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Estimation of Marketing Efficiency and Price Spread of Gladiolus in Punjab, Pakistan

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ABSTRACT

The gladiolus is an important cut flower due to its ornamental characteristics, coloring schemes and high returns. The present study was designed to explore the marketing cost, marketing margins, price spread and marketing efficiency of gladiolus in Punjab, Pakistan. The primary data were collected from 39 producers, 13 commission agents, 14 wholesalers and 19 retailers. There were two marketing channels involved in gladiolus marketing. Result shows that the producer's share in consumer's rupee was more in channel-II (74.46%) as compared to channel-I (54.24%). Farmer's net price was Rs. 1265.87/100 pieces in channel-II. Total marketing cost, total marketing margin, total physical quantity loss were Rs. 546.01, Rs. 314.76 and Rs. 223.25 per 100 pieces, respectively in channel-I. The retail price was Rs. 1700/100 pieces in channel-1 which was less as compared to Rs. 2221.00/100 pieces in channel-I. Price spread was more in channel-I which was Rs. 1016.32/100 pieces as compared to Rs. 434.13 in channel-II. The value of marketing efficiency was higher in channel-II (4.15 and 2.51) as compared to channel-I (1.58 and 1.11). But, the channel-II was observed only 25% and 75% of retailers and producers preferred channel-I due to quick and easy payment; and shortage of time, transport and labour. The government should establish the cold-storage facilities, proper and facilitated cut flowers markets in the country. The government should create awareness among the farmers about the economic incentive in the production of cut flowers. The government should promote the export of cut flowers. The government should eliminate the role of middle man by the establishment of flower markets in various parts of the provinces. The government should ensure the availability of flower related pesticide especially for fungus attack and provide crop insurance in case of insect pest attack.

KEYWORDS: Cut flower, Marketing cost, Marketing margin, Postharvest loss, Shepherd's method, Acharya's method

1. INTRODUCTION

Cut flowers are parts of plants which include the blooms or inflorescences and some attached plant material. The cultivation of cut flowers is a branch of floriculture [1]. There exists an increase in the use of floricultural products in developing countries such as Pakistan, Bangladesh and India. This increasing trend is responsible for increasing pressure on flower cultivation in developing countries. Pakistan is an agriculture-based country, have a favorable agro climatic zone for flower cultivation [2]. Some commonly growing flowers are rose (*Rosa indica*), gladiolus (*Gladiolus spp*), tuberose (*Polianthes tuberosa*) and marigold (*Tagetes erecta T. patula*) [1].

The life of cut flowers is very short after the removal from plant because their tissues have some special morphological and physiological characteristics. Due to this, the refrigerator is used for the extension of cut flowers life because it decreases the loss of water, senescence, and infection due to fungi and bacteria [3].

However, the cut flowers occupied a significant place in the life of human beings due to their involvement in social, cultural and religious activities. The activity flower farming on large estates was started in the late 1800's in United Kingdom but now flowers are cultivated in many countries. Flowers are also used for the expression of human feelings at different occasions such as birthday, weeding ceremony, valentine's day, mother's day, anniversaries, religious activities and home decoration [4]. Additionally, floriculture industry has a potential to increase the share in domestic as well as foreign markets. Nearly 120 countries were engaged in the production and trade of cut flowers. The economy of Netherland, Colombia and Israel depends upon the cultivation of flowers. The value of internationally exported floricultural products was 17.614 billion USD in 2012 with 90% export comes from developed countries [4].

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The sector of agriculture contributed 20.88% in gross domestic product of Pakistan with the involvement of 43.5% of labor force. The progress in agriculture sector is required for the development of all other sectors [5]. But, the prosperity of small farmers is required to uplift the agriculture sector of Pakistan because marginal or small farmers are important characteristics of Pakistani agriculture [6]. The industry of floriculture also provides attractive self employment opportunities for marginal or small farmers [7].

Gladiolus belongs to family Iridaceae and it is native to South Africa. The gladiolus is preferred after roses in Pakistan. It is internationally cultivated on commercial basis due to its ornamental and medicinal importance [8]. Gladiolus is commonly known as Glad or Sword Lily or Corn Lily. Internationally, it ranked at 8th position in the trade of cut flowers. In Punjab province, the trend of gladiolus cultivation increases among the farmers. The demand of flowers increases in the last few years due to high return, population growth, increase in living standard, increasing desire for environment friendly atmosphere, increase in the business of hotels and restaurants [9].

In Pakistan, the export of cut flowers was started in 1996-97 and initially the volume of cut flower trade was 87,734 kg and it becomes 126,354 kg in 2001-02. At present, Pakistan earned 35 million rupees by exporting cut flowers. Due to increasing trend in cut flower industry, this business shows the ability to achieve the second rank after textile if government facilitates the cut flower farmers with respect to better technology, refrigerated transportation and expansion in foreign markets [10]. Unfortunately, the infrastructure was not good in Pakistan with respect to floriculture. However, the increase in road networks and motorways enhanced the business of flower [8].

In Pakistan, the important cut flowers are Roses, Iris, Gladiolus, Narcissus, Carnation, Gerbera, Lilies, Statice (Gul-e-Sataish) and Freesia (Gul-e-Farzana). Approximately, the area under floricultural products was 6,680 hectares to give a production of 10 to 12 thousand tons. It is possible to earn billions of foreign exchange by exporting fresh flowers and flower buds like the countries Iran, Sri Lanka, Kenya, India, Thailand and Singapore. But, floricultural crops required huge care in their production and marketing due to their highly perishable nature. A large volume of flowers cultivated in Pakistan was locally sold because the product does not meet international export standards. Similarly, the level of wastage was also high due to improper infrastructure, post harvest losses and improper marketing [11].

The price of agricultural products increases at each stage of marketing. The prices of agricultural commodities received by farmers, wholesalers and retailers is important because the decrease in marketing margins and increase in producer's share in consumer rupee are considered as pre-requisite for an appropriate price fixation policy. The change is marketing margins can change the efficiency of marketing system [12].

Due to the importance of marketing channels, marketing margin, postharvest losses, price spread and marketing efficiency; many researchers explored these indicators for different agricultural crops such as Banana in India [13], cut flowers in Bangladesh [14-15], cut flowers in India [1], tomato in India [16]. But no study explored the marketing costs, margins, price spread and marketing efficiency of Gladiolus in Punjab, Pakistan.

Raha and Siddika [14] described the unorganized expansion of flower marketing in Bangladesh. The share of flower growers was 30.75% to 60.42% of the consumer's taka while the marketing cost was 24.71% to 58.5%. The net marketing margin ranges from 3.0% to 37.83% of consumer's taka. Growers adopted the channel I irrespective of the fact that it involved highest cost as compared to other channels.

Similarly, Riaz et al. [8] claimed an increase in the use of cut flowers in Pakistan. It has a link with living standard, and media was responsible for the increase in cut flower business. The results of survey confirmed the possibility of cultivation of all gladiolus varieties in Punjab due to varied agro-climatic conditions under open field or greenhouse conditions.

In a study, Mou [15] compared the profit and production of some selected flowers with their competing crops. He also explored the value addition and marketing channels for flowers in Bangladesh. Stratified random sampling was adopted for primary data collection from 32 farmers, 21 flower traders, retailers and wholesalers. Result showed the gross margin in flower (Tk. 1,359,824.20 per ha) and vegetables (Tk. 46,362.14 per ha). The marketing margin of wholesaler-cum-retailer and retailer were Tk. 638.39 and Tk.689.72 per 100 pieces, respectively.

Recently, Balamurugan et al. [1] explored the profitability and marketing cost in different cut flowers such as gladiolus, tube rose, rose, gerbera and marigold. The stratified sampling was employed for primary data collection from 20 farmers, 30 local traders, 10 wholesalers cum retailers and 20 retailers. The net return was more in the case of rose (Rs. 353,927) as compared to gladiolus (Rs. 133,069), marigold (Rs. 84,643) and tuberose (Rs. 176,941). Total marketing cost was more for retailer (Rs. 41.14/100 pieces) and less for wholesaler (Rs. 5.66/100 pieces). In the same way, marketing margin was also higher for retailer (Rs. 28.10).

To extend the available literature, the present study was designed to explore the marketing channels of gladiolus, marketing cost and margins of intermediaries, producer's share in the consumer price, marketing efficiency and problems in gladiolus business. The information will be beneficial to understand the present situation of gladiolus marketing system in Punjab province of Pakistan.

MATERIALS AND METHODS

The business of floriculture is comparatively better in Punjab province as compared to other provinces. It is due to the increase in competition in agriculture as well as presence of main markets in Faisalabad, Rawalpindi, Lahore and Islamabad. But the situation is not good with respect to international markets. In Pakistan, Pattoki district Kasur is considered as a hub of flower cultivation and flowers are distributed in other parts of country such as Faisalabad, Karachi, Islamabad, Lahore and Peshawar [17]. Therefore, districts Kasur and Faisalabad were selected for the collection of primary data from gladiolus producers, wholesalers cum commission agents and retailers in 2011. The respondents were distributed in three main groups like Gladiolus producers, wholesalers-cum-commission agents and retailers. Simple random sampling technique was used for the collection of data from 85 respondents including 39 gladiolus producers, 13 commission agents, 14 wholesalers and 19 retailers. These respondents were personally interviewed by using a structured and pre-tested questionnaire about their socio-economic background, marketing channels, marketing costs, prices and constraints in the business of gladiolus. The data were analyzed with the help of software (s) SPSS-15 and Microsoft Excel.

Marketing channels:

A marketing channel is a way by which goods are transferred from producers to consumers with the involvement of various market intermediaries [18]. The business of gladiolus involved two different marketing channels as described below:

Channel-I: Producer→ Commission agent→Wholesaler→Retailer→Consumer. (75%)

Channel-II: Producer→ Commission agent→Retailer→ Consumer. (25%)

Each respondent was asked about the marketing cost and return for the purchase of a single piece of gladiolus.

Marketing cost (MC):

The expenditures paid by different market intermediaries in the movement of produce from agricultural farm to consumer are called as marketing cost. These costs are important for the creation of form, time, place and possession utility in the products. These costs are different for different market intermediaries and had a significant impact on prices and marketing margins [17].

Marketing margin (MM):

Marketing margin was calculated by taking the difference between the price paid and price received by each marketing intermediary or middle man. Net marketing margin is calculated by taking the difference between gross marketing margin and marketing cost. The formulas were expressed as [13, 17]:

$$Gross\ marketing\ margin = Sale\ Price - Purchase\ Price \quad (1)$$

$$Net\ marketing\ margin = Gross\ marketing\ margin - Marketing\ cost \quad (2)$$

$$Marketing\ margin = Sale\ Price - Purchase\ Price - Marketing\ cost - value\ of\ physical\ loss \quad (3)$$

Farmer's net price (FNP):

The farmer's net price is simply a difference between gross price received by the farmer and total marketing

costs including the value of post-harvest loss. The gross value of product was used for the estimation of monetary value of post-harvest losses. The formula for farmer's net price [13] is expressed as:

$$FNP = (GP_F) - (C_F) - (L_F \times GP_F) \quad (4)$$

Where;

FNP= Net price received by the farmer (Rs.)

GP_F= Gross price received by the farmer (Rs.)

C_F= Marketing cost incurred by the farmer (Rs.)

L_F= The physical loss in the produce from harvest to market (pieces)

Price spread (PS):

It was calculated by taking the difference between the net price received by the gladiolus producer and the price paid by the consumer. In other words it is the difference between farmer's Net Price (FNP) and Retailer's Selling price (RP) as expressed [16]:

$$PS = RP - FNP \quad (5)$$

Producer share in consumer's rupee:

It represents the percentage share of consumer's rupee that goes to the gladiolus producer. It is expressed as [16]:

$$PSCR = (\frac{NPS}{RP}) \times 100 \quad (6)$$

where,
PSCR= Producer share in consumer's rupee
NPS=Net price spread for each agency
RP=Retail price

Marketing Efficiency Index (MEI)

Marketing efficiency was calculated by using two methods:

a) Shepherd's method:

According to Shepherd's method [19], marketing efficiency is the ratio of the total value of goods marketed to the total marketing costs and marketing margins. The higher the ratio, the higher is the efficiency. It is expressed as [17, 20]:

$$MEI = \frac{V - I}{I} \quad (7)$$

where,
MEI = Index of Marketing Efficiency
V = Value of the goods sold (Consumer's price)
I = Total marketing cost and marketing margins

b) Acharya and Aggarwal's method:

Marketing efficiency is the ratio of price received by the farmer to the sum of total marketing costs, marketing margins and marketing loss/value of physical quantity loss. The higher the ratio, the higher is the efficiency. It is expressed as [13, 21]:

$$ME = \frac{FNP}{MM + MC + ML} \quad (8)$$

where,
ME = Marketing Efficiency
FNP = Farmer's net price (Rs.)
MC = Total marketing cost
MM = Total marketing margin
MC = Total marketing loss

RESULTS AND DISCUSSION

Table 1 reveals the socio-economic characteristics of producers, commission agents, wholesalers and retailers involved in the marketing of gladiolus. Age was more in the case of retailers (36.47 years) and less for wholesalers (31.57 years). On average, education was higher for gladiolus producers (10.13 years) and less for retailers (7.58 years). Experience of gladiolus was more for retailers (14.47 years) followed by producers (11.77 years), wholesalers (10.45 years) and commission agents (9.07 years). Family workers were also involved in the marketing of gladiolus for different marketing intermediaries, which were more in the retail business. Hired labour were also higher in the retail business (4.32) followed by production, wholesaling and commission agent. Total operational landholding was 14.55 acres, and 5.83 acres were allocated for floricultural products in the study area. Out of total floricultural area, Gladiolus occupied more area (4.50 acres) which shows the popularity of gladiolus among the surveyed farmers. High return was also a reason for more area under gladiolus.

Table 1: Socio-economic characteristics of market intermediaries in Gladiolus marketing

Characteristic	Producer	Commission agent	Wholesaler	Retailer
Age (years)	34.79	32.35	31.57	36.47
Education (years)	10.13	9.93	9.00	7.58
Experience (years)	11.77	9.07	10.45	14.47
Family worker (No.)	2	1	1	3
Total worker (No.)	3.33	2.93	3.00	4.32
Wage/month (Rs.)	6610.26	6535.85	7178.57	6381.58
Total operational land (acre)	14.55	---	---	---
Land under floriculture (acre)	5.83	---	---	---
Area under Gladiolus (acre)	4.50	---	---	---

Table 2 shows the marketing margins, cost, price spread in gladiolus via channel-I. The gross price received by the producer was Rs. 1353.85 per 100 pieces of gladiolus in this channel. The producer also bears some marketing cost (Rs. 149.17/100 pieces) which also includes the postharvest losses (Rs. 67.69) in the sale of gladiolus. Due to marketing cost the net price received by the producer was Rs. 1204.68/100 pieces. The total

marketing cost of rose farmer was Tk. 9.1/100 pieces in Bangladesh [22]. The wholesaler comes in the flower market and involved in the auction of gladiolus in the market. The commission agent provides a place in the market for auction and received 5% commission of the price (Rs. 1353.85/100 pieces). Some commission agents were also involved in the business of wholesaling but most of them worked only as commission agent. The wholesaler purchases the gladiolus in the auction at flower market, paid the commission charges and distributes the gladiolus at various retail shop within or out of the city. The wholesaler also bears some marketing cost (Rs. 335.00/100pieces) including cost of packing (Rs. 80.71/100 pieces), loading/unloading (Rs. 21.79/100 pieces), transportation (Rs. 158.57/100pieces), physical loss due to perishable nature and other related costs. The retailer purchases the gladiolus from wholesaler at Rs. 1750.00/100 pieces) and sold it to the consumer at Rs. 2221.00/100 pieces. The retailer also bears some marketing cost Rs. 248.55/100 pieces including the value of unsold gladiolus and earn the marketing margin of Rs. 222.45/100 pieces. Therefore, the producer's share in consumer's rupee was 54.24% in gladiolus. The producer's share in consumer's rupee was 50% in rose flowers [23]. Wholesaler's margin was 2.75% in gladiolus which was less as compared to wholesale margin in rose (20%) as mentioned by Jyothi and Raju [23]. The retail margin was 10.02% in gladiolus business. The price spread was Rs. 1016.32 which was 45.76 of the consumer's purchase price.

Table 2: Price spread of gladiolus in channel-I

Particulars	(Rs.)/100 pieces	Share in consumer's rupee (%)
A. Marketing cost incurred by gladiolus producer		
Producer's sale price/Wholesaler's purchase price	**1353.85**	**60.96**
a) Packing cost	11.54	0.52
b) Loading/Unloading cost	10.00	0.45
c) Transportation cost	26.09	1.17
d) Commission charges (@2.5%)	33.85	1.52
e) Postharvest losses	67.69	3.05
Marketing cost (a+b+c+d+e) (MC_1)	149.17	6.72
Producer's net price	1204.68	54.24
B. Marketing cost incurred by gladiolus commission agent		
a) Share in wages	18.00	0.81
b) Miscellaneous cost	5.00	0.23
c) Physical loss/unsold	13.54	0.61
Marketing cost (a+b+c) (MC_2)	36.54	1.65
Marketing margin (total commission-marketing cost)	31.16	1.40
C. Marketing cost incurred by gladiolus wholesaler/middle man		
Wholesaler's sale price/Retailer's purchase price	1750.00	78.79
a) Commission charges (@2.5%)	33.85	1.52
b) Packing cost	80.71	3.63
c) Loading /unloading cost	21.79	0.98
d) Transportation cost	158.57	7.14
e) Physical loss/unsold	27.08	1.22
f) Share in wages	9.00	0.41
g) Miscellaneous cost	4.00	0.18
Marketing cost (a+b+c+d+e+f+g) (MC_3)	335.00	15.08
Marketing margin	61.15	2.75
D. Marketing cost incurred by gladiolus retailer		
a) Share in wages	86.92	3.91
b) Shop rent	25.28	1.14
c) Value of damage/unsold quantity	114.94	5.18
d) Miscellaneous cost	21.41	0.96
Marketing cost (a+b+c+d) (MC_d)	248.55	11.19
Retailer's sale price/Consumer's purchase price	**2221.00**	**100.00**
Net margin	222.45	10.02
Price Spread	**1016.32**	**45.76**

Table 3 shows the marketing margins, cost, price spread in gladiolus via channel-II. The gross price received by the producer was Rs. 1420.00/100 pieces of gladiolus in this channel. The producer also bears some marketing cost (Rs. 154.13/100 pieces) which also includes the postharvest losses (Rs. 71.00) in the sale of gladiolus. The wholesaler was not involved in this channel and retailer itself purchases the flowers in flower market. The commission agent received the commission at the rate of 5% of producer's sale price (Rs. 1420.00/100 pieces. The retailer directly purchased from flower market and sold it to the consumer at Rs. 1700.00/100 pieces. The retailer also bears some marketing cost (Rs. 197.56/100 pieces) including the value of unsold gladiolus and earns the marketing margin of Rs. 82.44/100 pieces. Therefore, the producer's share in consumer's rupee was 74.46% in gladiolus via channel-II. The retail margin was 4.85% in gladiolus business. The retailer's margin was 13.50% rose [23]. The price spread was Rs. 434.13 which was 25.54 of the

consumer's purchase price. The producer's share in consumer purchase price of gladiolus was 53.48% in Bangladesh [14] which was very close to the present results.

Table 3: Price spread of gladiolus in channel-II

Particulars	(Rs.)/100 pieces)	Share in consumer's rupee (%)
A. Marketing cost incurred by gladiolus producer		
Producer's sale price/Retailer's purchase price	**1420.00**	**83.53**
a) Packing cost	11.54	0.68
b) Loading/Unloading cost	10.00	0.59
c) Transportation cost	26.09	1.53
d) Commission charges (@2.5%)	35.50	2.09
e) Postharvest losses (@5%)	71	4.18
Marketing cost (a+b+c+d) (MC_1)	154.13	9.07
Producer's net price	1265.87	74.46
B. Marketing cost incurred by gladiolus commission agent		
a) Share in wages	18.00	1.06
b) Miscellaneous cost	5.00	0.29
c) Physical loss/unsold	13.54	1.67
Marketing cost (a+b) (MC_2)	36.00	2.15
Marketing margin (total commission-marketing cost)	34.46	2.03
C. Marketing cost incurred by gladiolus retailer		
a) Commission charges (@2.5%)	35.50	2.09
b) Share in wages	47.66	2.80
c) Shop rent	9.58	0.56
d) Value of damage/unsold quantity	90.64	5.33
e) Miscellaneous cost	14.18	0.83
Marketing cost (a+b+c+d+e) (MC_3)	197.56	11.62
Retailer's sale price/Consumer's purchase price	**1700.00**	**100.00**
Net margin	82.44	4.85
Price Spread	**434.13**	**25.54**

Table 4 reveals the score of marketing efficiency by using two different methods. The marketing efficiency by Shepherd method was more for channel-II (4.15) as compared to channel-I (1.58). On the other hand, the marketing efficiency was also higher for channel-II (2.51) than channel-I (1.11) as found by Acharya and Aggarwal's method. Marketing efficiency was more in channel-II because due to the absence of middle man. It shows that channel-I is more efficient for gladiolus marketing. The marketing efficiency was 0.57 (Acharya's method) and 5.25 (Shepherd's method) in grapes as explored by Thamizhselvan and Murugan [20]. The marketing efficiency was 1.08 in tomato as found by Shende and Meshram [16].

Table 4: Marketing efficiency analysis of gladiolus

Sr. No.	Particulars	Channel-I	Channel-II
1.	Value of goods sold/Consumer price	2221.00	1700.00
2.	Farmer's Net Price	1204.68	1265.87
3.	Total marketing cost excluding physical quantity loss	546.01	213.05
4.	Total physical quantity loss/marketing loss	223.25	175.18
5	Total marketing margin	314.76	116.90
6.	Marketing cost	52.48	38.41
7.	Marketing efficiency (Shepherd's method)	1.58	4.15
8.	Marketing efficiency (Acharya and Aggarwal's method)	1.11	2.51

Table 5 explored the reason or factors which were responsible for the involvement of middle man as reported by gladiolus producers. Most of gladiolus producers (71.79%) sell their produce to the middle man (at auction) in flower market due to easy, quick and daily payments. The less distance of Patoki flower market was also a reason (41.03%) to sell the produce to the middle man. Approximately 41.03% farmers reported that they had no transport, labour and time to sell the gladiolus in far off places (retailers) because flower farming required daily look after of the field and daily picking (in the season).

Table 5: Reason for selling the product to middle-man by the farmers

Sr. No.	Particulars	Frequency	Percentage
1.	Due to easy/quick/daily payment	28	71.79
2.	Flower market (Patoki) is near	16	41.03
3.	Shortage of Transport and Time	16	41.03
4.	Shortage of labour for far off places	5	12.82
5.	Due to high labour cost	3	7.69
6.	Shortage of resources	2	5.13
7.	To avoid risk in selling at far off places	1	2.56

Table 6 explored the problems faced by gladiolus producers. Most of gladiolus producers (74.36%) reported that fungus attack was main problem in this activity. About 41.03% farmers reported the expensive and impure pesticides, sprays, seeds and fertilizers were a hurdle in this business. Price fluctuation was also considered as a problem (23.08%) in this business. The problems of high input prices (23.08%), water shortage (15.38%) and lack of training (15.38%) were also reported by the farmers.

Table 6: Problems in the production and marketing of gladiolus (reported by producers)

Sr. No.	Particulars	Frequency	Percentage
1.	Fungus attack on Gladiolus	29	74.36
2.	Expensive and impure fertilizer, sprays, seeds	16	41.03
3.	Unstable flower prices	9	23.08
4.	Inflation (input prices, diesel)	9	23.08
5.	Thrips, mildews and army worm attack	9	23.08
6.	Shortage of water	6	15.38
7.	Lack of training/education	6	15.38
8.	High labour cost and labour shortage	4	10.26
9.	Wholesaler are not cooperative	1	2.56
10.	No Government incentive	1	2.56

Table 7 explored the problems faced by wholesalers and commission agents in the marketing of gladiolus. Most of respondents (46.67%) reported the lack of facilities in flower market. The commission agents, wholesalers and producers were combined in an open place near the railway station of Patoki for auction. About 33.33% respondents reported the fluctuation in price and supply of cut flowers as a problem in this business. Nearly 26.67% respondents mentioned the problem in transportation to sell the production in distant cities or retailers.

Table 7: Problems in the marketing of gladiolus (reported by commission agents and wholesalers)

Sr. No.	Particulars	Frequency	Percentage
1.	There is no proper flowers market (lack of facilities)	7	46.67
2.	Fluctuation in prices and supply of flowers	5	33.33
3.	Problems in Transportation and loading in train	4	26.67
4.	The Government is not providing any facility	1	6.67
5.	Rise in diesel prices	1	6.67

Table 8 explored the problems faced by retailers in the business of gladiolus cut flower. As mentioned earlier that cut flower nature is perishable and required much care, approximately 78.95% retailers mentioned the short shelf life of gladiolus flower in summer season. About 57.89% retailers reported the increase in prices and decrease in flower supply in winter season. Nearly 47.37% retailers considered that the inflation was responsible for decrease in consumers. However, all retailers (100%) confirmed the increase in cut flower trend among the people.

Table 8: Problems in the production and marketing of gladiolus (reported by producers)

Sr. No.	Particulars	Frequency	Percentage
1.	Short shelf life of flowers especially in summer season	15	78.95
2.	Flower supply decreases and prices rises in winter season	11	57.89
3.	Customers decreases due to inflation	9	47.37
4.	Low flower demand in summer	5	26.32

CONCLUSION AND RECOMMENDATIONS:

Pakistan has favorable agro-climatic conditions for the cultivation of cut flowers. The cultivation of cut flowers is beneficial for small or marginal farmers to uplift their living standard. This sector has the ability to earn foreign exchange and generation of employment. The gladiolus cut flower is an important ornamental plant which gives high return to the farmers as well as market intermediaries. The present study was designed to explore the marketing channels, marketing cost, marketing margin, price spread and marketing efficiency in the case of gladiolus. Channel-I involved the service of wholesaler/middleman while channel-II reveals the direct interaction of retailers with producers in the presence of commission agents. Results show that the producer's share in consumer's rupee was more in channel-II (74.46%) as compare to channel-I (54.24%). Two different methods were used for the calculation of marketing efficiency but its value was higher in channel-II (4.15 and 2.51) as compared to channel-I (1.58 and 1.11). Farmer's net price (Rs. 1265.87/100 pieces) was also higher in channel-II. Similarly, total marketing cost (Rs. 546.01/100 pieces), total marketing margin (Rs. 314.76/100 pieces) and total physical quantity loss (Rs. 223.25/100pieces) were also higher in channel-I. The retail price was low in channel-II (Rs. 1700/100 pieces) than channel-I (Rs. 2221.00/100 pieces). Price spread was high in

channel-I (Rs. 1016.32/100 pieces) as compared to channel-II (Rs. 434.13). But, the channel-II was not observed commonly in this business and most of retailers (75%) purchase the gladiolus cut flower from middleman or wholesaler. The producers share was high in channel-II but producers claimed the preference of channel-I due to some reasons such as quick, daily and easy payment; and shortage of time, transport and labour. The increasing demand for cut flowers at domestic as well as the international market requires a comprehensive policy for the progress of floricultural industry. Both private and public sector agencies should establish the cold-storage facilities for cut flowers stake holders due to their limited shelf life. Government should create awareness among farmers about the economic return and incentive in the production of cut flowers at country level because many farmers does not know about the production practices for the cultivation of flowers. The supply of cut flowers was more in summer while demand was less, government should facilitate the exporters to export this extra volume and earn foreign exchange. To eliminate the marketing cost and margin of middle man, government should establish the flower markets in various parts of the provinces. The establishment of flower markets also decreases the transportation expenses of market intermediaries which results in the decrease in prices. Fungus attack was a major hurdle in the production of gladiolus which destroyed the whole crop. Government should guide the farmers to avoid this flower disease or government should compensate the farmers in case of loss. The agricultural department must guide the farmer about flower diseases and specific medicines or sprays.

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