Economic Analysis of Marigolds and Rose Business in District Peshawar

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Abstract

Flowers are used for expressing or exhibiting the innermost feelings to the beloved ones or complementing any one or versifying any conceivable emotions. This piece of work examined the Cobb-Douglas production function to highlight the various inputs impacts on the yield of two major flowers: rose and marigolds and to highlight most productive flower variety between marigolds and rose. A survey was carried out in the two villages of district Peshawar (Khyber Pakhtunkhwa) namely Shahab Kheil and Bazid Kheil in 2016. Primary data was collected from 120 respondents randomly through well-designed questionnaires. The allocation of sample size was made by proportional allocation method in the selected villages. The mean revenue of marigolds and rose flowers was Rs. 140674 and Rs. 146174 respectively. t- Test was used for comparison of marigold and rose and concluded that rose is more productive than marigold. In order to show input output relationship COBB-DOUGLAS Production function was used and concluded that labour (days), seed, fertilizer, tractor (hours) and pesticides are significant and irrigation insignificant in case of marigolds, while in case of rose labour(days), seed and fertilizer turned out significant and tractor (hours) and pesticides insignificant.

Keywords: Production of marigolds and rose; Cobb-Douglas Production Function; t-test

Introduction

An elegant relationship exists between flowers and human beings. The positive influences of flowers on human demeanor have increased its utility in human life. Flowers are available in varieties of colors, forms and patterns. Flowers have a close contact with nature (Riaz et al. 2007). There are many sub- sectors of agriculture like poultry, forestry crops and horticulture. Horticulture deals with the planting of fruits, vegetables, flowers and condiments. Floriculture is one of the sub-sectors of horticulture. Floriculture deals with the plantation of flowers and ornamental plants. Flora-industry attends to all aspects of flowers like spacing, training, flower harvest and post harvest treatments come under the study of floriculture (Sattar, 2011). Floriculture has become an international business and more than 145 countries have been hooked with this business (Sudhagar, 2013). Netherlands, because of its Avant-grade technology, favorable soil, climate and positive attention of Netherlands government to flora sector, has become the world largest flower exporter (Ghule, 2013). Germany is the second largest flower exporter followed by Italy, Israel, Ecuador, and Columbia. India is also taking an interest in flower cultivation (Hamrick, 2004).

Right from the very initial stage of economy of Pakistan, agriculture has been as the backbone of Pakistan's economy. It has been continuously contributing a major portion to the Gross Domestic Product (Van Uffelen, et al., 2005). Pakistan has a good climate for the plantation of flowers. In addition, it yields rich fertile soil and wide availability of labour force. Floriculture does not require a big piece of land and flowers always need less quantity of water. The outcomes of flowers are not annoying, and one does not need to keep wait for a long period of time. Floriculture is a profitable business. The commencement of this business does not require amount in millions, neither heavy machines and nor expensive seeds (Manzoor et al. 2001). Pakistan can also earn a handsome foreign exchange from the export of cut flowers to western countries during the winter season. It is because many festivals are being celebrated in the western world during this season. It is a good opportunity for Pakistan to earn decent foreign exchange (Riaz, 2007). Pakistan flora-industry is not free from problems like improper variety of seeds, lack of storages, high competition in international markets and ignorance of public sector. The flower growing industry is usually located around big cities and flower shops on the bank of roads, where the freshness of flowers cannot be maintained for longer period (Usman et al., 2013).

Amongst all other flower varieties, rose and marigolds are very popular because of their charming fragrance, long lasting life and attractive colours. Rose is a highly fascinating and beneficial flower. Its plant can produce flower for around five years. The ideal season for cultivating of this plant is between March and August (Tabassum et al., 2002). Rose market is often attractive and beneficial. Dry petals of this flower are used in many medicines and value-added items. The Marigold flower is available in varieties of colours and sizes (Pradhan, 2016).

In the past, Peshawar has been well known for the 'City of Flowers'. Bazid Kheil, and Shahab Kheil are small villages, where rose, jasmine, marigold, tuberose etc. are cultivated on a large scale. These villages are located in the vicinity of Peshawar. This region doesn't receive heavy rainfall during summer and winter seasons. But in spring season (February – April), Peshawar Valley often gets heavy rain. The dwellers of these villages are mostly poor, and agriculture is their main profession. They cultivate wheat, flowers, maize and vegetables, but proportion of flower growers is higher than those of other crop growers. Special hues and types of rose and marigold are cultivated in those villages (Usman et al., 2015).

There are three purposes of the present research, such as (a) analyzing the productivity of floriculture in selected area of district Peshawar, (b) finding out the share of various inputs in per acre yield of marigold and rose in selected areas and (c) probing the flowers which one is more profitable. This study will also highlight the problems and recommend suggestion for improvement of the floriculture

industry in the subject area of our research. Previous selective studies related to floriculture have been reviewed in the following section. After this, material and methodology have been discussed in the third section. The fourth section highlights the results and fifth recommends policy implications.

Literature Review

This phase deals with the relevant paintings executed by way of unique researchers on the concerned subject matter. the problem of floriculture was given an awful lot extra importance as it has been emerged as a profitable zone in Netherlands. The overall exports of Netherland's rose due to foremost proportion of flower's export to other countries through 1970s (Hemert, 2005). In southeast particularly in India, the production and demand of flora are being improved day by day. The returns from flower products are changed into a great deal more than their cost (Sarkar, at al., 2005). Many scholars examine the flowers from economic point of view.

Woods and Anderson (1997) examined the long-stemmed rose production and compared specialized production system with other greenhouse products. Roses for commercial purposes can be grown under greenhouse and a single system from cuttings. Flowers do not require water frequently. Single stem roses can be grown under green house, but the usage of these techniques increase cost of production. Data from seven sequential crops of 'Lady Diana' rose revealed that labour cost, seasonal energy costs, market prices and capital costs were involved in the cultivation of rose under green house.

Furthermore, Megan (2003) studied the manufacturing's scale of floriculture and for this reason, statistics had been accrued from great landlords and small land lords. Greenhouse may be easily used for a large-scale production. The sale of a massive scale turned into additionally better than that of small scale of manufacturing. Small scale growers additionally faced such financial constraints in cultivation and income of flower manufacturing.

At the same time as, Jitendra (2007) analyzed his statistics through regression to peer enter output relationship. Regression co-efficient of land changed into positive and full-size at 5% level, manure and fertilizer changed into advantageous and substantial at 10% and insecticides were bad and widespread, at the same time as irrigation water became insignificant.

A separate study on marigold was conducted by Tomar and Sing (2009). This article highlighted the importance of marigold, which is available in varieties of colors and easily grown in different shapes and qualities. The per hectare return was estimated Pakistani Rs. 40,000, 60,000 and 90,000 respectively.

Bahirat and Jadhav (2011) discussed 'floriculture is labour intensive' in India. It shows the significance of labours involved in flower production. Their study was based on the survey conducted in ten villages of Satara District, Maharashtra. Head to head interviews were conducted and they concluded that floriculture becomes the exertions in depth. Labourers are required at different stages such as growing, harvesting, marketing and advertising. Labour's percentage is turned into 70% under this evaluation.

Vidyapeeth (2012) selected Pune District for his study, where rose, chrysthemum, tuberose, marigolds and aster are cultivating on a large scale. It was concluded that the flower production was a labour intensive, but with a large piece of land if more and more labours were employed, the output began to decline.

Furthermore, Majumdar and Lahiri (2011) conducted their research in Howrah and Purba Medinipur districts in West Bengal. They focused their view on the production of rose in comparison with other flowers. It was concluded that area under rose cultivation was larger than those of other horticulture products. But the cost-benefit ratio of hibiscus was higher than that of rose.

Haque et al. (2012) studied flower marketing by stratified random sampling and selected 32 farmers of flowers in Bangladesh. They came into conclusion that wholesalers were not benefited as extra as middlemen and outlets were benefited. These scholars highlighted that floriculturists have been facing some issues like lack of specialization and garage, loss of finance, high prices of fertilizers, want of buying and selling, lack of market understanding and poor transportation. Besides this, post-harvesting losses are additionally facing due to perishable nature of flora, which decreased profits.

Further, Haque et al. (2012) conducted their research in Bangladesh in February 2011, in which they measured the monetary elements of marigold. Primary data were collected from 100 respondents randomly from Jessore and Jhenaidah districts. The results found out that per acre costs were Tk. 147234 and Tk. 1,02,858, whilst revenue become Tk. 1,62,186 and Tk. 1,17812. The labour share turned into 34%, following 18% land education, 15% fertilizer and 10% irrigation. Cobb-Douglas production confirmed that labour, land instruction, seeding, fertilizers and irrigation had a wonderful impact on marigold.

Sing et al. (2016) on the process to analyze the significance of fertilizer utilization on flowers manufacturing, carried out research in Bangladesh. It was concluded that the output of flower manufacturing become drastically encouraged with the aid of the use of fertilizer.

Pradhan (2016) discussed the economic analysis of marigold, rose and chrysanthemum in Kavre and Dhading districts of Kathmandu, Nepal. As floriculture has been rising as a useful quarter, but nonetheless Nepal is missing advanced generation and deficiency of resources. Overall, 35 flower farms were surveyed during this study and received the consequences from randomly decided on a hundred and ten farmers. He discovered that advantage of cost ratio was 20% better than that of the value of manufacturing.

In context of Pakistan, Manzoor et al. (2001) highlighted the importance of flowers that demand for flowers has been increasing day by day in Pakistan. The study was conducted in district Lahore to explore the productivity of flower business. It was concluded that the average net income of producers ranged from Rs. 2529 to Rs. 11229 per acre. One-rupee cost on the production of flower's cultivation, a farmer could earn 2 rupees in return. On the other hand, against per rupee spent by retailer, Rs. 1.18 were received.

Nasir (2002) explored the cultivation of four kinds of plant life particularly chrysanthemum, gladiolus, statice and marigolds grown in Pakistan. The production of the flowers on 50 acres of land and with the amount of Rs. 8 million investment gave profit of 8 to 16 million rupees.

Moreover, Usman and Ashfaq (2013) studied the flower of tuberose. The Cobb-Douglas production function's results revealed that variable of age, land preparation, irrigation, fertilizer and education have positive and significant impact on revenue earned from tuberose. While coefficient of labour and chemical have notable negative impact on revenue. The cost benefit ratio of small, medium and large farmers was Rs. 2.66, 2.68 and 2.60 million respectively.

Usman et al. (2014) conducted their study in Punjab and they used Cobb-Douglas Production function to determine factor affecting rose cut flower productivity. Primary data were obtained from 100 respondents randomly in district Kasoor. It was concluded that education, fertilizer cost, land preparation cost and chemical cost had a positive and significant impact on rose flower. While the flower farming experience and irrigation had positive but insignificant impact on yield.

Usman et al. (2015) further examined various input share in the production of gladiolus cut flower in Punjab. It was resolved that family labour, tenant farmers, age of farmers and seed sources have a negative and significant impacts on the inefficiencies of gladiolus farms. Furthermore, the inclination of young farmers in the cultivation of flowers, better infrastructure and availability of good seeds variety increases the production of flowers.

Similarly, in Peshawar, Khan and Hussain (2014) in their article "The Marketing and Cost-Benefit Analysis of Floriculture in the Rural Areas of Peshawar: A Case Study of Bazid Khel" studied various aspects of flowers production, marketing and cost-benefit ratio. By using random sampling techniques, 150 farmers were selected for this study. It was concluded that although business is on small scale, but lucrative. Cost and revenue were compared where a vivid difference was found between cost and revenue of different flowers.

Overall, there are many studies have been conducted in the world, which highlight the importance of flowers production, their marketing, cost benefit and input output relationship. One thing is common amongst all these studies that floriculture is a labour intensive, large scale producer are more benefited as cost of production could be reduced, but post-harvest loses are also involved. In developing countries, where agriculture is the core sector of economy, floriculture is still at its initial stage. The use of labours, fertilizers, good varieties of seed in most cases are significant.

Materials and Methods
An informal survey was carried out with the aid of the researchers in villages of Shahab Kheil and Bazid Kheil, district Peshawar. Interviews had been done casually with farmers in their hujras, farms and houses. Questionnaires were also used in this survey. This process turned into endeavored to create a mitigate surroundings wherein respondents could sense unfastened to present replies. A mile achieving questionnaire turned into designed on the idea of records received in the informal field look at, for testing the soundness and correctness of the interview time table, it become revised within the discipline. After revising, changes had been brought and interviewing agenda became finalized for the gathering of information.

Keeping in view the aims of flower production, input/output relationship and to find out the most treasured type of flower in two flower producing villages, the area of survey carried out from door to door discovered that there were generally 240 farmers. It was emphasized that most effective farmers would be interviewed, who cultivated either rose or marigold or both sorts of vegetation. Proportional allocation techniques were also utilized whereas one hundred and twenty pattern respondents were selected. Statistics have been analyzed through t-test, Cobb-Douglas production function.

Null hypothesis against alternative hypothesis is as:
H_0= There is no difference in the revenue of both varieties of flowers
H_1=There is a difference in the revenue of both varieties of flowers.
H_0 = There is not input output relationship.

H1= There is a relationship between input and output.
Cobb-Douglas Production Function
$Y = AL^{\beta}K^{\alpha}$
Y=Total output
L=Labour input
K=Capital Input
A=Total factor productivity.
α and β are the output elasticities of capital and labour, respectively

$$FY = \alpha_0\, SD^{b_1}\, LR^{b2}\, FR^{b3}\, PS^{b4}\, TR^{b5}\, IR^{b6}\, e_i^{u}$$

Where,
FY= output yield per acre
α 0= Constant/Autonomous Variable/Intercept
bi = Slope coefficient of associated variable
SD= Seed used per acre (kg)
LR= Labour days per acre
FR= Fertilizer used per acre(kg)
PS=Pesticides used per acre(liter)
TR= Total tractor hours per acre
IR= Number of irrigations on per acre
e I = Random disturbance term

The Cobb-Douglas is not a linear model. After transformation of variables values into natural log, Ordinary Least Square techniques were applied.

In FY= In α0 + β_1In SD+ β_2In LR+β $_3$InFR +β_4InPS+β $_5$InTR+β_6 In IR+lnU$_i$
In order to analyze, different software like SPSS, EViews and Microsoft Excel was used.

Results and Discussion
This section deals with the results and discussion obtained from the study area

T-test for Comparison of Gross Revenue One of the objectives of the study was to find out most valuable variety of flowers between marigolds and rose. In order to achieve these objectives, t-test was applied.

Table-1: T-test for comparison of Gross Revenue of both varieties of flowers

Particular	Mean differences	Standard Error Differences	t-value	Significance
Gross Revenue	37122	1872.56	19.83	0.0000

The above table shows the comparison of both varieties of flowers. The mean difference is calculated 37122 and the t-test result shows less than 5 percent means significant. There is the difference between marigold and rose revenue.

Gross Margin

Gross margin is the difference between gross revenue and total variable cost. The gross margin provides simple and quick method for analyzing farm. The mean value for marigold is Rs. 112140 and for rose Rs. 149262. The calculations are shown in the following table.

Table-2: Gross Margin

Particulars	Mean
Gross Margin(marigold)	112140
Gross Margin (Rose)	149262

Cobb- Douglas Production Function Estimation

In order to study the impacts of various inputs on output, Cobb-Douglas production function was used, and the following results were obtained.

H_0= Inputs have no impacts on output

H_1=Inputs have impacts on output.

Table-3: Cobb-Douglas Production Function for Rose

Independent Variables	Beta Value	St. Error	t-Value	Significance
Constant	0.75	0.041	18.29	0.0000
Labour days per acre	0.04	0.0088	4.54	0.0000
Fertilizer used per acre (kgs)	0.02	0.0048	4.16	0.0000
Seed used per acre (kg)	0.028	0.006	4.66	0.0001
Irrigation (Number)	0.023	0.009	2.55	0.0247
Pesticides used in (liter)	0.013	0.006	2.16	0.0541
Tractor (hours)	0.0037	0.007	0.53	0.6140
R^2=0.59 Adjusted R^2=56	F-Statistic=23	P-Value=0.0000		

The empirical results of log transformed production function for rose production showed that the production of flowers was positively affected by use of fertilizer, labour performance, quality of seed, pesticides, increase of irrigation and application of tractor. Further one percent increase in fertilizer, labour days, seed, pesticides, tractor hours and irrigation number lead to the improvement of rose production; achieved as 0.75, 0.04, 0.02, 0.028, 0.023, 0.013 and 0.0037 percent respectively.

The use of FYM (Farmyard Manure) is very important for the production of rose. It is always required to add fertilizers in soil to fulfill the nutrients deficiency for getting maximum production. A balanced use of fertilizer with desired level of nutrients is very necessary if one wants to get maximum production. The coefficient of fertilizer 0.02 means one percent increase in the use of fertilizer lead to increase the production of flowers to 2%.

Floriculture is a labour-intensive industry. The practice of experienced labourers can increase productivity of rose. The coefficient of labour 0.04 indicates that one percent increase in labour enhanced the output of flowers to 4 percent. There is always threat of insect attacks on flowers. Pesticides are used to protect flowers from such attacks. The coefficient for chemical pesticides was 0.013, which revealed that one percent increase in the use of pesticides boosted the yield of flowers to 0.013%.
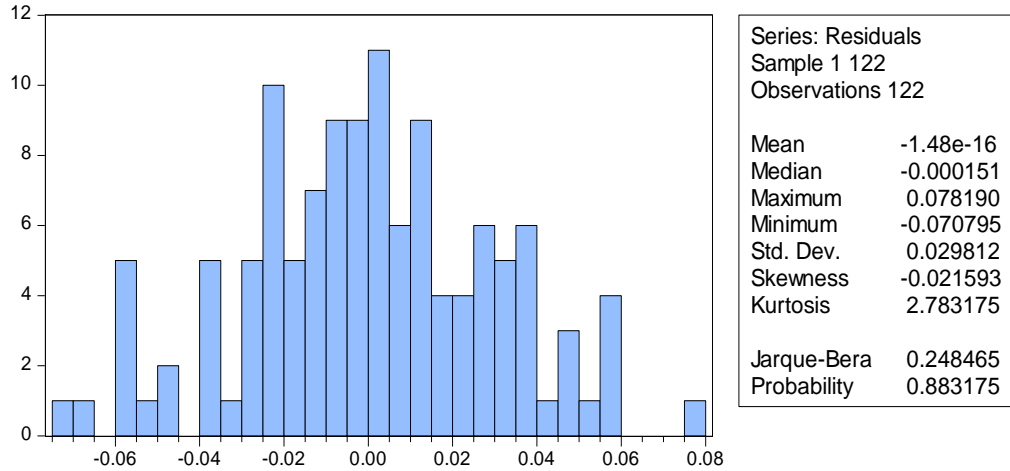
The usage of good quality of seeds is also important for the production of flowers. The Cobb-Douglas analysis revealed that one percent increase in the usage of seeds increased the production to 0.028%. Proper application of a tractor in the field enhanced the yield. It revealed that one percent increase in tractor hours, enhanced the flower productivity to 0.0037%. The coefficient of irrigation was 0.023, which indicated that one percent increase in the number of irrigations improved the flower production to 0.023%.

The t-ratio at 5 percent level of significance showed that investment of labour, quality of seeds, quantity of irrigation, use of pesticides and fertilizers were highly significant while tractor hours were insignificant. A similar research, the economics study of floriculture, was carried out by Kadam (2012) in district Pune. In this research all important variables like use of labour, seeds and fertilizer lead to the significant results of flower production.

R^2 value indicates that 59% variation in the production of rose was mainly achieved due to the fore-mentioned variables. The adjusted R^2 value was 56%. The model was significant as mostly variables were significant and p value was less than 5%. So, we reject the null hypothesis that inputs have no impacts on output.

Normality Test

To test the normality, we used Jarque-Bera test. The result of Jarque-Bera test showed that the distribution was normal.

| Series: Residuals |
| Sample 1 122 |
| Observations 122 |

Mean	-1.48e-16
Median	-0.000151
Maximum	0.078190
Minimum	-0.070795
Std. Dev.	0.029812
Skewness	-0.021593
Kurtosis	2.783175
Jarque-Bera	0.248465
Probability	0.883175

Heteroscedasticity Test

In case of cross-sectional data, we usually face the problems of Heteroscedasticity. To check the Heteroscedasticity problem, Breusch-Pegan-Godfrey test was applied. The results of this test given in the following table shows the data were not facing problem of Heteroscedasticity.

Table-3.1: Heteroscedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.257749	Prob. F(6,115)	0.2825
Obs*R-squared	7.512841	Prob. Chi-Square (6)	0.2760
Scaled explained SS	5.951742	Prob. Chi-Square (6)	0.4286

Table-4: Cobb-Douglas Production Function for Marigolds

Independent Variables	Beta Value	St. Error	t-Value	Significance
Constant	0.85	0.058	14.65	0.000
Labour days per acre	0.078	0.014	5.57	0.000
Fertilizer used per acre(kgs)	0.023	0.0064	3.59	0.0006
Seed used per acre(kg)	0.020	0.0097	2.06	0.0396
Irrigation (Number)	0.018	0.010	1.8	0.078
Pesticides used in (liter)	0.012	0.007	1.71	0.11

Tractor (hours)	0.0014	0.001143	1.22	0.9018
R^2=0.62	F-Statistic=16	P-Value=0.0000		
Adjusted R^2=58				

The empirical results of log transformed production function for marigold production shows that the production of flowers was positively affected by use of fertilizer, labour days, seed, pesticides, irrigation numbers and tractor hours. Further one percent increase in fertilizer, labour days, seed, pesticides, tractor hours and irrigation number lead to the increase in the yield of rose production to 0.85, 0.078, 0.023, 0.020, 0.018, 0.012 and 0.0014 percent respectively.

The application of FYM is very important for the good production of flower. There is always required to add fertilizers in soil to fulfill the nutrients deficiency for obtaining maximum production. A balanced use of fertilizer with desired level of nutrients is very necessary if one wants to get maximum production of flower. The coefficient of fertilizer was 0.023 which means one percent increase in the use of fertilizer enhanced the production of flowers to 2%.

As mentioned above, floriculture is a labour intensive industry. The use of experienced labourers always increase the output of marigold. The coefficient of labour 0.078 indicated above that one percent increase in labour boosted the production of flowers to 7%.

The coefficient of chemical pesticides was 0.012, which revealed that one percent increase in the use of pesticides enhanced the yield of flowers to 1%.
The application of healthy seed is also important for the good production of flowers. The Cobb-Douglas analysis revealed that one percent increase in the usage of seeds enhanced the production to 0.020%. Tractor hours enhanced the yield of crops. It means one percent additional use of tractor obviously increased the production of flower to 0.014%. The irrigation coefficient was 0.018. This amount of irrigation showed revealed that one percent increase in the irrigation number boosted the production of flower to 0.018%.
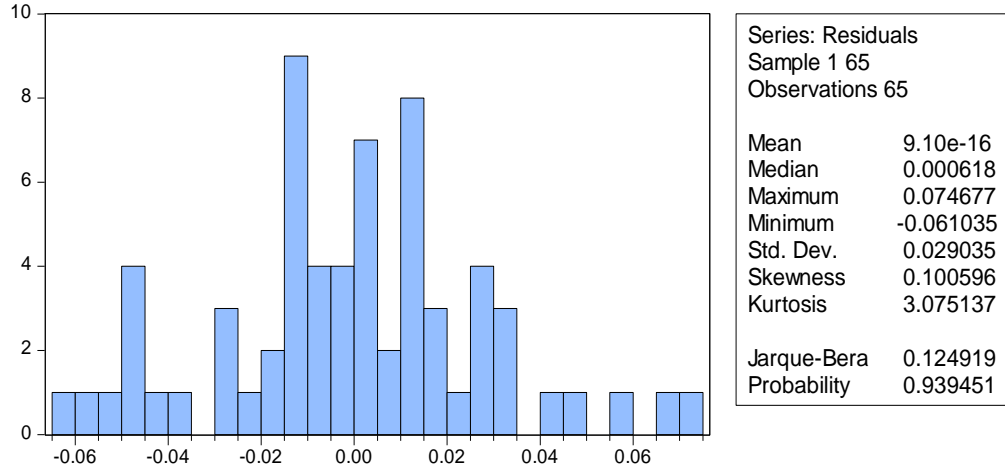
The t-ratio at 5 percent level of significance showed that labour hours, seed quality, irrigation numbers and fertilizers were highly significant while tractor hours and usage of pesticide were insignificant. As described above, similar analysis for floriculture was conducted by Kadam (2012) in district Pune. In this research all important variables like labour, seeds and fertilizer were tested which turned the results to significant level.

R^2 value indicated that 62% variation in the production of rose was mainly

occurred due to these variables. The adjusted R^2 value was 58%. So, we reject the null hypothesis that inputs have no impacts on the production of flower

Normality Test
To test the normality, we used Jarque-Bera test. The result revealed data were normally distributed.

Series: Residuals	
Sample 1 65	
Observations 65	
Mean	9.10e-16
Median	0.000618
Maximum	0.074677
Minimum	-0.061035
Std. Dev.	0.029035
Skewness	0.100596
Kurtosis	3.075137
Jarque-Bera	0.124919
Probability	0.939451

Heteroscedasticity Test
The Heteroscedasticity results are highlighted in the following table.

Table-4.1: Heteroscedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.909888	Prob. F (6,58)	0.4944
Obs*R-squared	5.591870	Prob. Chi-Square (6)	0.4704
Scaled explained SS	4.619587	Prob. Chi-Square (6)	0.5934

Conclusion and Policy Implications
Based on the outcomes and results of above experiments, it can be concluded that floriculture is a worthwhile enterprise. The effects from comparison of each sorts of marigold and rose manifested that cultivation of rose is found more useful than marigolds. The motive was that the revenue of rose remained better than those of marigolds. At certain stages in the society like wedding seasons, Eid festivals, Hajj ceremony in Zul Hijah, the demand of flowers increase. Along with these activities, the costs of rose set better due to its confined supply and higher demand. The gross margin of marigold become Rs. 112140 and rose Rs. 149262. It suggests that the difference of Rs. 37122 was consistent with acre production.

The analysis of Cobb-Douglas production function revealed that there was deep

input/output relationship. The increased amount of inputs could enhance the productivity of flowers. In case of rose, various factors of production like labour days, fertilizer, pesticides, irrigation and seeds were highly significant while only tractor hours found insignificant.

In case of marigolds, it was determined that labour days, use of fertilizers, seed and irrigation were highly significant, while tractor hours and pesticides were turned insignificant.

To confirm the results of Normality and Heteroscedasticity tests, Jarque-Bera and Breusch-Pegan-Godfrey tests were applied successfully.

It is need of time for the government to come forward and support the floriculture discipline particularly in district Peshawar. It will provide employment opportunities to the people of this region. These days, the extremism scenario has widely poisoned the minds of youth which can be illuminated through such kind of healthy activities. If the public sector promotes this kind of production and establish talent enhancing centres, and schooling facilities in this region, they will protect our youths from illegal activities which are common in Peshawar region.

Rose and marigolds can be used in lots of value-added products like rose essence, rose water, medicines, jams and so on. Marigolds can be used in various skin care cosmetics. In certain areas, these flowers are produced on a massive scale, but they are offered in raw and natural form. If the government authorities patronized this art and industry and provide small devices for commercial purposes, then floriculture will become profitable and beneficial.

The private sector should also perform its vital role in this business. These sectors should set up small industrial units for making such value-added products. More youth will be able to get jobs in these industrial units.

Private banks should introduce loan facilities to the farmers and traders in order to develop their production, trading and marketing skills in a better way. They should provide flexible loans to the youth on easy installment.

Hybrid seeds can enhance productivity of flowers, but they are beyond the purchasing power of poor farmers. In Punjab, the hybrid seeds of rose and marigolds are commonly used, but in Peshawar the situation is not much encouraged. In Peshawar, only few farmers of marigold can afford and use hybrid seeds. Flowers are very sensitive, post-harvesting loses is a common phenomenon with this material. There is a great deficiency of cold storages in Peshawar. Moreover, the available storage houses are also remained out of work. It is the utmost responsibility of the government to pay proper attention to these cold

storage houses. New and advanced storage facilities for better preservation need to be constructed in Peshawar district.

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