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Flower Cultivation In Jessore- A Prospective Field Of Economic Boom

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Abstract:

Flower cultivation has emerged as a lucrative business which ensures higher potential to return compared to other agricultural crops. It is an emerging sector that has influenced in national GDP growth as well as employment generation in Bangladesh. Flower has an enormous international demand that creates huge opportunities for Bangladesh. Bangladesh is an agro-based country, where the climate is very favourable to flower cultivation. This is a qualitative research that tries to focus on the prospects of this industry and finds the potentialities to grab the international market due to the low production cost.

Key words: Flower industry, international market

1.Introduction

Flower symbolizes beauty and purity. But now flower is not only a symbol of purity and beauty, but also a potential revenue earner. It creates huge demand at home and abroad. This huge demand of flowers turns it as the flower industry in many countries which has significantly contributed in their national economy. In Bangladesh, flower cultivation has developed commercially in the mid eighties in Jhikargacha Upazila of Jessore district. Recently, flower cultivation has adopted commercially in 19 Zillas of our country (Mithu, 2011). Flower cultivation has emerged as a profitable business which ensures higher potential to return compared to other agricultural crops. About 70% of the total country's demand of flowers is supplied by Jessore. At present, 9,000 hectares of land covers flower cultivation taking the lead by Jessore district. More than 4,000 farmers are growing flower and foliage in the country and about 2, 00,000 people are directly or indirectly involved in the floriculture business as their sole livelihood (BFS, 2009). Internal marketing facilities are about Tk. 300 crore on the other hand, international marketing facilities are about Tk. 16,000 crore. Our country has earned Tk. 60 crore through exporting flowers during FY 2009-2010 (Mitul, 2011). So, commercial flower production is a profitable venture and it is mainly due to the low production cost which creates huge employment opportunities.

2.Objectives Of The Study

This paper tries to illustrate the prosperity of emerging flower industry (Gadkhali, Jessore) as a tool of enriching economic boom and its potentiality to compete in the international market.

3.Literature Review

Khan (2012) finds that Bangladesh is well suited for commercial flower cultivation due to is favourable climate, cheap labour and relatively low capital investment. Now about 1, 50,000 people are directly or indirectly involved in floriculture business. During FY 2010-2011, flowers worth US dollar 127,488 was exported. Though there exist some problems, it can be a profitable agro-economic sector which has a good prospect for exports. Again Seraj (2008) reports the history of commercial flower cultivation which took place in Jhikorgacha upazila of Jessore during Mid-80s. Gradually it has spread other upazilas of Jessore and now Gadkhali bazaar of Jessore district is the largest flower bazaar of Bangladesh. Approximately thirty thousand flower-farmers of Jessore region are now engaged with this bazaar. Each day, flowers of Tk.10, 00,000- Tk.15, 00,000 are being bought and sold over here.

Hossain (2010) argues that the commercial development of floriculture in Bangladesh is still at a very early stage. The major problems in the floriculture development are unorganized marketing, weak research, lack of support infrastructure and lack of educational base. Besides observing these problems, he gives some positive news regarding floriculture development. Where Qamruzzaman (2009) has made a research that the exports flowers and floral products of Bangladesh to Pakistan, Italy, Portugal, Saudi Arabia, India, the United States, South Korea, Philippines, Singapore, Japan, Germany, Britain, Denmark and France was now take a good position and day by day. It enlarges and adds a new dimension in the export item of Bangladesh. The country earned over 166.1 million taka (about 2.56 million US dollars) in FY 2004-05. But due to lack of proper steps Bangladesh cannot utilize the opportunity. Sohel (2010) has observed that the flower market is expanding day by day. Countries like Columbia, Israel, Kenya and Italy have made an entry and have created a good position. But the world floriculture trade is

still controlled by Holland. The international floriculture market trade is estimated to be 40 billion US dollars of which cut-flowers account for nearly 25 billion US dollars. So Bangladesh has huge potential to capture the market. Through taking proper steps this opportunity can be utilized.

FAO (2010) represent the floriculture situation in Bangladesh among the countries of Asia. Commercial production of flowers is adopted on about 10,000 hectares where approximately 95% is being practiced under open field conditions, mainly for the local markets. The stage of commercial development is still at a very early stage. There exist some serious problems such as, poor extension and consultancy services, lack of knowledge and infrastructure of post-harvest management, lack of quality certification of flowers and government support is very limited.

Sohel (2010) describes the potentialities of flower cultivation. It is emerged as attractive business because many farmers shifted to floriculture from vegetables for higher profitability. The flower business has also formed other areas of trade including nurseries, transport service providers etc. As a result, it not only creates jobs for many, especially poor women, but also enlarges the opportunity to export. But due to the problems in production, harvesting, packaging, transportation and lack of government support, traders face losses which can reduce the prospects of flower exports, although Bangladesh has the potential to gain from floriculture due to its favourable agro-climate. Wittstock and Quinto (2008) discuss the current status of flower cultivation in Bangladesh. For quick returns and good market prospects, a vast area of agricultural land has been turned into flower growing areas. This study also shows the level of women's involvement in different stages of flower cultivation. Rahman (2009) observes the role of flower cultivation in poverty reduction and employment generation in Trilochonpur union of Jhenidah area, where around 2,300 bighas are now under flower cultivation. Farmers have shifted from traditional cultivation to flower cultivation as it proves more profitable for them. It also provides opportunities for women to generate income and contribute to bear their children's educational expenses. This study revealed the urgency of government initiatives to solve the problems such as a lack of preservation facilities, absence of cool transportation systems, scarcity of fertiliser and irrigation for the development of the business.

4. Methodology

Recently, flower cultivation has adopted commercially in 19 Zillas of Bangladesh. About 70% of the total country's demand of flowers is supplied by Jessore. Internal marketing facilities of this business are about Tk. 300 crore and international marketing facilities are about Tk. 16000 crore. Our country has earned Tk. 60 crore through exporting flowers (FY2009-2010) (Mitul, 2011). So, it can be said that commercial flower production is a profitable venture which has huge potentialities.

In Jessore District, there are seventy five villages of five upazilas where flower is cultivated (BFS, 2009). Among them, Jhikargachha upazila is the most important area for flower cultivation. In order to get sufficient information for accomplishing the study in a correct manner, two villages (Sayedpara and Potuapara) of Jhikargachha Upazila under Jessore District is selected as study area. Purposive and multi-stage sampling techniques are taken into consideration. Firstly, Jessore district of the Southwest region of Bangladesh is deliberately selected. There are eight upazillas under Jessore district. Among these upazillas, Jhikargachha upazilla is selected. Then Gadkhali union is purposively selected among 11 unions of this upazilla. Gadkhali union is familiar for biggest flower market of the Bangladesh. It consists of 16 villages. Finally, two villages namely Sayedpara and Potuapara are selected.

From the two villages, Sayedpara and Potuapara the total sample is collected and the number of sample from every village is 40. This study is based on qualitative approaches through using Weighted mean index (WMI).

District	Upazilla	Union	village	Sample from each village	Total sample
Jessore	Jhikargachha	Godkhali	Sayedpara	40	80
			Potuapara	40	

Table 1: Distribution Of Sample Size

Source: Author's` Compilation.

For measuring the value of different indicators, to measure WMI, of flower business, the five point scale is used. This scale includes five parts denoted as 'very high', 'high', 'Medium', 'low' and 'very low'. These five parts are assigned by value '5', '4', '3', '2' and '1' respectively.

Very High	High	Medium	Low	Very Low
5	4	3	2	1

Table 2: Measurement Of Five Point Scale

Source: Researcher's` Compilation

Through using this scale all values of different indicators can be obtained. Demand of the product in the market, price of product in the market, profitability, income increase, employment generation are the five factors which has been taken as indicator to find out the position of this business. The cumulative value of the five factors will denote the status of this business that will be specified by the below measurement scale.

Level of prospect of the business				
Very much prospective=5	Prospective =4	Medium prospective =3	Low prospective =2	Very low prospective =1
$5 \geq P > 4$	$4 \geq P > 3$	$3 \geq P > 2$	$2 \geq P > 1$	= 1

*Table 3: Measurement Of Prospect Of The Business
Source: Researcher's Compilation
Here, P=Level Of Prospect Of The Business*

5. Analysis And Interpretation

5.1. Amount Of Land Ownership Of The Respondents

Land is one of important factors of production. Without land cultivation cannot be possible. In case of flower cultivation many farmers have their own lands, some farmers lease land to cultivate and some farmers occupies both.

Amount of land (in bighas)	Self-land holdings	Only Lease	Both
.5 -2.5	26	5	11
3-5	11	4	7
5.1-7	5	1	3
7.1-9	2	0	2
10- above	1	0	2
Total	45	10	25

*Table 4: Amount Of Land Ownership
Source: Field Survey, 2012*

This table shows that most of the respondents occupy land. The highest number of the respondents who has .5 -2.5 bighas land is 26. the only lease holding farmers are 10 and they have to pay 10,000 Tk. -15,000 per bighas for taking lease in a year. On the other hand, the both that means self and lease land holdings include 25 respondents.

5.2. Types Of Cultivated Flowers

Jessore district has a reputation for commercial flower cultivation. At present, 9,000 hectares of land covers flower cultivation taking the lead by Jessore district (Jagoroni Chokkro Foundation, 2012).

Type of flower	Number of cultivators
Rose	12
Gladiolus	10
Vutta, rose	9
Marigold	6
Vutta, gladiolus, marigold	14
Gladiolus, rose, vutta	18
Gerbera	7
Lod stick, marigold	4

*Table 5: Types Of Cultivated Flowers
Source: Field Survey, 2012*

Mainly tuberose, rose, marigold, gladiolus, gerbera are commercially cultivated in Jessore. This table shows, rose, vutta, gladiolus is highly cultivated as the number of cultivators of these flowers are 18. On the other hand, the cultivation of gerbera and lodstick are relative low.

5.3. Benefit-Cost Analysis Of Flowers

Name of flowers	Duration	Total revenue (Bigha/year) (Tk. in 1000) (Approximately)	Total cost (Bigha/year) (Tk. in 1000) (Approximately)	Profit TR-TC = π (Bigha/year) (Approximately)
Rose	5 Years	150.00 -170.00	60.00-70.00	90.00 -100.00
Gladiolus	4 Months	140.00-180.00	80.00	60.00 -100.00
Marigold	6-7 Months	100.00	30.00	70.00
Tuberose	18 Months	100.00 -160.00	40.00	100.00-120.00
Lod stick	3 Months	60.00-70.00	15.00-20.00	45.00-50.00
Gerbera	2 years	7,000.00 -2,200.00	1000.00-1400.00	600.00 -800.00
Vutta	18 Months	100.00 -160.00	40.00	60.00 -120.00

*Table 6: Benefit-Cost Analysis Of Flowers
Source: Jagoroni Chokkro Foundation, 2012*

From the table it can be concluded that among different flowers, the cultivation duration of Rose, Gerbera, Tuber rose and vutta is relatively long that means it is more than one year. But the cultivation duration of Gladiolus, Merigold and Lod stick is less than

one year. Those can cultivate 2-3 times in a year. The total cost of Gerbera is very higher than others as it results higher profit. The total cost of Rose, Gladiolus is also high. But they are relatively lower than Gerbera cultivation. On the other hand, total cost of Marigold, Tuberose, Lod stick, and Vutta is relatively cheaper. The profit margin of Rose, Gladiolus, and Tuberose, Vutta is also good which ranging from approximately Tk. 60,000 to Tk. 1, 20,000 and Marigold and Lod stick make profit ranging from about Tk. 45,000 to Tk. 70,000 in a year.

5.4. Position Of The Business

Flower cultivation as a commercial venture started in the country in the 1980's. Bangladesh has a very favorable condition for flower cultivation, due to variation in climate, topography and vegetation. Recently flower is added into the export item. It is an emerging field export that has an enormous opportunity to contribute to the GDP of the country. To evaluate the position of the flower business, WMI is used in this study.

Type	Weighted Mean Value	Final value of the business position
Demand of the product in the market	4.2	$\frac{4.2+4.1+3.29+3.29+3.61}{5}=3.7$
Price of product in the market	4.1	
Profitability	3.29	
Income increase	3.29	
Employment generation	3.61	

Table 7: Measurement Of Position Of The Sector
Source: Author's Compilation Based On Field Survey (2012)

Table 7 says that, for measuring the WMI five factors namely demand of the product in the market, price of product in the market, profitability, income increase and employment generation are considered which result 4.2, 4.1, 3.29, 3.29 and 3.61 respectively. The mean value of the position of the business is denoted as 3.7 that mean this sector or business is prospective. Because the value 3.7 falls under prospective category in which condition is the value must be greater than 3 but less or equal to 4 points.

5.5. Demand Of The Product In The Market

The WMI value of demand of the product in the market is 4.2 that mean it is very high. Basically, Godkhali flower market is the biggest flower market in Bangladesh. Flowers are marketed from Godkhali to Dhaka, Chittagong, Rajshahi, Bogura, Barisal, Khulna, Shyllet, and major Zilla and upazilla. About 70% of the total country's demand of flowers is supplied by market. For this reason the demand of the product in the market is very high.

5.6. Price Of Product In The Market

The whole selling season of flowers are divided into two seasons namely peak season and off-peak season. The duration of peak season is from December to March. This season is known as floral season and the duration of off-peak season is from April to November. Generally, the selling unit of flower is per piece. Only Marigold is sold in per hundred. During the peak season, the per piece prices of flowers go very high. Actually, flower cultivators enjoy higher profit in these periods. During off-peak period, the demand of flower is low in the market so the price of flower is also low in that period which make the profit margin very low of the flower cultivators. The following table shows per piece of different flowers in different season.

Name of flowers	Peak Season (December - March)	Off- Peak Season (April -November)
Rose	3-6 Tk.	0.6-1 Tk.
Gladiolus	8-10 Tk.	5-7 Tk.
Gerbera	10-18 Tk.	8-10Tk.
Tuberose	4-5 Tk.	1-2 Tk.
Vutta	5-8 Tk.	1-2 Tk.
Lod Stick	1 -2Tk.	0.5 -1 Tk.
Marigold	500-300Tk. per hundred	50-100 Tk. per hundred

Table 8: Per Piece Prices Of Different Flowers In Peak And Off Peak Season
Source: Jagoroni Chokro Foundation, 2012

This table shows the per piece prices of different flowers during peak and off peak season. During the peak season, per piece price of Gerbera is very high which is sold at 12 Tk. to 20 Tk. per piece. The prices of others flowers like Rose, Gladiolus, Tuberose, vutta are also go high. These flowers are sold at least 3 Tk. and maximum 10 Tk. per piece. On the other hand, in off-peak season, the price of gerbera and Gladiolus is relatively higher than that of other flowers.

5.7. Profit Range

Profit means the difference between total revenue and total cost. It is the sole objective of doing any business and at the same time it is the income of the businessman. According to the opinions of 80 flower cultivators, The WMI value of profitability of flower

business is 3.29 that mean it is high. The WMI value of income increase factor is 3.29 that mean the business provides the opportunity of income increase to a large extent.

Type	Range	Frequency	Percentage
Very low	30000-60000	8	10
Low	61000-90000	16	20
Medium	91000-120000	24	30
High	121000-150000	12	15
Very high	<151000	20	25

Table 9: Profitability Range

Source: Author's Compilation Based On Field Survey (2012)

From this table it can be seen that the profitability range among the 80 respondents are divided into five categories. They are namely very high, high, medium, low and very low. The very low category defines the profitability range from 30,000 to 60,000 Tk. and 8 respondents fall under this category. Among 80 respondents, 16 respondents are included under low category which reflects the profitability range from 61,000 to 90,000 Tk. The number of the respondents who enjoy the profit ranging from 91,000 to 1, 20,000 Tk. is 24 denoted as medium category. High category consisted of 1, 21,000 to 1, 50,000 Tk. and 12 respondents fall under this category. And the rest 20 respondents are included in very high category which reflects the profit range above 1, 50,000 Tk.

5.8. Employment Generation

From the field survey it was found that flower cultivation is fully labour intensive agricultural systems (calculated mean value is 3.61). There are about 2, 00,000 people whose livelihood is related with the flower production and marketing activities (BFS, 2009). About 10,000 daily labour were work in the flowers field. Flower cultivations had brought a radical change among the young generation especially among the poor who unfortunately left the school before for their financial problems and family unrest. In the study it is found that age between 20-30 years had a good proportion. Through the cultivating and working in the flower field they earn daily average 150-200 taka which plays a vital role in the family standard. By doing work in the flower field they become self sufficient and self employment. In this area, at present, it was very common scenario that most of the women are engaged in the flower pick out work, due to that the flower field need a good amount of labour. As a result along with their family daily income the women member of the area contribute to their family earning and they can contribute to the rural economy as well as the national economy.

6. International Market Scenario Of Cut Flower

6.1. Status Of Bangladesh In Exporting Of Cut-Flower

Bangladesh started to export cut-flowers in 1994-1995 when Tuberose value Tk.16, 000 was exported to the United Arab Emirates (UAE) as a sample shipment (Hossain, 2004). Since then the status of Bangladesh in exporting flowers is not developed enough. But in spite of various difficulties, the flower industry is rising and Bangladesh tries to increase the amount of exportable flowers to the international market. Tuberose, rose, orchid and gerbera are among the major flowers that prepared Bangladesh's floral basket for exports. Flowers and floral products are exported from Bangladesh to Pakistan, Italy, Portugal, Saudi Arabia, India, United States, South Korea, Philippines, Singapore, Japan, Germany, Britain, Denmark and France.

2008-2009 (July- April) (in US dollar)	2010-11 (July- April) (in US dollar)	2011-2012(July- April) (in US dollar)
32,643.21	3,42,266.74	1,55,566.68

Table 10: Export Of The Cut -Flowers From Bangladesh

Source: EPB, 2012

This table shows the amount of export of cut flowers from Bangladesh to other countries. During 2008-2009, cut flowers were exported valued as 32643.21 US dollar. On the other hand, flowers worth US dollar 127488 were exported during FY 2010-11. In recent year (2011-2012 July-April), it is exported worth 1, 55,566.68 US dollar.

6.2. Comparison Of Initial Market Price Of Bangladesh And Netherland

Flower industry of Bangladesh is enlarging in a continuous basis. The industry is moving towards growth due to its cheap production cost. It is very clear that Netherland is the highest flower exporting countries of the world. In comparison with Netherland from the view point of production cost, Bangladesh is in a stronger position. Here the entire price is compared with Netherland because it is the largest flower exporting country of the world. But the most remarkable story is that, the initial or farmer level prices are more in Netherlands in comparison with Bangladesh. Though Bangladesh exports very poor portion of the world flower demand but it produces the most attractive flower items of the world in a lower price level than the most flower exporting country. So there is hardly any doubt about the potentiality of the flower industry of Bangladesh.

Type of Flower	Average Price Per Stem (in Tk.)				
	Netherlands Import Price (1)	Netherlands Initial Market Price (2)	Bangladesh Initial Market Price (3)	(1) - (3) (4)	(2) - (3) (5)
Rose (Large)	17.51	35.00	4.00	13.51	31.00
Rose (Small)	10.30	12.36	3.00	7.30	9.36
Gerbera(Large)	31.63	26.48	14.00	17.63	12.48
Gerbera (Mini)	18.24	20.30	8.00	10.24	12.30
Gladiolus (Big)	35.02	38.00	10.00	25.02	28.00

Table 11: Comparison Of Initial Market Price Of Bangladesh And Netherlands
Source: Plasmeijer And Yanai, 2009

Not only the production price but also the imported prices, Netherland, of Rose (both large and mini), Gerbera (large and mini) and Gladiolus are higher than the production price of Bangladesh. The imported price of Netherland is more than Tk. 14.74 in an average in per piece where the amount is Tk. 18.63 more in an average in per piece in case of Netherlands home production. So there is a huge opportunity for Bangladesh to grab the international flower market due to its very much cheap production cost.

7. Conclusion

Flower is not only a source of beauty, it has some economic values. The usage of flower in different occasions is rapidly increasing in locally as well as internationally. This study shows that flower cultivation is a prospective business which ensures higher profitability. Bangladesh has a very favourable climate to turn the flower business into booming industry. Jessore is regarded as commercial zone of flower cultivation. It can not only play a vital role in employment generation and poverty reduction but also can contribute in the national economy through earning valuable foreign currency. But the commercial development of the business is still at very early stage. This study also reveals that the position of facility provided for flower business is near to medium level. Weak research activities, unorganised market, lack of post-harvest management and air condition vehicles are the major problems. Government initiative is also very limited. Government should be active and these problems should be solved through taking appropriate actions for the proper growth of this industry.

8. Ending Notes

- Purposive Sampling Techniques: Under this technique, deliberate selection of sample item is conducted by a researcher. (Kothari, 2011)
- Multi-Stage Sampling Techniques: Multi-stage sampling involves randomly selection of sample in all stages. (Kothari, 2011)
- Five Point Scale: The rating scale includes qualitative description of a limited number of aspects of a thing or of traits of a person. (Kothari, 2011)

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