

# Impact of COVID 19 on Floriculture Industry of Nepal

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## Abstract

The COVID-19 pandemic has affected all aspects of human life across the world and has further exacerbated the impact of financial crisis brought about by agrarian crisis, job crisis, rise in oil prices and trade renegotiations. Floriculture industry of Nepal was not an exception and was severely impacted too. Floriculture Association Nepal (FAN) carried out this questionnaire based survey to assess the impacts of COVID 19 and then followed up by interaction with different major stakeholders. The findings of the study are based on post - COVID period from April 2020 to July 2020. In the Pre - COVID period, the yearly transaction of the industry increased by 10% annually but due to this havoc its annual transaction decreased by 10.89% (from NRs. 2416400000 to NRs. 2153300000). The study revealed annual transaction loss of 97% in cut and loose flowers, followed by 75% in landscape and gardening and 65% in ornamental plants. However, the most vulnerable sub-sector was cut flowers business as it was the most severely affected by COVID 19. Its major impacts also appear on physical, mental, financial and industry crisis that need to be well addressed by short-medium-long term strategy and package programs to rejuvenate the industry.

**Keywords:** COVID 19, Cut flowers, Entrepreneurs, Floriculture, Transaction

## Introduction

The COVID-19 pandemic has led to a dramatic loss of human life worldwide and presents an unprecedented challenge to public health, food systems and entire work. The economic and social disruption caused by the pandemic is devastating: tens of millions of people are at risk of falling into extreme poverty, while the number of undernourished people, currently estimated at nearly 690 million, could increase by up to 132 million by the end of the year (WHO, 2020).

Millions of agricultural workers – waged and self-employed – while feeding the world, regularly face high levels of working poverty, malnutrition and poor health, and suffer from a lack of safety and labour protection as well as other types of abuse. With low and irregular incomes and a lack of social support, many of them are spurred to continue working, often in unsafe conditions, thus exposing themselves and their families to additional risks. Further, when experiencing income losses, they may

resort to negative coping strategies, such as distress sale of assets, predatory loans or child labour (WHO, 2020).

In global floriculture scenario, top five countries by Export Revenues in 2019 were 48.9% of Netherlands (4.6 billion USD), 14.9% of Columbia (1.4 billion USD), 9.3% of Ecuador (879.8 million USD), 7.5% of Kenya (709.4 million USD) and 2.6% of Ethiopia (241.3 million USD). As per the COVID-19 pandemic, a contraction of 6.2% is expected in 2020 on the Floriculture and Floristry Industry (Petal Republic, 2020).

As Nepal has small to medium scale level of annual production and its transaction with small scale of economy, Nepal is highly vulnerable to the impacts of COVID 19. The lockdown affected the entire floriculture sector, but the cut flowers sub sector and the value chain therein were totally devastated. Therefore, Floriculture Association Nepal (FAN) carried out this study to assess the social and economic impacts of COVID 19 on floriculture industry in Nepal.

## Materials and methods

Floriculture Association Nepal (FAN) conducted a survey during COVID havoc period from April 2020 to July 2020 to access the impacts of COVID 19. A total of 61 entrepreneurs participated in the survey among them 32 were cut flower growers and 29 were nursery owners. A set of questionnaires was developed and circulated it by FAN to all the respondents. After compiling all the data received from the respondents, verification and further consultation was also done. As the havoc COVID situation extended and continued lock down, various interactions with different major stakeholders namely cut flower growers, retailers, wholesalers and nursery owners were carried out. Besides, secondary data on yearly transaction of different floriculture products, national and international import and export scenario were collected from FAN and International Trade Centre. Primary

and secondary data was analyzed using Microsoft Excel Spreadsheet.

## Result and Discussion

### *Floriculture industry: pre, during and post COVID 19*

Components of floriculture industry cover nursery, flower shop, cut flower, large shrubs and plants, gardening services, landscaping services and flower/plant wholesale that amidst around urban and peri-urban areas. In Nepal directly and indirectly more than 41 thousand people rely in the industry out of which more than 700 entrepreneurs have invested more than 6000 million (6 Arab) rupees in the industry (FAN, 2020).

The figure 1 shows the growth of floriculture industry of Nepal. Its transaction was about 4 times increased from 688.5 million NPR in 2067/68 (2010 AD) to 2416.4 million NPR in 2075/76 (2019 AD). Even though it was projected that there would be 18% increment in the transaction of floriculture products in 2076/77 (2931 million NPR) as per the higher investment by entrepreneurs in the sector, result was observed into reverse. As a COVID 19 and thereby lockdown situation during 2076/77 (2020 AD), transaction of floriculture products was reduced by 10.88% (from 2416.4 to 2155.3 million NPR) (FAN, 2020).

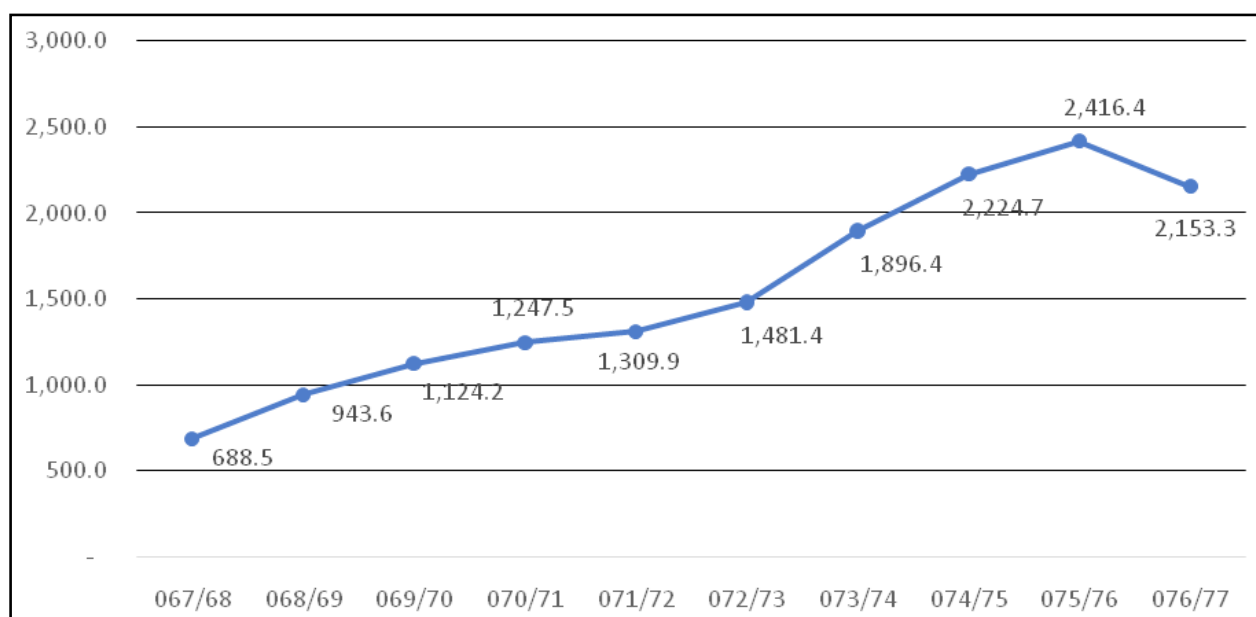


Figure 1. Yearly transaction of floriculture products of Nepal (NPR in million)

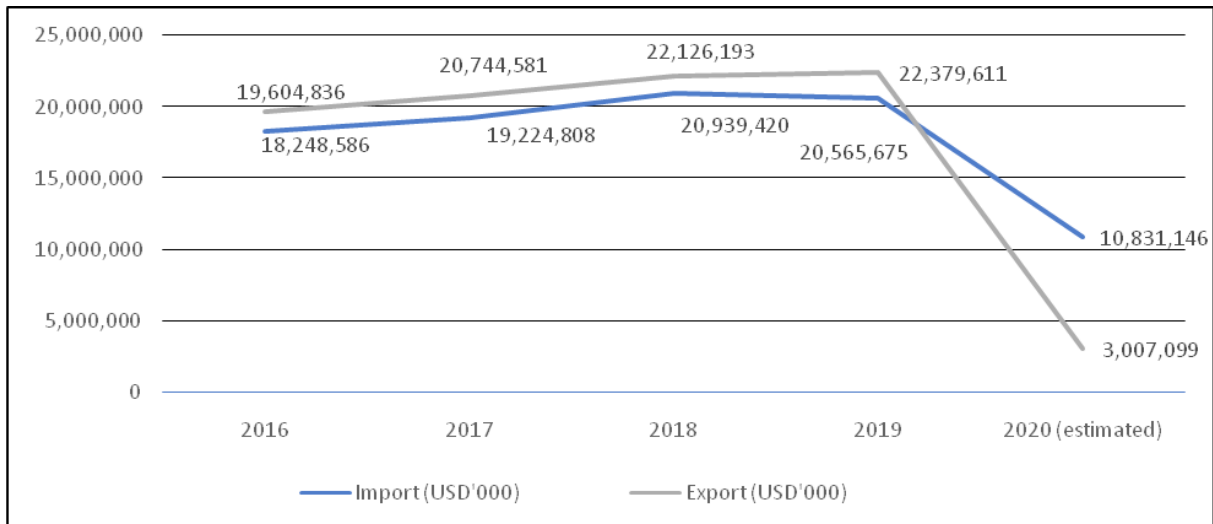
Similarly, Table 1 shows the commodity wise transaction of floriculture products of Nepal. The highest transaction value was found in “Ornamentals plant, Shrub & Climbers” commodity in all the three fiscal years (2074/75, 2075/76 and 2076/77), followed by “Marigold and other flower garland”. As in case of “cut flowers & Foliage” commodity, third highest transaction value was found in 2074/75 and 2075/76, whereas it was in fourth positioned value in 2076/77. It was due to severe impact on the commodity.

**Table 1.** Commodity wise transaction of floriculture products (NPR in million)

S.N.	Particular	2074/75	2075/76	2076/77
1	Seasonal flowers	302.86	333.15	281.73
2	Ornamentals plant, Shurb& Climbers	582.66	640.92	577.37
3	Cut flowers & Foliage	312.32	343.56	290.59
4	Landscape and gardening	238.13	261.94	221.51
5	Open flowers (Loose Flowers)	102.33	112.57	90.77
6	Marigold and other flower garland	385.25	398.50	364.03
7	Others (Tissue Culture, agro equipment, carpet grass, rhizome, bulb etc)	301.17	325.73	327.28
<b>Total</b>		<b>2,224.7</b>	<b>2,416.4</b>	<b>2,153.3</b>

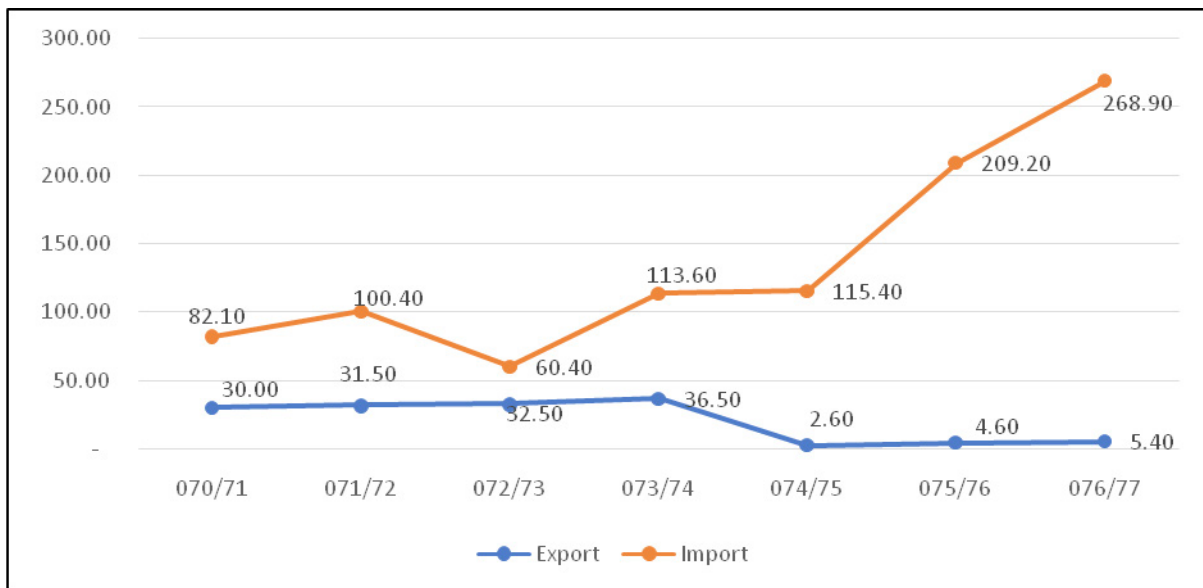
Source: FAN (2020)

With respect to import and export scenario of world floriculture products (product: 06 Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage), there was increasing trends of both import and export scenario by 5-6% and 6-9% in 2017 and 2018 respectively (Figure 2). While in 2019, import was reduced by 1.7% and export was only increased by 1.1%. Similarly, this decreasing trend of import and export was found so higher at 47% and 86% respectively (ITC, 2021). This reduction was as the major cause of pandemic COVID 19.



**Figure 2.** Yearly international import and export scenario of World (US dollar Thousand)

Similarly in Nepal, export was drastically decreased by 82% (from 30 to 5.4 million NPR) in 2076/77 as compared to 2070/71 (Figure 3), whereas import was increased by 227.5% (more than three times from 82.10 to 268.90 million NPR) in 2076/77 as compared to 2070/71.



**Figure 3.** Yearly import and export scenario of Nepal (million NPR)

*Market situation of floriculture during and after pandemic*

As use of flower has both cultural and aesthetic value in Nepal, growing population of Nepal love flowers especially share of youth population was found larger. Public sector has also realized importance of urban greenery so that significant change was found in establishing urban parks, planting plants and flowers along the urban roads and open spaces. Its result was observed that public spending has been increasing in floriculture that would also lead to creating demand for flowers and plants and to creating jobs. Thus, the industry has new job opportunities such as garden consultant, nursery consultant, cut flower consultant, marketing consultant, florist, garden center assistant, etc.

However, domestic demand was found still unfulfilled where 20% deficit in cut flowers, 50% deficit in ornamental plants, 90% deficit in cut flowers planting materials, and 100% deficit in flower seeds (FAN, 2020). Besides, due to COVID 19, market situation of floriculture was found poor and it depends on how long it takes to prevail over Covid 19. During interaction among different stakeholders (growers, retailers, wholesalers, and thematic experts), it was projected that the loss of this four months study period will lead the industry to two years behind.

Besides, major impacts also appeared on physical, mental, financial and industry crisis. Following measures were identified especially in cut flowers and nursery business:

#### **Cut flowers**

- ▶ No sales of cut flower and foliage's
- ▶ Closure of wholesalers and retailers
- ▶ No landscaping and plant rentals

- ▶ Limited sales from plant nurseries
- ▶ Limited sales of inputs
- ▶ Teehar during Covid 19-huge sales of Marigold and Gomphrena affected
- ▶ Survivor's would certainly grow and there might be slow business for few quarters-years
- ▶ Market demand highly depends on how situation will be prevailed; renormalizing of tourism, occurrence of social events, etc.
- ▶ Need to reestablishment of disruption (35%) in the production system especially in cut flower sub sector

#### **Nursery business**

- ▶ People especially from the neighborhood customers bought flowers, inputs and plants from the local nursery
- ▶ Huge quantities of annual flowers could not be sold due to lock down
- ▶ Some nurseries began online sales

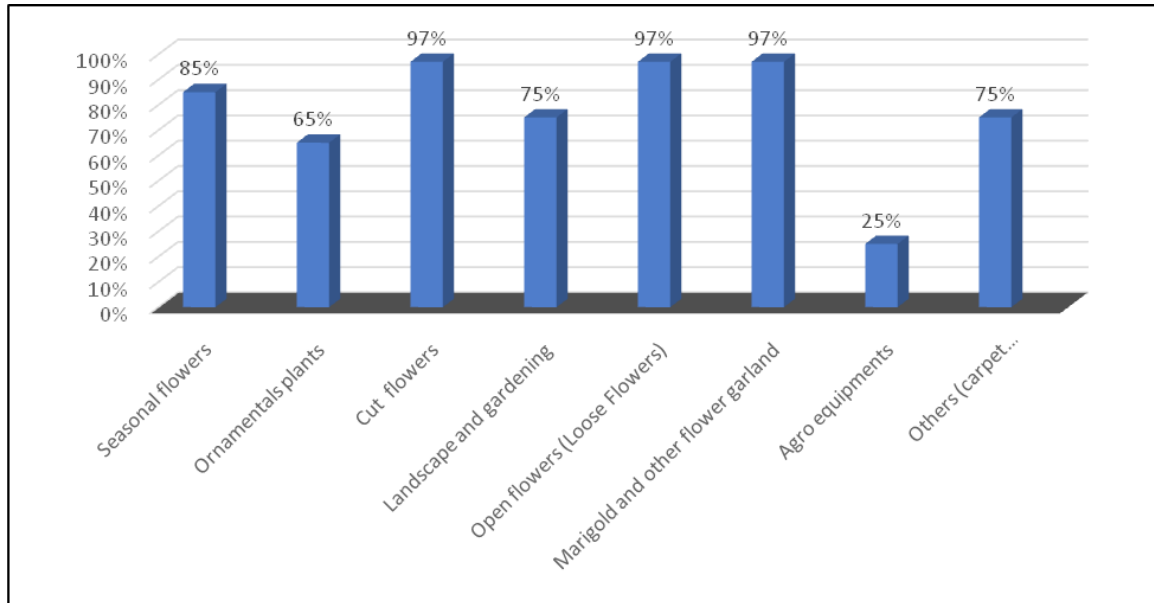
#### **Loss due to COVID 19**

During lock down period of four months, loss amount was estimated about 770.6 million NPR (Table 2). As compared with various commodities of floriculture industry, the highest loss share was found in "Marigold and other flower garland" (173.9 million NPR), followed by "Ornamentals plants" (159.7 million NPR) and "Cut flowers" (138.9 million NPR).

**Table 2.** Commodity wise loss value due to COVID 19 (NPR in million)

S.N.	Particular	Estimated transaction amount	Loss amount (4 month period)
1	Seasonal flowers	393.1	111.4
2	Ornamentals plants	737.1	159.7
3	Cut flowers	429.4	138.9
4	Landscape and gardening	309.1	87.6
5	Open flowers (Loose Flowers)	132.8	42.1
6	Marigold and other flower garland	538.0	173.9
7	Agro equipment	234.0	19.5
8	Others (carpet grass, rhizome, bulbs, etc)	150.3	37.6
<b>Total</b>		<b>2923.9</b>	<b>770.6</b>

Similarly during the period, 97% loss of floriculture products was found in three commodities viz. cut flowers, open flowers and marigold and other flowers as compared with the estimated commodity wise transaction amount (Figure 4).



**Figure 4.** Commodity wise loss percentage due to COVID 19

**Resilience building during and after COVID 19**

Most of the entrepreneurs interacted with each other to think what should they had to prepare contingency plan and their subsequent implementation including clear role and responsibility of concerned stakeholders during and after the Covid 19 situation. Meanwhile, FAN organized Press Meet on 2077/1/11 (23 April 2020) and 2077/2/20 (2 June 2020). During the meeting, FAN released press meet notes including impacts of COVID 19 on floriculture industry that was leading to appear on physical, mental, financial and industry crisis. So, press notes highlighted that the issues need to be well addressed by short-medium-long term strategy and package programs to rejuvenate the industry.

Thereafter it was decided that business should need to be done following social distancing, sanitation measures and online. Otherwise, it was found that if there will be no lock down situation, limited sales of flowers and plants might happen due to reduction in their production scale. It was observed that many cut flower growers scaled down floriculture products and were found integrating vegetables in their farms.

Some were found opening garden center due to realization of surviving in the pandemic would be the biggest hurdle.

Meanwhile, consultation and interaction among experts and entrepreneurs were conducted and prescribed following adaptation measures:

**Adaptation measures applied**

- ▶ De-suckering flower buds in gerbera
- ▶ Pruning back and disbudding carnation, roses
- ▶ Pruning back to limonium
- ▶ Free gift of cut flowers to front line health workers and general public
- ▶ Lobbying on government stimulus support: loan, interest waiver, electricity subsidy etc.

**Conclusion**

Floriculture business is one of the worst hit business sector of Nepal. Due to COVID 19, various commodities of the industry were severely impacted loss ranging from 65% to 97% in terms of value. Among the different commodities, cut flower business and aligned entrepreneurs had worst situation. There is urgency for stimulus package to revive especially cut flower sector. There will be no doubt that after pandemic, Nepalese floriculture industry will

rise and grow again for import substitution and export promotion of these high value products. Joint venture between concerned stakeholders and entrepreneurs needs to be realized and well addressed by short-medium-long term strategy and package programs to rejuvenate the industry.

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