

## FAMILY FARMING EFFICIENCY OF WOMEN HEADED HOUSEHOLDS

D. Harshitha<sup>1</sup>, V. L. Madhu Prasad<sup>2</sup> and Lohar Prashant Shivaji<sup>3</sup>

<sup>1</sup>Assistant Professor (C), Directorate of Extension, UAS, Bengaluru -560065

<sup>2</sup> Professor & Chief Instructor, FTI, Directorate of Extension, UAS, Bengaluru-560065

<sup>3</sup> Ph.D. Scholar, Dept. of Agricultural Extension, GKVK, UAS, Bengaluru-560065

Email: harshithadkumar1@gmail.com

### ABSTRACT

*The present study was conducted during in purposively selected Tumakuru district. By using 'snow ball technique' 160 respondents were purposively selected. Data were gathered through structured interview schedule and analyzed using appropriate statistical tools. The study revealed that in family farming efficiency, among dimensions namely productivity, profitability, employment generation, family labour, competency in farm resource use and socio - psychological sensitivity, the statements such as farm diversification is important key to enhance productivity in family farming, use of organic manures and wastes recycling helps to sustain profitability, different farm enterprise of family farming provides enough scope to employ the family members round the year, family members and their farms are linked and co-evolve and one should spend considerable amount of time in planning and searching for best resource use practices to get higher yields were ranked I. Further, more than one third (35.00%) of the respondents belonged to medium category of overall family farming efficiency. Hence, concerned developmental departments should plan programmes exclusively on women headed households practicing family farming as a target group by developing data base of women headed households to increase the family farming efficiency.*

**Keywords:** snow ball technique, farm diversification, family farming efficiency, women headed households, developmental departments

### INTRODUCTION

The declaration of the 2014 as the International Year of Family Farming by United Nations reflects a growing global consensus that family farming is a key to feeding a world population that is expected to reach more than nine billion by 2050. Family farming is a means of organizing all agricultural and allied activities which is managed and operated by a family and is predominantly reliant on family labour, including women, men and children (Jose Graziano Da Silva., 2014; Chauhan *et al.*, 2017). In India, women are major producer of food because, agriculture is largely household enterprise. Further, women end up heading household were often found to be absence of a resident male head due to widowhood, divorce, separation, desertion, lack of mature sons to take over the households, migration of male member for long periods or loss of economic function by resident males due to disability and illness. The portion of women headed households in India has been raising. According to the census 2011, a total of 23 million and 19.65 lakh female headed households exist in rural India and Karnataka respectively, there are 8412 women headed households in Tumakuru district (Anon, 2011). The family farming efficiency of women headed households depends on

the work carried out by women, men and children. Hence, there is a need to elevate the women headed households to improve living conditions in rural areas.

### OBJECTIVE

To measure the family farming efficiency of women headed households in Tumakuru district

### METHODOLOGY

The study was conducted in the purposively selected Tumakuru district of Karnataka state. The district comprising of three agro- climatic zones from each zone, two taluks were selected namely (1) Central Dry Zone (Sira and Madhugiri), (2) Eastern Dry Zone (Tumakuru and Gubbi) and (3) Southern Dry Zone (Turuvekere and Kunigal). From each taluk, two hoblis were selected based on the potential crop farming systems. Further, from each hobli, list of villages having maximum number of women headed households practicing family farming was prepared by consulting staff of Raitha Samparka Kendras (RSKs), Grama Panchayath, Anganavadi workers and local leaders. Further, arranged the villages in descending order and top four to eight villages in the list were selected. From each village, list of women headed

households practicing family farming was prepared by using snow ball technique. From the list, two to four respondents were purposively selected thus making total sample of 160. The study was conducted by using ex-post facto research design. The final scale of 66 statements was administered to the respondents and the responses were elicited on five point continuum representing ‘Strongly Agree’, ‘Agree’, ‘Undecided’, ‘Disagree’ And ‘Strongly Disagree’ with weightage of 5,4,3,2 and 1, respectively for positive

statements and vice versa for negative statements. The family farming efficiency score of a respondent was calculated by adding up the scores obtained by her on all statements. Thus, the minimum and maximum score one could get is 66 and 330 respectively. Higher score on the scale indicates that the respondent has higher level of efficiency in family farming. The collected data were quantified and analyzed using frequencies, percentages, mean and standard deviation.

**RESULTS AND DISCUSSION**

**Statement wise family farming efficiency of women headed households**

**Table 1 : Statement wise family farming efficiency of women headed households** (n=160)

Sr. No.	Statements	Mean Score	Rank
<b>I. Productivity</b>			
1	Huge gap between actual yield and potential yield is observed in our farm.*	3.11	X
2	All my family members allocate the time and other available resources only for productive works.	3.28	V
3	One should maintain the soil health, organic matter and fertility through the use of organic and green manures.	3.27	VI
4	Farm women should follow Indigenous Technical Knowledge practices for economic viability of farm.	3.34	II
5	Farm diversification is important key to enhance productivity in family farming.	3.51	I
6	Our farm is productive, as it fulfills family requirements such as food, fuel, fodder, fiber etc.	3.24	VIII
7	Our farm produces more produce than the family requirement.	3.31	IV
8	Timely identification and control of the pests and diseases in crops/livestock’s is very essential to get more yields.	3.27	VI
9	Appropriate nutrition management ensures animal immunity, growth and production.	3.12	IX
10	Excessive use of inorganic fertilizers reduces the soil productivity.	3.26	VII
11	Family farming provides an opportunity to increase yield per unit area per unit time by virtue of family labour commitment and concern for their own family well-being.	3.32	III
12	Farm women should not only identify the causes for poor yield but also manage.	3.26	VII
<b>II. Profitability</b>			
1	One should grow more field crops than commercial crops in field. *	3.09	VII
2	Family farming provides more profit by reducing cost of production due to family labour involvement.	3.48	I
3	Use of organic manures and wastes recycling helps to sustain profitability.	3.39	II
4	A farmer should tied up with the organizations for marketing the produce to avoid price risk.	3.31	V
5	One should always set target of production and profit in the farm.	3.39	II
6	Farm women should prefer to use minimal off-farm inputs and maximum on-farm inputs to reduce cost of production.	3.35	III
7	Integration of different farming systems will not increase the profitability of farm. *	3.11	VI
8	Family headed women makes ensure that the market price offered shouldn’t be less than the cost of production.	3.33	IV
<b>III. Employment Generation</b>			
1	Non-farm income source substitute maximum extent in the family. *	3.23	IV
2	Family members engage in non-farm activities during slack agriculture seasons for their earning.	3.25	III

Sr. No.	Statements	Mean Score	Rank
3	Family farming provides assured employment and reduces family poverty.	3.26	II
4	Employment generated in man-days to women, age holds and children through family farming can't be equated with men.	3.23	IV
5	Farm women seek the greater opportunity as they are attracted to farming as owners /labourers of their farm..	3.25	III
6	Different farm enterprise of family farming provides enough scope to employ the family members round the year.	3.50	I
<b>IV. Family Labour</b>			
1	Family members and their farms are linked and co-evolve.	3.33	I
2	There will be huge difference in the skills of hired labours and family labours. *	3.04	VIII
3	Children and age holds will take part during peak seasonal activities.	3.18	V
4	All family members will work only during leisure time. *	3.00	IX
5	Specific farm activities performed by children after school/college hours.	3.22	IV
6	Many a times few of my family members spend time and resources for unproductive works. *	2.99	X
7	Family labour promotes effective utilization of available resources.	3.13	VI
8	Hired labour increases the production cost.	3.25	III
9	Lack of co-operation among family members is observed frequently while working in the farm. *	3.04	VIII
10	Family labour can engage in the farm activities for more hours.	3.31	II
11	My family members simply work because of unemployment rather than to get high yields. *	3.00	IX
12	Cost of production in family farming reduced by the involvement of unpaid family labours.	3.11	VII
13	Family headed women can't do hard work for longer hours.*	2.96	XI
<b>V. Competency in Farm Resource Use</b>			
1	Successful farm women should prefer to grow high yielding and disease resistant varieties in farm.	3.29	VIII
2	Cash can be generated regularly from direct sales of egg, milk and manure in family farming.	3.28	IX
3	One should consciously avoid use of resources to unproductive works.	3.25	XI
4	A good farm women estimate the cost of production and returns before taking up any enterprise.	3.26	X
5	Family headed women are not serious about safe storage of harvested produce. *	3.19	XV
6	One should plan the crop production after ascertaining the market demands only.	3.41	III
7	One should follow soil and water conservation techniques in farm.	3.34	VI
8	Farm women can't determine and acquire low/no cost technologies. *	3.20	XIV
9	One should spend considerable amount of time in planning and searching for best resource use practices to get higher yields.	3.52	I
10	Farm women do not seek any help from professionals or read literatures during pests and disease attack to maintain good crop.*	3.24	XII
11	Livestock supplements the crop production and vice versa.	3.35	V
12	Progressive farm women do not buy plant protection chemicals based on the price only.	3.28	IX
13	Farm women don't possess sufficient materials to pledge at the time of emergency.	3.38	IV
14	Family headed women do not calculate the fertilizer requirements instead simply follow the neighbours. *	3.19	XV
15	One should use chemical fertilizers judiciously.	3.30	VII
16	Generally farmers don't take up post-harvest management practices like processing and value addition. *	3.23	XIII

Sr. No.	Statements	Mean Score	Rank
17	Multipurpose trees / shrubs in the farm ensure required quantity of fodder and green manure.	3.43	II
18	Farm women are not confident to identify all the pests, diseases and nutrient deficiency symptoms. *	3.25	XI
19	Usually, Family headed women does not register to the crop insurance schemes.	3.26	X
<b>VI. Socio - Psychological Sensitivity</b>			
1	Family headed women shouldn't become upset by the comments of others.	3.36	III
2	It is difficult to motivate family members to do farm activities. *	3.13	VI
3	Farm women should not easily influenced by the suggestions of others unless it is practically suited to the farm condition.	3.42	I
4	Even though farm women have goals set for family farm, she find problems in setting priorities. *	3.07	VII
5	One should be firm on the farm decisions taken.	3.33	V
6	Farm women very much anxious about market price fluctuations. *	3.33	V
7	Optimism is the strength for successful farm women to move forward.	3.40	II
8	Family headed women don't seek moral support very frequently through elders/ peer group in failures	3.35	IV

\*Negative statement

Statement wise family farming efficiency of women headed households were ranked based on mean score and given in Table I.A perusal of table revealed that, in family farming efficiency of women headed households out of six dimensions, in productivity dimension three statements namely farm diversification is important key to enhance productivity in family farming, a farmer should follow indigenous technical knowledge practices for economic viability of farm and family farming provides an opportunity to increase yield per unit area per unit time by virtue of family labour commitment and concern for their own family well-being were ranked I, II and III respectively. With respect to profitability dimension, the statements such as family farming provides more profit by reducing cost of production due to family labour involvement ranked I, followed by use of organic manures & wastes recycling helps to sustain profitability and one should always set target of production & profit in the farm were ranked equally (II). The statements such as, different farm enterprise of family farming provides enough scope to employ the family members round the year and family farming provides assured employment and reduces family poverty were ranked I and II respectively related to employment generation dimension. Further, with regard to family labour dimension, the statements family members & their farms are linked & co-evolve and family labour can engage in the farm activities for more hours statements were ranked I and II respectively. The statements such as one should spend considerable amount of time in planning & searching for best resource use practices to get higher yields and multipurpose trees /shrubs in the farm ensure required

quantity of fodder & green manure were ranked I and II respectively related to competency in farm resource use dimension. With respect to socio-psychological sensitivity dimension the statements such as farm women should not easily influenced by the suggestions of others unless it is practically suited to the farm condition and optimism is the strength for successful farm women to move forward were ranked I and II respectively.

The enabling reason for the results might be due to as integrated approach livestock and crop diversification provides enough scope to utilize by products of linked components effectively and supports recycling of wastes .It reduces the input cost by vertical integration and practice of indigenous technical knowledge's like application of FYM/organic manures/crop residues sustains the farm productivity by enhancing soil due to its eco-friendly approach. Family farming found to give more profit by reducing cost of production due to family labour involvement and commitment for the own family well-being .With regard to employment generation diversified farming activities generate employment opportunities to family members throughout the year and reduces the family poverty. Further, with reference to competency in farm resource use to enhance resource use efficiency family headed women avoid the use of resources to unproductive works and use resources in an intelligent manner to get higher yields with available resources. Addition to this optimism, workaholic behaviour and vested responsibility of farming, children and household prepared her to stay competent in utilizing farm resources as well as in analyzing others suggestions practically.

### Dimension wise family farming efficiency of women headed households

The dimension wise analysis of family farming efficiency of women headed households with mean score and ranking were presented in Table 2.

**Table 2: Dimension wise family farming efficiency of women headed households (n=160)**

Sr. No.	Dimensions	Mean Score	Rank
1	Productivity	3.28	IV
2	Profitability	3.31	I
3	Employment Generation	3.29	III
4	Family Labour	3.12	V
5	Competency in Farm Resource Use	3.30	II
6	Socio - Psychological Sensitivity	3.30	II

It reflected that the profitability dimension was ranked I and two dimensions namely, competency in farm

resource use and socio-psychological sensitivity were equally ranked (Rank II). Further, employment generation, productivity and family labour were ranked III, IV and V respectively.

The possible reasons for this kind of trend might be due to reduced cost of cultivation because of unpaid family labour and less external inputs application. Use of recycled organic wastes as inputs and supplementation of livestock enterprise to the crop production and vice versa. In relation to this family headed woman have more proficiency in using farm resources without wastage. She is not affected by societal stigma and psychological prejudices. Being head of the household she has commitment in farming and in achieving livelihood security to family.

### Distribution of respondents based on their levels of family farming efficiency dimensions

Distribution of respondents based on their levels of family farming efficiency dimensions were presented in the Table 3.

**Table 3 : Distribution of respondents based on their levels of family farming efficiency dimensions (n=160)**

Sr. No.	Dimensions	Category	Number	Per cent	Mean	Standard Deviation
1	Productivity	Low (< 36.41)	47	29.38	39.13	5.44
		Medium (36.41 - 41.85)	55	34.37		
		High (> 41.85)	58	36.25		
2	Profitability	Low (< 24.51)	49	30.63	26.48	3.94
		Medium (24.51 - 28.45)	67	41.87		
		High (> 28.45)	44	27.50		
3	Employment Generation	Low (< 18.31)	56	35.00	9.74	2.87
		Medium (18.31 - 21.18)	60	37.50		
		High (> 21.18)	44	27.50		
4	Family Labour	Low (< 38.57)	51	31.87	40.67	4.21
		Medium (38.57 - 42.78)	63	39.38		
		High (> 42.78)	46	28.75		
5	Competency in Farm Resource Use	Low (< 60.18)	53	33.12	62.71	5.05
		Medium (60.18 - 65.24)	53	33.13		
		High (> 65.24)	54	33.75		
6	Socio-Psychological Sensitivity	Low (< 24.70)	46	28.75	26.43	3.44
		Medium ( 24.70 - 28.15)	67	41.87		
		High (> 28.15)	47	29.38		

### Productivity

The results pertaining to productivity dimension indicated that more than one third of the respondents belonged to high (36.25%) and medium (34.37%) level of productivity respectively. Whereas more than one fourth (29.38%) of the respondents belonged to low level of productivity.

The reason might be use of indigenous technical

knowledge practices, application of crop residues, farm yard manure and green manures to maintain the soil health and fertility. Less use of inorganic fertilizers and pesticides increases the soil productivity. The results of the present study are in conformity with the findings of Lavanya (2010).

### Profitability

It is observed from Table 3 that 41.87 per cent of

the respondents belonged to medium category of profitability followed by low (30.63%) and high (27.50%) categories of profitability.

Family farming provides more profit by reducing cost of production due to family labour involvement and commitment. They use resources only for productive works. Crop diversification, integration of different farming systems provides regular income through the sale of milk, butter / ghee, egg and manure. Use of off-farm inputs, maximum on-farm inputs and wastes recycling helps to increase and sustain profitability of farm. More or less similar findings were reported by Lavanya (2010).

**Employment generation**

The findings from Table 3 implies that more than one third of the respondents belonged to medium (37.50%) and (35.00%) low categories of employment generation respectively. Whereas more than one fourth (27.5%) of the respondents belonged to high category of employment generation.

The probable reason for the observed trend is that different farm enterprises of family farming might provided enough scope to employ the family members round the year and also family members might have satisfied to work in their own farms than in urban areas. The results are supported by the findings of Lavanya (2010).

**Family labour**

A glance at Table 3 revealed that 39.38 per cent and 31.87 per cent of the respondents belonged to medium and low categories of family labour respectively. Whereas more than one fourth (28.75%) of the respondents belonged to high category of family labour.

Due to high labour wage and less annual income to farm family and availability of labour in family farms headed by women naturally relied on the family members to reduce the cost of production. Because of their high level of farming commitment and achievement motivation, they might have motivated and coordinated their family members to engage farming activities and Further, also affectionate sentiments/ soft corner of family members on women as a mother might

have encouraged family members to involve in farming. However, there are no studies available either to support or contradict the above findings.

**Competency in farm resource use**

With respect to competency in farm resource use it is evident from the Table 3 almost equal percent of respondents belonged to high (33.75%), medium (33.13%) and low (33.12%) categories of competency in farm resource use.

In the light of achieving secured livelihood to household one can see cultural shift in farming, migration of resident males and engagement of men in non-farm activities changing the face of farming as number of women are moving from the kitchen to the fields. In addition, women have no deviations more focus and wise enough in spending, saving habits, use of resource efficiently and rationality in decision making compared to men. Generally, family headed women consciously avoid use of resources to unproductive works. To support the obtained results there are no similar studies.

**Socio-psychological sensitivity**

The results from the Table 3 depicted that 41.87 per cent of the respondents belonged to medium category of socio-Psychological sensitivity. Whereas more than one fourth of the respondent’s falls under high (29.38%) and low (28.75%) categories of socio-psychological sensitivity, respectively.

These days, farming is more about brains than brawn. Personal mental ability of women is at most important in the field like farming, as it requires analytical mindset to adopt the suggestions of others, only when it is ideal to the field situation practically. Stress free, stable mind without anxiety and past experiences is important, as depressed mind reduce their performance significantly. However, there are no related studies available either to support or contradict the above findings.

**Over all family farming efficiency of women headed households**

Over all family farming efficiency of women headed households were presented in the Table 4.

**Table 4 : Overall family farming efficiency of women headed households** (n=160)

Sr. No.	Overall Family Farming Efficiency	Number	Per cent	Mean	Standard Deviation
1	Low (< 209.27)	53	33.13	215.18	11.80
2	Medium (209.27 - 221.08)	56	35.00		
3	High (> 221.08)	51	31.87		

A glimpse at the table interpret that more than one third (35.00%) of the respondents belonged to medium category of overall family farming efficiency Whereas remaining 33.13 per cent and 31.87 per cent of the respondents belonged to low and high categories of family farming efficiency respectively.

The possible reason might be due to medium level of different family farming efficiency; the majority of dimensions such as profitability, employment generation, family labour and socio-psychological sensitivity were belonged to medium group. Hence, with respect to overall family farming efficiency majority of the respondents belonged to medium level. The results are almost in conformity with the findings of Rajula (1997), Lavanya (2010) Saikumar *et al.* (2013), Tandel *et al.* (2019) and Rachana and Shaikh (2021).

### CONCLUSION

The study was conducted in Tumakuru district to analyse the family farming efficiency of women headed households practicing family farming. The results revealed that more than one third (35.00%) of the respondents belonged to medium category of overall family farming efficiency. Hence, concerned development departments should plan programmes exclusively on women headed households practicing family farming as target group by developing data base of women headed households to increase the family farming efficiency.

### ACKNOWLEDGEMENT

I owe my deepest sense of gratitude to Dr. V. L. Madhu Prasad, Professor and Chief Instructor , Farmers Training Institute, GKVK, University of Agricultural Sciences, Bangalore and Chairman of my advisory committee for his excellent guidance, constant encouragement, and keen interest throughout the course of investigation. I also like to acknowledge my life partner, Mr. V. Ranganath for his eternal support and understanding of my goals and aspirations.

Finally, I wish to thank the family headed women's of Tumakuru District, who have co-operated in conduct of my research work.

### CONFLICT OF INTEREST

No conflict of interest among researchers.

### REFERENCES

- Anonymous (2011), Socio Economic and Caste Census Report, Press Information Bureau, Government of India, official website. <http://secc.gov.in>
- Chauhan, N. B., Vinaya Kumar, H. M. and Patel, J. B. (2017). Sustainability Crisis of Family Farming. National Seminar on Extension Plus: Expanding the Horizons of Extension for Holistic Agricultural Development, April 21-22, 2017: Lead Paper, pp: 67-74.
- Jose Graziano Da Silva.(2014), Family Farms are key to feeding the world. *Rural 21-Internatl. J. Rural Dev.*,48(2): 6-7.
- Lavanya (2010), Assessment of farming system efficiency in Theni district of Tamil Nadu. *M. Sc. (Agri.) Thesis, Univ. Agric. Sci., Bangalore.*
- Rachana Kumari Bansal and A. S. Shaikh (2021), Role of Women Dairy Cooperative Societies on Income And Employment of Women. *Guj. J. Ext. Edu.*,32(2) :75-80.
- Rajula Shanthi, T.(1997), Efficiency of women agricultural labourers in rice farming systems of Kerala and Tamil Nadu. *Indian Res. J. Extn. Edu.*, 9 (2) : 96 - 99.
- Saikumar, C., Bharamappanavara and Mundinamani, S.M. (2013), Resource use efficiency and constraints in farming in the tank commands :the case of north eastern karnataka. *J. Rural Dev.*, 32(3):311-320.
- Tandel, B. M., Patil S. J. and Tandel, Y. N. (2019). Management Efficiency of Mango Growers in Navsari District. *Guj. J. Ext. Edu.*, Spl Issue:30-34.