

# Technological Needs of Farm Women in Varied Farming Systems of Tamil Nadu.



D. Vengatesan, Santha Govind, P. Ramesh, M. Kavaskar, T. Kalidasan

**Abstract:** *Technological base for improving productivity and income of the rural population in the field of agriculture has broadened with the success of Green revolution. As a result of this research and transfer of technology programmes, the national production has increased over time in the decades, thus balancing the population growth and food production of our country. There is a serious and valid criticism that the modern technologies served only male farmers and not the resource poor small farm women who account for nearly 89.00 per cent of the women farmers. It has now been realised that participation of all sections of the farming community in particular the farm women, can be brought by developing appropriate technologies, keeping other issues of stability, sustainability, equity and productivity. The study was taken up in three districts of Tamil Nadu viz., Nagapattinam, Cuddalore and Perambalur districts comprising of maximum area under three different farming systems viz., wet land, garden land and dry land respectively. The respondent of 60 small farm women was selected from each of the selected farming systems by using proportionate random sampling technique. The technological needs of small farm women in farm operations were measured with the help of a specially constructed schedule, which was prepared by discussing with experts. The collected data were tabulated and analysed using statistical tools viz., percentage analysis, mean and analysis of variance. The majority of the farm women expressed high level of technological need in dairy farming, goat rearing and poultry farming with the overall mean score (2.752, 2.554 and 2.516) respectively.*

**Key words:** *Technological Needs, Farm Women and Innovation.*

## I. INTRODUCTION

As per the statistical report of 200, the total women population in India is 494.82 million out of

1,025,25 million total population. This means women accounted for 48.26 per cent of the total population. The incongruousness of the situation becomes clear when we see the participation rate of women in the field of work. For instance, out of the total women in the country, the rate of participation in the work force was only 25.67 per cent against men, whereas the participation rate of men was 51.95 per cent in the same year. Thus, these figures indicate higher participation of men as compared to women. But is this explanation all true? For a long time, statisticians and economists thereby devised to formulate definitions of work in such a manner, that they have managed to exclude women from the concerned field of work, thereby derecognizing the women's participation and undermining their contribution from many spheres of activities, particularly in economic activities.

There is a serious and valid criticism that the modern technologies served only male farmers and not the resource poor small farm women who account for nearly 89.00 per cent of the women farmers. It has now been realised that participation of all sections of the farming community in particular the farm women, can be brought by developing appropriate technologies, keeping other issues of stability, sustainability, equity and productivity.

But the question is what to do with the technologies already developed, but not appropriate? The answer is technology refinement after technology assessment by the users. This can give adequate feed back for the scientists and the technology developers to modify, refine the existing technologies or completely develop new technologies for the users context, for which technology assessment becomes strategically important and crucial.

The present situation demands active participation of women along with men in all walks of life to have better life. Involvement of women in all development activities again demands a proper understanding to assess their needs and extent of fulfillment. With this background and in the absence of empirical evidence, the present paper is designed as a pioneer attempt with the objectives of Technological needs of farm women in different framings of Tamil Nadu.

## II. METHODOLOGY

The research was carried out in Nagapattinam, Cuddalore and Perambalur districts of Tamil Nadu. The selection of districts was based on maximum area under three different farming systems viz., wet land, garden land and dry land respectively.

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A respondent of 60 small farm women was selected from each of the selected farming systems. . The Technological needs of small farm women in farm operations were measured with the help of a specially constructed schedule, which was prepared by discussing with experts. The data were collected through interview method. The collected data were tabulated and analysed using statistical tools viz., percentage analysis, mean and analysis of variance.

Thus technological need score for all the 60 farm women under each of the three farming systems was calculated. Based on the average mean score obtained in the major subject matter areas were assigned ranks in the ascending order of technological needs. They were further classified into two categories of high and low technological needs. The major subject matter areas having the average mean score above the overall mean score fell under 'High technological need' while those subject matter areas having the average mean score below the overall mean score fell under 'Low technological need category'. Based on the mean score obtained, each specific technology was classified into three, categories viz., 'High level of technological need', 'Moderate level of technological need' and 'Low level of technological need' based on cumulative frequency method.

### III. FINDINGS AND DISCUSSION

#### A. Technological needs of wet land farm women in dairy management

The relevant data regarding the technological needs of farm women in dairy management are presented in Table .

**Table 1: Technological needs of wet land farm women in dairy management (n = 60)**

S. No.	Technologies	Mean score	Rank order
1.	Balanced diet	3.500	I
2.	Preparation of feed	2.010	XII
3.	Health care and sanitation	3.166	II
4.	Care of pregnant animals	2.916	V
5.	Care of new born calves	2.910	VI
6.	Milking	3.033	IV
7.	Maintenance of cattle shed	2.500	X
8.	Preparation of milk products	3.083	III
9.	Rearing of animals	2.333	XI
10.	Cultivation of fodder crops	2.666	IX
11.	Preservation of fodder	2.800	VIII
12.	Enriching the nutrient content of fodder	2.000	XIII
13.	Care of sick animals	2.866	VII
	<i>Average mean score</i>	<b>2.752</b>	

It could be elucidated from Table 1, that a majority of the farm women perceived the areas viz., balanced diet (3.500), health care and sanitation (3.166), preparation of milk products (3.083), milking (3.033), care of pregnant animals (2.916), care of new born calves (2.910), care of

sick animals (2.866) and preservation of fodder (2.800) as the most important areas of technological need compared to others. This is evident from their respective mean score value which were found to be above the average mean score of 2.752. The mean score for the rest of the technologies were less than the average mean score value. Hence, low level of technological need was observed for the items viz., cultivation of fodder (2.666), maintenance of cattle shed (2.500), rearing of animals (2.333), preparation of feed (2.010) and enriching the nutrient content of fodder (2.000). Umarani (2002) also reported that farm women preferred similar areas for technological needs.

#### B. Technological needs of garden land farm women in goat rearing

The information collected for assessing the technological needs of farm women in the goat rearing technologies is presented in Table 2.

**Table 2: Technological needs of garden land farm women in goat (n = 60)**

S. No.	Technologies	Mean score	Rank order
1.	Balanced diet	3.083	II
2.	Health care and sanitation	3.333	I
3.	Care of pregnant goats	2.750	IV
4.	Care of new born kids	2.650	VI
5.	Maintenance of shed	2.500	VII
6.	Rearing of animals	2.033	VIII
7.	Cultivation of fodder	1.750	X
8.	Preservation of fodder	2.916	III
9.	Enriching the nutrient content of fodder	1.866	IX
10.	Care of sick animals	2.666	V
	<i>Overall mean score</i>	<b>2.554</b>	

It could be noticed from Table 2, that majority of the farm women expressed high (2.554 overall mean score) level of technological need in goat rearing. It is quite surprising to know that out of nine items, the respondents expressed high technological need in six items viz., health care and sanitation (3.333), balanced diet (3.083), preservation of fodder (2.916), care of pregnant goats (2.750), care of sick animals (2.666) and care of new born kids (2.650). The farm women were aware of existence of such technologies but did not possess adequate knowledge. The respondents would have perceived these technologies as important areas. Hence, they might have perceived high level of technological need. The remaining technologies had the mean score value below the average mean score which indicated low level of technological needs for the items viz., maintenance of shed (2.500), rearing of animals (2.033), enriching the nutrient content of fodder (1.866)

and cultivation of fodder trees (1.750). These findings are in accordance with the finding of Vengatesan et al (2019).

### C. Technological needs of dry land farm women in poultry keeping

In order to assess the technological needs of farm women in poultry keeping, necessary data were collected and the findings are given in Table 3.

**Table 3: Technological needs of dry land farm women in poultry keeping (n=60)**

S. No	Technologies	Mean score	Rank order
1.	Balanced diet	2.833	III
2.	Health care and sanitation	3.500	I
3.	Preparation of feed	2.083	VI
4.	Maintenance of cages	1.750	VII
5.	Care of sick birds	3.333	II
6.	Enriching the nutrient content of feed	2.333	V
7.	Vaccination	2.666	IV
8.	Lighting arrangements	1.633	VIII
	<b>Overall mean score</b>	<b>2.516</b>	

It is obvious from Table 3, that out of eight technologies studied for assessing the technological needs of farm women with regard to poultry keeping, technological need was found to be high only for four technologies viz., health care and sanitation (3.500), care of sick birds (3.333), balanced diet (2.833) and vaccination (2.666) which were found to be above the average mean score of 2.516. Disease management is the serious problem in poultry keeping and there are number of occasions when they had lost the entire batch. Hence, most of the dry land farm women would have aspired for appropriate technologies on these areas that affected their income. The mean score for the rest of the four technologies were found to be less. They were viz., enriching the nutrient content of feed (2.333), preparation of feed (2.083), maintenance of cages (1.750) and lighting arrangements (1.633). These result is correlated with the results of Deshpande and Ali (2002).. Fifteen technologies were studied for assessing the technological needs of farm women in the off-farm activities. But only five similar technologies existed in the three categories viz., balanced diet, health care and sanitation, maintenance of shed, enriching the nutrient content of feed/fodder and care of sick animals. Balanced diet alone had shown significant difference at 0.01 per cent level of probability, while the technology taking care of sick animals had exhibited significant difference at 0.05 per cent level of probability. The remaining technologies had not shown any significant difference in the three farming systems. Thus, the obtained findings, reject the null hypothesis stating that there will be no difference in the technological needs in farm technologies between the respondents under varied farming systems

## IV. CONCLUSION

Poultry keeping, goat rearing and dairy management were practiced as backyard enterprises on a small scale in the study area. To practice viable dairy units, poultry keeping units and goat farming units on a large scale banks should come forward to provide financial assistance. Also awareness about the latest exotic breeds and new technologies related to vaccination and debeaking should be brought to the attention of women through campaigns, village meetings etc.

Gender sensitive technology generation and promotion is possible. An understanding of women's farming role and constraints is a prerequisite to devise suitable strategies. Event from the studies suggest that appropriate technologies/equipments for farm women should be economically accessible and viable. The diagnosis of gender difference in agricultural activities and constraints should be improved and extension messages and delivery modified accordingly. Further, monitoring and evaluation should routinely be on a gender disaggregated basis.

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