

Original Research Article

Capital structure and investment on Flower farms in District Varanasi

ABSTRACT

A study on 120 flower farmers was made in the district Varanasi to analyze the farm structure and investment patterns of the selected farms. Multistage stratified purposive cum random sampling procedure was adopted for the study. Findings reveal that, overall average cropping intensity on sample farms was found 213.04%. Among overall cropping pattern of the crops in the study area, per cent of rose was 8.57 and marigold was found 11.12 per cent. Per farm investment on farm structure was highest on small size group of farms i.e., Rs. 750644.34 followed by marginal size group of farms which found the money value of Rs. 463367.02 respectively showing the direct relation to farm size.

Keywords: marigold, rose, cropping pattern, investment.

INTRODUCTION

Floriculture has established itself as a viable business. It has also been recognized for its potential as a profitable agriculture. Floriculture was once only done on tiny farms, but it has since spread to a few larger ones. The National Commission on Agriculture has advised that by the year 2000 A.D., 5 lakh hectares of land be planted in floriculture to increase productivity. Floriculture continues to provide rural residents with employment opportunities. A family of 5 to 6 people can live in a region where flowers are grown. Roses, carnations, gladioli, marigolds, and orchids are among the most highly prized flowers growing here. India is ranked 18th, with a 0.6 percent share of the worldwide floriculture market. It shows growing trend and also reveals a scope further. Although, conventional farming is largely being adopted on every farms. But flowers are also now being trending to be included in the cropping pattern of the farmers, however large farms on flowers can be seen on very area specific only. Farm size is a major factor in influencing the cropping pattern. A change in cropping pattern implies a change in the proportionate area under different crops. An increase in the area under high value crop is likely to result in an increase in total return even if there is no increase in the yield rate or price provided there is simultaneous decrease in the proportionate area under equally or more valuable crops (*Kadapatti and Bagalkoti, 2014*). Marginal farmers can be more attentive about better utilization of their tinny land holding (*Choudhri et al., 2017*). Therefore, flower cultivation can be a better option to utilize their

every inch of holding as well as can be a return generating on daily basis. Therefore, to analyze the status of flower cultivation and investment pattern on it the study has been performed.

METHODOLOGY

Multistage stratified purposive cum random sampling procedure has been adopted for the present investigation to select the ultimate unit of the sample. Out of 75 District and 18 Divisions in Uttar Pradesh state, the Varanasi division of Uttar Pradesh was been selected purposively to avoid the investigator's operational inconvenience. A list of all 8 blocks of Varanasi district of Uttar Pradesh along with acreage in field flowers cultivation were prepared and arranged in descending order. Out of 8 blocks, two blocks namely **Chiraigaon** and **Arazi Line** having highest area under field flowers were selected purposively for this study. Five villages from each block and a total of 120 respondents were selected for the study at random. Tabular analysis was made to compare different aspects of analysis of costs and returns on different categories of the sample farms. The simplest and the most important measures of average mean and weighted mean were applied. Simple comparisons have been made on the basis of percentage.

RESULT & DISCUSSION

The structure of sample farms

This section deals with the size of farms, farm assets structure, irrigational structure, cropping pattern and cropping intensity.

Average holding size on sample farms

The average size of land holding of marginal and small farms were found 0.88 and 1.61 hectares, respectively with an overall average size of land holding were obtained as 1.15 hectare.

Table 1 Average size of holding on different size of sample farms

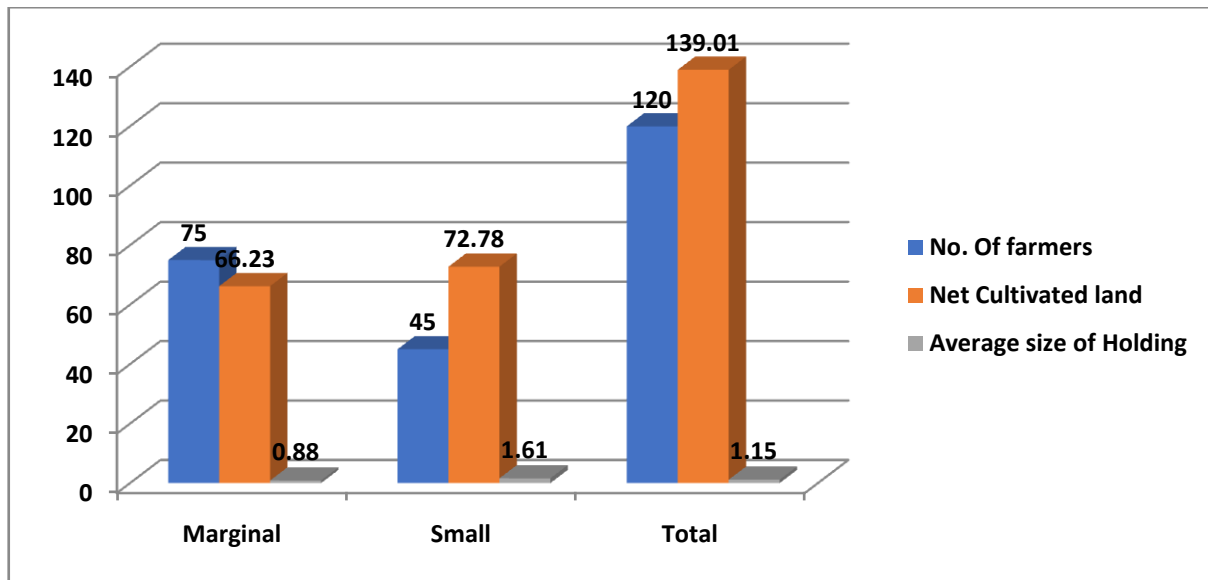
S. No.	Size groups of farms	No. of Farmers	Net Cultivated land(ha.)	Average size of holding
1	Marginal	75	66.23 (47.64)	0.88
2	Small	45	72.78 (52.36)	1.61
Grand Total		120	139.01 (100.00)	1.15

(Figure in parenthesis indicate percentage to the total cost)

Distribution of cultivated land owned by different size group of sample farms revealed that 47.64 % of cultivated land was owned by 75.00 of marginal size of farms. Table 1 also revealed that 52.36 % of area (land) were owned by 45 of small size group of farms.

The result is also showing in the Fig. 1.

Fig 1 Average size of holding on different size of sample farms



Cropping pattern

Cropping pattern represents the area attached to the various crop during the given period, customarily (conventionally) in a single year. It indicated the yearly sequence and arrangement of crops grown by farmer in a particular area. The cropping patterns follow by the sample farms are presented in Table 2. It reveals that on an average the highest area was covered under in paddy and Wheat 13.42, followed by Marigold 11.17 % in kharif season, rose 9.57 %, maize 4.26 %, Mustard 6.38%, Pea 4.26%, Gram 3.19%, Urd 2.13 % and Vegetable 1.60 %. Rose and Marigold have popular flower occupied 9.57% and 11.17%, 6.58 in kharif and of gross cropped area which was distributed as 1.88 ha. on marginal farms followed by small 3.35 ha. respectively of their total cultivated area.

Table 2 Cropping Pattern

S.No.	Crop	Marginal	Small	Overall Average
A.	Kharif	0.88 (46.81)	1.61 (48.06)	1.16 (47.35)
1	Paddy	0.26 (13.83)	0.41 (12.24)	0.33 (13.42)
2	Maize	0.08 (4.26)	0.23 (6.87)	0.15 (6.07)
3	P. Pea	0.08 (4.26)	0.12 (3.58)	0.10 (3.88)
4	Urd	0.04 (2.13)	0.10 (2.99)	0.06 (2.55)
5	Rose	0.18 (9.57)	0.29 (8.66)	0.21 (8.57)
6	Merigold	0.21 (11.17)	0.41 (12.24)	0.27 (11.12)
7	Vegeatble	0.03 (1.60)	0.05 (1.49)	0.04 (1.53)
B	Rabi	0.64 (34.04)	1.20 (35.82)	0.85 (34.69)
1	Wheat	0.28 (14.89)	0.41 (12.24)	0.33 (13.42)
2	Mustard	0.12 (6.38)	0.21 (6.27)	0.14 (5.77)
3	Vegatable	0.07 (3.72)	0.09 (2.69)	0.07 (2.65)
4	Gram	0.06 (3.19)	0.14 (4.18)	0.09 (3.67)
5	Lentil	0.03 (1.60)	0.12 (3.58)	0.06 (2.60)
6	Potato	0.08 (4.26)	0.23 (6.87)	0.16 (6.58)
C	Zaid	0.36 (19.15)	0.54 (16.12)	0.44 (17.96)
1	Urd	0.19 (10.11)	0.23 (6.87)	0.21 (8.37)
2	Moong	0.08 (4.26)	0.12 (3.58)	0.10 (3.88)
3	Chari	0.05 (2.66)	0.09 (2.69)	0.07 (2.65)
4	Vegetable	0.04 (2.13)	0.10 (2.99)	0.06 (2.55)
Gross Cropped Area (A+B+C)		1.88 (100.00)	3.35 (100.00)	2.45 (100.00)

(Figure in parenthesis indicate percentage)

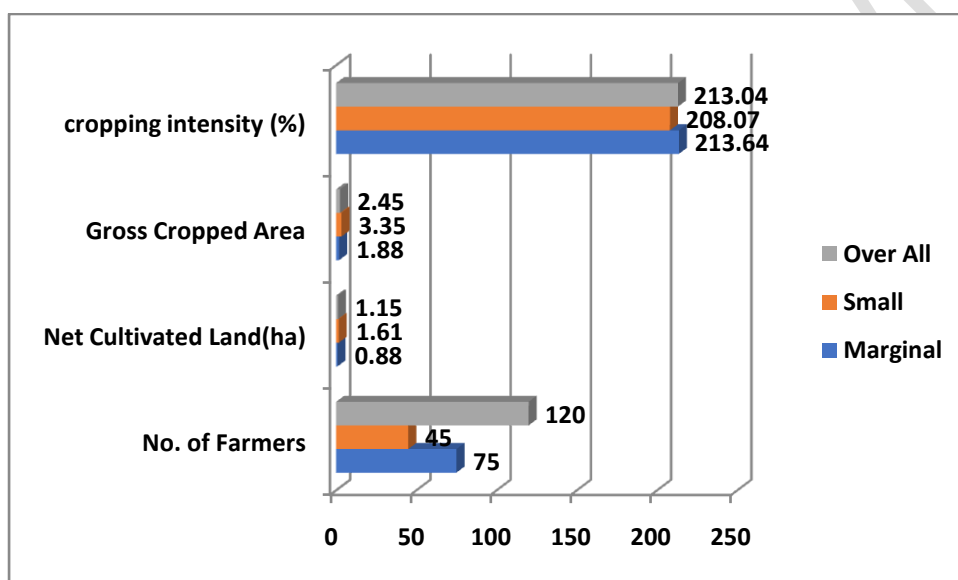
Cropping intensity

The details of cropping intensity depicted in the Table 3

Table 3 Cropping intensity of different size group of samples

S. No.	Size groups of farms	No. of Farmers	Net Cultivated land(ha.)	Gross Cropped Area (ha.)	Cropping Intensity (%)
1	Marginal	75	0.88	1.88	213.64
2	Small	45	1.61	3.35	208.07
Over All		120	1.15	2.45	213.04

Fig 2 Cropping intensity of different size group of samples



Intensity of cropping refers to the number of crops raised on a field during an agriculture year 2021-22. This can be computed by dividing gross sown area by the net cultivated area. Cropping intensity expressed in %.

$$\text{Cropping intensity} = \frac{\text{Gross sown area}}{\text{Net cultivated area}} \times 100$$

Table 3 reveals that the overall average cropping intensity on sample farms having 213.04% which was found highest on marginal farms 213.64 % followed by small 208.07 %, respectively, also showed in the Fig. 2. Cropping intensity was inversely related to size of farms.

Farm asset structure on sample farms

(a) Per farm investment on sample farms

Table 4 depicted the per- farm asset structure on sample farms. Table 4 revealed that major components of farm asset structure are buildings, machinery & implements and livestock which constituted 70.42 %, 17.09 % and 12.49 % of total asset value, respectively on the basis of overall average. Per farm buildings, machinery & implements and livestock came to Rs. 407394.41, Rs. 94800.18 and Rs. 68901.43 respectively on the basis of basis. Table 4 revealed that per farm investment on farm structure was highest on small size group of farms i.e., Rs. 750644.34 followed by marginal size group of farms which found the money value of Rs. 463367.02 respectively. It was concluded that per farm investment on sample farm were showed the direct relationship with size of holding, whereas component wise investment on marginal and small farm did not show any definite trend.

Table 4 Per farm investment on different size group of sample farms (Rs.)

Sl. No.	Particulars	Size of Farms		Overall Average
		Marginal	Small	
1	Buildings	316178.69 (68.24)	559420.60 (74.53)	407394.41 (70.42)
I.	Residential	261366.24 (56.41)	520406.00 (69.33)	358506.15 (60.89)
a.	Kachcha	10872.53 (2.35)	19268.23 (2.57)	14020.92 (2.42)
b.	Pucca	250493.71 (54.06)	501137.77 (66.76)	344485.23 (58.47)
II.	Cattle shed	54812.45 (11.83)	39014.60 (5.20)	48888.26 (9.53)
a.	Kaccha	14642.24 (3.16)	10327.41 (1.38)	13024.18 (2.54)
b.	Pacca	40170.21 (8.67)	28687.19 (3.82)	35864.08 (6.99)
2	Live stock	62569.76 (13.50)	79454.20 (10.58)	68901.43 (12.49)
I.	Milch Animals	62569.76 (13.50)	79454.20 (10.58)	68901.43 (12.49)
a.	Cow	20942.37 (4.52)	29832.57 (3.97)	24276.20 (4.33)
b.	Buffalo	41627.39 (8.98)	49621.63 (6.61)	44625.23 (8.16)
3	Machinery and implements	84618.57 (18.26)	111769.54 (14.89)	94800.18 (17.09)
I.	Minor Implements	989.61 (0.21)	1987.92 (0.26)	1363.98 (0.23)
II.	Major Implements	83628.96 (18.05)	109781.62 (14.62)	93436.21 (16.86)
	Grand Total	463367.02 (100.00)	750644.34 (100.00)	571096.02 (100.00)

(b) Per hectare investment on different size group of farms

Investment on different size groups of farms on per hectare basis depicted in Table 5. On an overall average per hectare investment was found Rs. 5039353.42, which was recorded higher marginal farms Rs. 526553.43, followed by small Rs. 466238.72 and respectively. It concluded that per hectare investment on farm assets at different size group of farms had inverse relationship with holding size.

Table 5 Per hectare Investment (Rs. /ha.)

Sl. No.	Particulars	Size of Farms		Overall Average
		Marginal	Small	
1	Buildings	359293.97 (68.24)	347466.21 (74.53)	354858.56 (70.42)
I.	Residential	297007.09 (56.41)	323233.54 (69.33)	306842.01 (60.89)
a.	Kachcha	12355.15 (2.35)	11967.84 (2.57)	12209.91 (2.42)
b.	Pucca	284651.94 (54.06)	311265.70 (66.76)	294632.10 (58.47)
II.	Cattle shed	62286.88 (11.83)	24232.67 (5.20)	48016.55 (9.53)
a.	Kachcha	16638.91 (3.16)	6414.54 (1.38)	12804.77 (2.54)
b.	Pucca	45647.97 (8.67)	17818.13 (3.82)	35211.78 (6.99)
2	Live stock	71102.00 (13.50)	49350.43 (10.58)	62945.16 (12.49)
I.	Milch Animals	71102.00 (13.50)	49350.43 (10.58)	62945.16 (12.49)
a.	Cow	23798.15 (4.52)	18529.55 (3.97)	21822.42 (4.33)
b.	Buffalo	47303.85 (8.98)	30820.89 (6.61)	41122.74 (8.16)
3	Machinery and implements	96157.47 (18.26)	69422.07 (14.89)	86131.69 (17.09)
I.	Minor Implements	1124.56 (0.21)	1234.73 (0.26)	1165.87 (0.23)
II.	Major Implements	95032.91 (18.05)	68187.34 (14.62)	84965.82 (16.86)
Grand Total		526553.43 (100.00)	466238.72 (100.00)	503935.42 (100.00)

CONCLUSION

From the study of flower (rose and marigold) growers in district Varanasi it was concluded that, overall average size of land holding was obtained as 1.15 hectare and flower cultivation was found included in the cropping pattern of the farmers for their day-to-day business and livelihood along with other conventional crops. On studying the investment pattern of the flower farmers, it was concluded that per farm investment showed the direct relationship with size of holding, whereas component wise investment on marginal and small farm did not show any definite trend. Similarly, on per hectare it was found that investment on farm assets at different size group of farms had inverse relationship with holding size.

REFERENCES

- Amarnath, J.S. and Vendhan, K. T. 2017. An Economic Analysis of Cut Flower Marketing in Tamil Nadu. *Economic Affairs*, **62**(4):621-631.
- Choudhri, H.P.S.; Singh G.P.; Singh R.; Kushwaha P.; Kumar R., 2017. Study of the Farm Structure and Cropping Pattern and Cropping Intensity, on Maize Growing Sample Farm in Bahraich District of U.P., India. *International Journal of Current Microbiology and Applied Sciences*, **6**(9): 2975-7981.
- Harisha, B.N. 2017. An Economic Analysis of Floriculture in India. Proceedings of the Sixth Middle East Conference on Global Business, Economics, Finance and Banking (ISBN: 978- 1-943579-18-1).
- Hasan, M.K.; Dewan, B.; Afrin, T.; Rahman, M.; Afrina, T.; Beg, T.H.; Islam, S. 2019. Profitability Analysis of Cut Flowers-Based on Rose. *International Journal of Multidisciplinary Research*, **5**(10).
- Kadapatti R.G.; Bagalkoti S.T. 2014. Farm Size and Cropping Pattern: A Case Study of Dharwad District in Karnataka State. *International Journal of Science and Research (IJSR)*, **2**(10): 2147-2152.
- Shankar U.; Singh G.P.; Ahmad R.; Sengar V.S.; Kishore K.; Chaudhary B. 2019. Study of farm structure, cropping pattern and cropping intensity on Lentil growing sample farms in Lakhimpur (Kheri) district of Uttar Pradesh, India. *Journal of Pharmacognosy and Phytochemistry*, **8**(3): 4029-4033.
- Ambrish Kumar Verma, B.S. Sachan, Birendra Kumar, Bhartendu Yadav*, H.P.S. Choudhri, Smriti Yadav and Mandeep Kumar, 2022. Investment Pattern and Returns Capability of Sugarcane Farms U.P., India. *Current Journal of Applied Science and Technology*, **41**(23): 21-30.