

Performance of Rose Production in Sindh Pakistan

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Abstract

The present study was intended to determine the economic analysis of rose production in district Hyderabad Sindh, Pakistan during 2012. Commercial farming of Rose has emerged as a remunerative enterprise in the diversified farming zone of Sindh Province but unfortunately common farmers of this area are not aware of its economic performance. The investigation on economic analysis of rose production in District Hyderabad was carried out during 2012, through survey method by randomly interviewing 60 rose growers. This sample was selected by random sampling techniques amongst the rose growers cultivating rose on commercial scale. It was studied that area devoted to rose averaged 3.53 acres per farm in district Hyderabad, during 2012. The span of flowering life of bushes averaged 5 years and consequently one and half years data were collected to account for fixed and variable costs as well. Rose production realized total gross income of Rs.450674.60 and on an average spent Rs.234679.56 per farm, the study indicates that each grower per acre realized gross income of Rs.127669.86, spent Rs.66481.46 and earned net profit of Rs.61188.40. The input-output ratio was 1:1.89 and the cost-benefit ratio was 1:0.89 investing a rupee.

Keywords: Rose, Sampling, Commercial, Production, Percentage

1. Introduction

Rose, belonging to the Genus *Rosa* of Rosaceous family, is an evergreen shrub. In Pakistan, floriculture is still in its initial stages, techniques used are primitive. Pakistan share is less than 3% in international market; rose crops contribute about 50% in floriculture trade in Pakistan. The cultivation of rose on commercial scale started in late seventies. The cultivation of rose on commercial scale started in late seventies. Mostly it is cultivated in vicinity of cities (Memon and Shaikh, 2000). In flowers, the rose is considered as a king of flowers. Rose flowers were grown even before the history of human civilization. Roses are grown for ornamental purposes on large scale in many parts of the world. There are more than 20,000 types of cultivated roses and 120 rose species, including the popular and fragrant *Rosa cent folia*, *Rosa damascene*, and *Rosa gullied*. The two main species used in the commercial production of essential oil are *Rosa cent folia* and *Rosa damascene*, selected by a majority of perfumers (Khan and Younis, 2007). Practice of 145 countries on floriculture and consumption pattern is in billions but Pakistan's share is less than 3% in international market while India ranks 25th in global trade with export having growth rate of 12-15% in floriculture, Where more than 50% of the floriculture products are contributed by Netherlands. As for as Pakistan is concerned, this industry is still in an infant position, rose crops contribute about 50% in floriculture trade in Pakistan, (Sidhu, 2005).

Growing cut flowers, especially roses, is a very profitable business if done properly on commercial oasis. Demand for cut flowers, especially roses and tulips, are growing tremendously as more people are becoming aware of the beauty of flowers as decorative items. In Pakistan tied are the best gift at weddings, birthday parties, seminars, and other such social gatherings.

Justification and Need of the study

Rose flower usage in Pakistan is limited to marriage ceremony birthday parties, seminars and for decorative purpose only. The agriculture infrastructure is the web of personal, economic, social and legal relationships that support the production of agriculture commodities. In many countries Rose flowers are grown for commercial purpose for domestic markets, although the size of individual market or its development is difficult to assess given the lake of consumption and production data. The main consuming countries (Germany is the exception) are largely self-sufficient in flowers. Japan and United States are the largest markets.

2. Objectives

1. To assess the current status of rose production in Sindh.
2. To estimate per unit (acre) production cost by physical and revenue productivities or net return received by rose growers of the area.
3. To compute input-output and cost benefit ratio availed by the rose growers in the study area.

3. Methodology

In this chapter the types of data (primary and secondary) used this study are explained, as well as how the data were collected, what methods were used in the field and how the primary data was processed, however, the focus was on where precision farming technologies have been used and how location characteristics influences the probabilities of adoption among farms. Data from the simple during 2012 survey method was adopted to conduct this research. A list of Rose growers was prepared after conducting preliminary survey of the demarcated area. The respondents were selected from this list.

3.1. Data Gathering Techniques

A well-designed questionnaire was prepared and pre tested to record the interviews of selected respondents. A sample of 60 growers was selected from district Hyderabad through random sampling technique in order to select the representative samples.

3.2. Method of Study

Adopting survey method carried out the present research work. Preliminary survey of district Hyderabad was carried out and a list of growers producing rose. Main aspect of farming such as farming organization, cropping pattern, area sown under rose, location of farm etc were recorded. Samples of 60 Rose growers were selected from this list through random sampling techniques. The sample constituted depends on the total population.

3.3. Data Analysis

Initially the data were arranged and organized in coding system. By using the coding sheet, after the coding of collected data, all the data were tabulated, summarized and analyzed through Computer Software SPSS (Statistical Package for Social Sciences) Computer Software and Excel. Mean. Standard error and rank were calculated.

4. Results

Production is a process, whereby some goods and services, called inputs are transformed into other goods and services, called outputs. Production of agriculture commodities not only result through the transformation of various inputs into outputs but it is also subject to the physical, natural and socio economic conditions prevailing in the study area, and to account the production practices as well as returns in physical and revenue terms.

4.1. Size of Family

Table 1: Average size of family of selected growers (n=60) in district Hyderabad

Size of Family	Major		Minor	
	Male	Female	Male	Female
Average	3.26	2.48	2.66	2.28

4.2. Land Used and Pattern of Cropping

Table 2: Land used pattern followed by selected rose growers (n=60) in district Hyderabad

Land used for crop	Total Holding		Area Sown	
	Acre	Hectare	Acre	Hectare
Average	6.43	2.58	2.75	1.11

4.3. Rent of Land

Table 3: Land rent paid by the selected rose growers (n=60) in district Hyderabad

Land Rent Paid on	Rate / acre / hectare				Rs.18/- months	Amount Rs.
	Rs. Yearly/ acre	Rs. Yearly/ hec.	Rs. 18/- months/ acre	Rs. 18/- months/ hec		
Avg/Farm	22697.04	41528.18	25419.52	-	62186.30	25419.52
Avg/Acre	8253.47	12380.21	9243.46	24760.42		

4.4. Land Tax

Table 4: Land tax paid by the selected rose growers (n=60) in district Hyderabad

Sr. No.	Land Tax	Income Tax	Local Cess	Amount Rs.
1.	Av/Farm	673.90	27.50	714.80
2.	Av/Acre	245.05	10.00	259.93

4.5. Total Fixed Cost

Table 5: Expenditures incurred on total fixed cost realized by the selected rose area

Expenditure on total fixed cost	Land Rent			Land Tax. Rs.	Grand Total Rs.
	Rate / acre yearly Rs.	Rate for six months Rs.	Amount Rs.		
Av/Farm	22697.04	8475.24	25419.52	714.80	31710.66
Av/Acre	8253.46	3081.91	9243.46	259.93	11531.15

4.6. Labour Cost

Table 6: Total labour cost incurred by the selected rose growers in district Hyderabad

Labour cost incurred on	Average per	
	Farm	Acre
Dry ploughing	12906.00	4693.09
Clod crushing	2750.00	1000.00
Leveling	2730.16	992.77
Layout	8431.70	3066.07
Making bunds and channels	8431.70	3066.07
Making paths	4125.00	1500.00
Sowing of plants	3850.00	1400.00
Irrigation	21925.00	7972.73
F.Y.M	4185.00	1521.82
Fertilizer	2475.00	900.00
Pruning	4165.00	1514.55
Insecticide and pesticide	7429.00	2701.45
Weedicide	17325.00	6300.00
After care	24750.00	9000.00
Planting	72792.00	26469.82
Operating charges	2182.00	793.45
Grand Total	189759.88	69003.59

4.7. Capital Inputs

Table 7: Expenditures incurred on capital inputs by the selected rose growers

Expenditure on capital inputs	Average per farm	Average per acre
Seeds per plant		
Qty. plants	21104.40	7674.33
Rate Rs.	10.10	-
Amount Rs.	21145.00	7689.45
Farm Yard Manure (FYM)		
Qty. plants	4.28	1.60
Rate Rs.	2418.00	879.27
Amount Rs.	10348.00	3762.91
Application of Fertilizer		
Qty. plants	11.36	4.13
Rate Rs.	800.00	290.91
Amount Rs.	9100.00	3309.09
Insecticides/Pesticides		
Qty. plants	11.30	4.11
Rate Rs.	292.90	106.51
Amount Rs.	3325.30	1209.20
Other Charges		
Repair of implements	2226.00	809.45
Electricity charges	5280.20	1920.07
Grand Total	62040.38	22560.14

4.8. Marketing Cost

Table 8: Marketing cost incurred by the selected rose growers (n=60) in district Hyderabad

Marketing cost incurred on	Loading charges Rs.	Transportation charges Rs.	Un-loading charges Rs.	Commission Charges Rs.	Total Rs.
Av/Farm	1237.50	73730.00	1237.50	35942.50	82147.62
Av/Acre	450.00	15901.82	450.00	13070.00	29871.86

4.9. Total Cost of Production

Table 9: Total cost of production incurred by the selected rose growers

Production cost incurred on	Fixed Cost		Labour Cost Rs.	Marketing Cost Rs.	Capital Cost Rs.	Grand Total Rs.
	Land Rent. Rs.	Land Tax Rs.				
Av/Farm	25419.52	417.80	189759.88	82147.62	62040.38	347351.92
Av/Acre	9243.46	259.93	69003.59	29871.86	22560.14	12631.24

4.10. Per Unit (Acre and Hectare) Cost of Production

Table 10: Per unit (acre and hectare) cost of production incurred by the Selected rose growers.

Per unit production cost	Average per	
	Farm	Acre
Land rent	25419.52	9243.46
Land tax	714.80	259.93
Labour cost	189759.88	69003.59
Marketing cost	82147.62	29871.86
Capital cost	76813.30	27932.11
Total cost	347351.92	126309.79
Per acre cost	128514.40	46732.51

4.11. Physical Productivity

Table 11: Physical productivity realized by the selected rose growers

Physical productivity	Total Production in 40 kg	Productivity in kg	Total cost Rs. Per acre 40 kg
Av/Farm	387.20	15440.00	140.00
Av/Acre	140.80	5614.55	50.91

4.12. Revenue Productivity

Table 12: Revenue productivity realized by the selected rose growers

Revenue productivity	Total quantity in unit (40 kg)	Rate / unit (40 kg) in Rs.	Amount Rs.
Av/Farm	387.20	1288.40	496476.00
Av/Acre	140.80	468.50	180536.72

4.13. Net-Farm Income

Table 13: Net return earned by the selected rose growers (n=50) in Hyderabad

Sr. No.	Net return	Revenue productivity (a) Rs.	Total expenditure (b)Rs.	Net-returns a-b=c Rs.
1.	Av/Farm	496476.00	347351.920	152984.080
2.	Av/Acre	180536.727	126309.789	55630.575

4.14. Per Unit (40 kg) Gross Income

Table 14: Per unit (40 kg) gross income realized by the selected rose growers

Gross income	Production in 40 kg (a) Rs.	Rate/ 40 kg. Rs.	Total Revenue (b) Rs.	Net-returns a-b=c Rs.
Av/Farm	387.20	1288.40	496476.00	1282.22
Av/Acre	140.80	468.50	180536.72	466.26

4.15. Per Unit (40 kg) Net Revenues

Table 15: Net unit (40 kg) net revenue realized by the selected rose growers

Net revenue	Total gross income in 40 kg (a) Rs.	Total cost of production/40 kg (b) Rs.	Per 40 kg Revenues a-b=c Rs.
Av/Farm	1288.40	917.96	370.44
Av/Acre	468.50	333.80	134.70

4.16. Input-Output Ratio

Table 16: Input output ratio realized by the selected rose growers

Sr. No.	Input/output Ratio	Gross income (a) Rs.	Total Expenditure (b) Rs.	Input-output ratio a÷b=c Rs.
1.	Av/Farm	496476	347351.92	1:1.43
2.	Av/Acre	180536.72	12631.24	-

4.17. Cost Benefit Ratio

Table 17: Cost benefit ratio realized by the selected rose growers

Cost Benefit Ratio	Net income (a) Rs.	Total Expenditure (b) Rs.	Cost benefit ratio a÷b=c Rs.
Av/Farm	152984.08	347351.92	1:0.44
Av/Acre	55630.75	12631.24	-

5. Conclusions and Recommendation

The economics of any crop gives a factual depiction not only on the revenue, expenses and net income that accumulate to the farmers from their followed enterprise but also enable them to use their resources in such a way so as to get maximum returns. Economics of production truly plays an important role in the production. It helps the farmers to use their accessible resources in a mainly well-organized and gainful way. It enables them to seem into the variety of factors and to make adjustment into maximum return and to minimize costs. Approve survey method carried out the present research was carried out.

The present study has been carried out the means to increase per hectare yield and consequently the income of farm; therefore the following suggestions are put forwarded as under;

- New modern package of practices may be followed to get maximum production of rose crop.
- Growers may be educated about soil status market conditions to get better profit.
- Credit facilities may be extended and the procedure be further simplified.
- Chemical fertilizer/pesticides may be provided at cheaper rates to the rose growers.
- Good quality seed and high yielding varieties may be introduced to get maximum benefit from rose cultivation.
- Quick and cheaper transport facilities are provided to the rose growers.
- Technical assistance is extended to farmers by the Directorates of Agriculture Extension Sindh, Agriculture Research Sindh and by the Sindh Agriculture University, Tando Jam for further improvement in rose cultivation.

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