is not old as it dates back a century back in the world and 25 years in Nepal. Flower being adorable creation of the god useful for all occasion from birth to death of human life thus the tendency of people to accept flower on all occasion make it a great potential sector to contribute largely to national GDP. Nepal is rich in biodiversity having 6,500 species of flower including 453 species of orchid blooming from terai to mountain region with the possibility of further innovation, commercialization, and diversification (FAN, 2015). This sector is currently employing over 43,500 people with maximum women participation (77%) (FAN, 2017). Trivia nursery and Kapil nursery of Kathmandu along with the Gupta nursery of Rupandehi are recorded to be the oldest nursery in Nepal (FAN, 2017).

Floriculture is mostly led by private sector enterprises, and these are led by FAN (Floriculture Association Nepal). Established on 15th November 1992 with 11 members and now has reached 565 members until 2016-17 to organize and promote flori business in Nepal (FAN, 2017). Almost half of the nurseries were established from 2007-08 indicating it is being attractive and profitable each year. Import decreased to 20% of total business with 12-15% demand increasing every year (FAN, 2015). In recent years besides cut flowers sales of seasonal flowers are finding importance and increasing market in Nepal and abroad (FAN, 2016). The government is also gearing slowly toward the promotion of the flori business by implementing a floriculture promotion policy in late 2012 is

one example. After AEC'S support Project for Agriculture Commercialization and Trade (PACT) project has started providing its technical and financial support to FAN and promising entrepreneurs to expand their business.

2. FLORICULTURE DEVELOPMENT BRIEF HISTORY OF NEPAL

The flowers and flowers bearing trees were exported from different foreign countries. Among them, one good example can be considered the two trees of 'BhoteChaap' (endangered species) placed in the garden near the western entry gate of Singha Darbar (FAN, 2017). Earlier flowers were only considered the things which were used to worship Gods and Goddesses. During those days flowers found in nurseries were only seasonal flowers, flowers that could be grown in a vase, and some trees that bear beautiful flowers. In Nepal, the flower business might have been started in 2007 B.S. After the declaration of Nepal as a Federal Democratic country, foreign tourists started visiting Nepal (FAN, 2017). The establishment of Godhawari Sahi Banaspati Uddhan in 2007 B. S. shows the increased interest in flowers and ornamental trees which prompted the establishment of floriculture nurseries in Kathmandu Valley. The oldest nursery is believed to be established in Lajimpat whereas 'Kapali Nursery' is also considered one of the old nurseries of Nepal (FAN, 2017). Even though the 'Standard Nursery' is considered among the oldest, but it was only registered on 2030 B.S. (FAN, 2017).

On 2040 B.S. Rajendra Rai of 'Parijat Nursery' took the first step toward flower cultivation (FAN, 2017). He took the first step to cultivate the Gladiolus flower in Nepal. The first positive step for the commercialization of this floriculture subsector was initiated with the establishment of FAN

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in 2049 BS. (1992 AD) (FAN, 2017). Till the date of 2021-22, 22 national and 3 international exhibitions (2000 A.D., 2013 A.D., 2016 A.D.) are successfully organized by FAN.

3. GLOBAL MARKET

A high degree of market concentration by product and sources accounting for 90% in developed countries of America, Europe, and Asia of Global Market (ITC). High-cost low volume producers have to focus on exotic and niche markets. For the cut flowers Europe, North America, Asia, and Africa, and for potted plants, Europe, North America, South America, Asia, and Africa are dominant markets ranking-wise. International floriculture trade is about \$25 billion with a 5% annual growth rate between 2017- 2021 A.D. (ITC, 2022). Because of the fast growth of the value chain, the economic scale has increased, and as a result market competition emerged. The marketing department of the wholesalers develops new product concepts with their value chain to sustain sufficient scale for their client as a logistic service provider (Sharma, 2019). Netherland dominates the floriculture market with 50.65% export share and Germany with 14.626% import share in 2021 (ITC, 2022). Cost-efficient producer countries like Brazil, China, India, Mexico, Israel, and Turkey are strengthening their grip on the global market due to high demands for competitively priced flowers in the main destination market and improved logistics, including sea transportation containers. A high-cost producer has to differentiate from low-cost competitors. The countries that are uniting themselves in trade unions are getting more power in the world market, for example, the European Union (15 countries plus another European countries joined in 2004), ASEAN (Asian integration) NAFTA treaty (USA, Canada Mexico), WTO (Sharma, 2019).

4. GLOBAL CONSUMPTION

Annual consumption ranges from \$45-60 billion rising over the past few years (ITC, 2022). To meet the changing and growing demand, production is shifting from traditional growers and consumers (Holland to other relatively new producing countries). New emerging countries in the floriculture sector are India, China, and Thailand (ITC, 2022).

Consumption per capita has increased strongly because of growing income, people have just started to buy more ornamentals for personal use as well as gifts with that institutional, companies, and recreation demands have also raised. Consumers are moving toward low-cost markets like supermarkets, discounters, and chain stores. The countries with economic crises Greece, Spain, and Portugal are falling in consumption volume, whereas in Eastern Europe the market is developing positively. The BRIC countries i.e. Brazil, Russia, India, and China are gaining importance.

5. NATIONAL MARKET

From 80 nurseries in 1992/93 of small sizes concentrating around Kathmandu valley to more than 700 nurseries in 43 districts established in 175 ha area coverage with 6 billion capital investment (estimated) and 2.42 billion annual turnovers which is increasing over a year, indicates floriculture is being promoted as a profitable business (FAN, 2019). About 20% cut flower, 60% ornamental plants and 90% seed, and 20% as a whole floral product demands is fulfilled by imports with 12-15% increasing demand annually (FAN, 2015). The market in recent years is diverging along with urbanization and modernization. In recent years a new culture accepting flowers positively as a gift is helping the floricultural market to flourish. The major market and producers are Kathmandu (50.4%), Lalitpur (7.1%), Morang (4.1%), Kaski (3.9%), and Bhaktapur (3.6%) forms by percentage (FAN, 2016). The consumption pattern and market demands present an encouraging sign for the grower and the entrepreneur. Most of the flowers are cheaper in India due to a government subsidy of 50% on horticulture (NHB, 2022).

6. NATIONAL PRODUCTION

Out of a total of 697 flori-farm in Nepal (Pun et al., 2019). Most of the farms concentrate on perennial, ornamental, and loose flowers. The demands during the summer season are fulfilled by home production mainly from Kathmandu (50.4% of the total no. of farms), Lalitpur (7.1%), Morang (4.1%), Kaski (3.9%), Bhaktapur (3.6%) whereas demand in winter is fulfilled by imports from wholesaler/retailer and production of terai (FAN, 2016; FAN, 2015).

Table 1: Floriculture Products and Production of Nepal in 2015.

Product	Flower Type	Main District of Production	Area % of Production
Seasonal Flower (pcs)	Sayapatri/marigold, Petania, Dahlia, Zinnia, Pansy	K.T.M valley, Chitwan, Morang	28.74
Perennial Flower (pcs)	Rose, Carnation, Godawari, Baganbeli	K.T.M, Lalitpur, Jhapa, Morang	<0.12
Ornamental Flower (pcs)	Dhupi, Hedge, Ashoka	K.T.M, Lalitpur, Morang, Jhapa	<0.12
Cut Flower (pcs)	Carnation, Rose, Gerbera, Gladiolus	K.T.M Valley around	25.34
Loose Flower (pcs)	Marigold, Dahlia, Godawari, Taro (Korepsis)	K.T.M, Mahotari, Dhanusa, Siraha, Makawanpur	32.12
Seed/Bulb/Tuber/Rhizome (pcs)	—	Jhapa only	11.6

Source: Floriculture Association Nepal (FAN)

The national business transaction was NPR 2250 million in 2017/18 (Pun et al., 2019). The gladiolus and roses are bulk business flowers whereas flowers like tuberose, gerbera, anthurium, bird of paradise, Liliium, dahlia, carnation, lilies, orchids, and azaleas are commercially grown on a small scale.

7. PRODUCER

Almost 50% of nurseries are concentrated in Bagmati province within

Kathmandu valley and fewest in Karnali province. Floriculture is female (77%) and Tamang ethnic group (28%) dominated the subsector (FAN, 2016). There are 86 cut flower producers and out of which 40 facilitated production and supply for 8 months (FAN, 2015). Only 14 % of farmers are contacted in extension and 31% received training regarding production, marketing promotion and linkage, entrepreneurship development, and leadership development. In FAN, 74% of flori enterprises are registered (FAN, 2016).

Table 2: Major Farms/Producers.

Nursery Name	A Bloom Flora Farm	Lila Nursery	Kumari Nursery	Kusuwaha Nursery Farm	Joshi Ban Nursery and Mauripalan
Area	20 bigha	5 bigha	55 ropani	4 bigha	3.5 bigha
Investment	1crore	50-100 lakh	>1 crore	10-50 lakh	10-50 lakh
Location	Ganganagar Chitwan	Jhapa	KTM	Siraha	Makawanpur

Source: Floriculture Association Nepal (FAN)

8. CONSUMER

Growing demands and preference of consumers towards the flori product significantly indicate growing consumer. Total demand can be divided into

institutional 60%, individual 20%, and tourism 20% (FAN, 2016). 70% of the consumer is reported to be female and the remaining are also influenced by the female (FAN, 2016).

Table 3: Demanding Pattern of Consumer

Highly Increasing Demand	Very Good Increasing Demand	Moderately Increasing Demand
Wedding ceremonies	Birth, Death, and other personal programs	Office and official Function
Hotels, Travels, and Tourism Industries	Welcome, farewell, and similar ceremonies	Special occasion; Traditional and Religious

Source: Floriculture Association Nepal (FAN)

9. IMPORT

Import of floriculture products has been increasing continuously to fulfill the growing demand of the increasing population despite of development of floriculture sub-sectors nurseries, attention of different public-private sectors and government, still, about 20% of cut flowers, 60% of ornamental plants, and 90% of seeds demands are met through import (FAN, 2015). Nepal majorly imports from India with 38.40%, Turkey with 22.99%, and Italy with 22.91% in 2021 (TEPC, 2022). From the economic year 2003-2004 AD the legal provision for discounting VAT on the imported greenhouse for floriculture and orchard subsector had been done but not on 1% custom tax, afterward almost 10,000-meter square greenhouse for floriculture was imported and from 'BINIYOJAN BIDHEK' of the economic year 2005-2006 AD the legal provision for discounting on vat and custom tax on product has been undertaken (FAN, 2017).

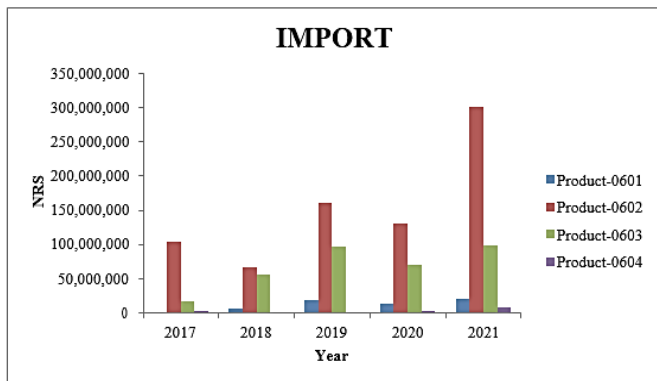


Figure 1: Imports of Nepal

[Product-0601: Bulbs, tubers, tuberous roots, corms, and rhizomes, dormant, in growth or

flower: chicory plants and roots other than roots of heading 12.12; Product-0602: Other live

plants (including their roots), cuttings and slips: mushroom spawn; Product-0603: Cut

flowers and flower buds of a kind suitable for bouquets or for ornamental purposes, fresh,

dried, dyed, bleached, impregnated or otherwise prepared; Product-0604: Foliage, branches and other parts of plants, without flowers or flower buds, and grasses, mosses and lichens,

being goods of a kind suitable for bouquets or for ornamental purposes, fresh, dried, dyed,

bleached, impregnated, or otherwise prepared]

10. EXPORT

Nepal can be a potential exporter of the floriculture sub-sector as in the past period the export of floriculture products has significantly increased. Nepal majorly exports to the U.S.A. at 38.05%, Japan at 29.38%, and Indonesia at 16.07% of the floriculture products (TEPC, 2022). The increment of export can play a vital role in the economics of any country as Holland's economics depends on floriculture and this can be achieved through the incorporation of this sub-sector into ADS (Agriculture Development Strategy), NTIS (Nepal Trade Integration Strategy) for which increment in the export is prerequisite.

Since 2004 A.D., Nepal is a member of WTO (World Trade Organization) 147th afterward the tariff on floriculture products of Nepal was reduced (FAN, 2017). In 'European countries groups' project "Everything but Arms" made provision for discount on TAX for Nepali floriculture products but after getting Phyto-sanitation certificates from SPS control. In the U.S. A., only 1.7% tariff on cut flowers and 0% on everything else compared to other countries China and Korea face an average tariff of 4.85% whereas is In Japan no tariff for Nepali floriculture product whereas 3% for other countries and in India 0% tariff but plant quarantine regulations are strictly applicable (FAN, 2016).

[Product-0601: Bulbs, tubers, tuberous roots, corms, and rhizomes, dormant, in growth or flower: chicory plants and roots other than roots of heading 12.12; Product-0602: Other live plants (including their roots), cuttings and slips: mushroom spawn; Product-0603: Cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes,

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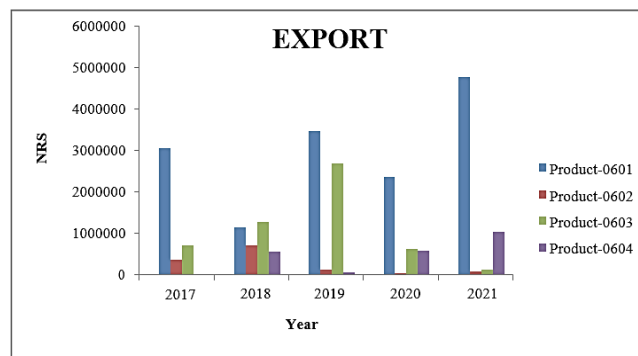
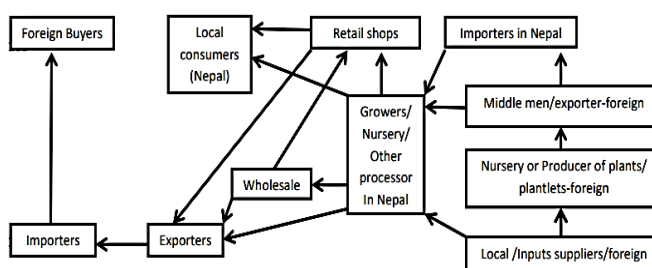


Figure 2: Exports from Nepal

The proportion of value addition is almost 75-90% of total value in this subsector however due to a lack of information on technology and technical experts, low price export and high price import has been the main constraint of this subsector in past few years. The majority of the entrepreneurs involved in the floriculture business are not facilitated with export marketing management and promotion resulting lack of proper export channel and singularized in one country and one custom, Mechi custom with higher export quantity but with a lower value is being one of the contrasting examples. Diversification of the international market of Nepali floriculture products from Asian to European, and American markets is being a positive step in the development of the floriculture business in Nepal over the past few years. Due to the attack of Islamic Terrorists on September 11, 2001, in America, almost 2,996 people were killed and the gladiolus bulb cultivated in Nepal with the support of FAN to export in Bangladesh had not been successful (FAN, 2017).

Another example of a lack of proper policy, action plan, and political instability is the unofficial Indian blockade from 2072/6/6 which resulted in 64,000 gladioli lost and being fed to cattle (FAN, 2017). Thus the proper policy management, political stability, and proper export import channel with the proper vision from the government is the immense requirement of systematic export import development in the floriculture sub-sector. Export and Import Potential data Of Nepal Are reviewed in this paper as these are the first indicator of business potential and raw materials for the development of these sectors to include in government policy priorities i.e, NTIS and ADS.

11. VALUE CHAIN MAP OF FLORICULTURE PRODUCTS



12. CONCLUSION

Nepal is one of the potential countries for floriculture can create great opportunities both in the economic and social sectors of the country. 80% of the floriculture export from Nepal are propagation materials and 94% of imported floriculture are live plants and cut flowers (TEPC, 2022). This data justifies cultivation and marketing scenarios are the national levels are major challenges faced by floriculture. Policy for investment guarantee, import substitution, and export promotion; infrastructure development for wholesale markets, cold storage, refrigerated van, and collection center; package program for irrigation, greenhouse, transport, packaging, manpower development, and seeds; research and development for local spices, manpower development, production location, diseases, and pests, marketing network, etc. are the essential need of floriculture sector development in Nepal. Along with that strengthening the Nepal Agriculture Research Council (NARC), School Of Science and Technology, Central Department Of Botany, Agro Enterprises Centre

(AEC), Floriculture Association of Nepal (FAN), Department Of Plant Resources (DPR), Floriculture Development Center (FDC), Godavari, Himalayan Flora Enterprise Private Limited, Hattiban, in the areas of variety development and initiation of floriculture researches, Nepali product differentiation is also needed. Effective implementation of Floriculture Promotion Policy 2012 and with the proper functioning of the Floriculture Development Coordination Committee along with including extensive training programs among farmers/nurseries developers on better techniques for quality control, protection from diseases and insects, nursery management as well as postharvest handling, processing, VAT and Tax exemption on earning from floriculture sector for the initial year are one of the key factors of these policies. This will boost up registration of individual farms and the establishment of a communication channel at the Provincial level for cultivation and marketing. Subsidized credit and other facilities for collective and cooperative farming at the local level should be insured followed by diversification and ensuring the national market by opening floriculture sales outlets in the potential market. The prioritization and integration of this subsector in Nepal Trade Integration Strategy (NTIS), 2010 & Agriculture Development Strategy (ADS) for increment in export potential and floriculture promotion is the first step toward its development.

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