



## **TECHNOLOGICAL NEEDS OF GARDEN LAND FARM WOMEN IN SUGARCANE CULTIVATION**

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### **Abstract:**

*The involvement of women in agriculture is as old as the advent of agricultural practices in the world. Women are intensively involved in all the farm operations. However, women's involvement and participation are not always 'visible' as compared to the 'visibility' of men. Moreover, the technologies are said to be gender neutral. Few research studies have shown that most of the technologies in agriculture are not suitable to farm women. The study was taken up with the objective to study the technological needs of garden land farm women in sugarcane farming operations. Sample size of 60 garden land farm women were selected using proportionate random sampling technique. The farm women of garden land cultivating sugarcane crop expressed high level of technological needs in the major subject matter areas of farm implements (3.553), harvest (3.127), varieties (3.014), plant protection (2.984), fertilizer application (2.838) and sets and planting (2.816) which were found to be above the overall mean score of 2.699.*

**Key Words:** Technological Needs, Small Farm Women & Sugarcane Cultivation

### **Introduction:**

Technological base for improving productivity and income of the rural population in the field of agriculture has broadened with the success of Green revolution that the country witnessed during mid sixties. Various technological innovations have been realized claiming spectacular yield potential at research stations. 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. However, the benefits of the new production technologies have accrued mostly to male farmers while farm women have been bypassed in the development process.

There is a serious and valid criticism that the modern technologies served only farmers and not the resource poor small farm women who account for nearly 89.00 per cent of the women cultivators in India. It has now been realized that participation of all sections of farming community in particular the small farm women can be brought by developing appropriate technologies. Hence, the study entitled 'Technological Needs of Small Farm Women in Varied Farming Systems of Tamilnadu', was taken up to analyse the Technological Needs of Small Farm Women in Sugarcane Cultivation.

### **Methodology:**

The study was taken-up in Nagapatinam district in Tamil Nadu which comprised of maximum area under garden land farming system. A sample size of 60 garden land farm women was taken for analysing the technological needs of farm women in sugarcane cultivation. Ex Post Facto research design was used in the study. The required data was collected by utilising a well structured and pre-tested interview schedule. The technological needs with reference to production and produce, mechanisation, harvest, post-harvest agro-processing, transport, storage, marketing and livestock production technologies will be examined within the scope of what is technically feasible, economically feasible, socially acceptable, environmentally safe and

sustainable were collected to adopt the technology. 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.

**Findings and Discussion:**

**Technological Needs of Garden Land Farm Women in Sugarcane Cultivation:**

Technologies developed specifically based on farm women's need, interest, problem and satisfaction would be purposeful and cost effective and this holds good for women of garden land also. Hence, an attempt was made to assess the technological needs of farm women of garden land farm women in sugarcane cultivation. The results are given in Table 1.

Table 1: Technological needs of garden land farm women in sugarcane cultivation (n = 60)

S.No	Technologies	Mean Score	Rank Order
1	Field preparation		
	(i) Stubble collection	1.986	
	(ii) Digging the corners of fields	1.862	
	(iii) Cleaning the field boundaries	1.792	
	(iv) Time of land preparation	2.012	
	(v) Quantity of FYM to be applied	2.000	
	Average mean score	1.930	X
2.	Varieties		
	(i) Varieties recommended in the area	2.612	
	(ii) Characteristics of recommended varieties	3.416	
	Average mean score	3.014	III
3	Setts and planting		
	(i) Selection of good quality setts	3.012	
	(ii) Method of sett treatment with chemicals	3.116	
	(iii) Method of sett treatment with bio-fertilizers	3.212	
	(iv) Method of planting	2.631	
	(v) Time of gap filling	2.012	
	(vi) Maintenance of plant population	2.917	
	Average mean score	2.816	VI
4.	Irrigation management		
	(i) Economic use of water	1.650	
	(ii) Time of irrigation	2.516	
	Average mean score	2.083	IX
5.	Inter-cultural operations		
	(i) Method of earthing-up	1.666	
	(ii) Time of trashing	2.566	
	(iii) Time of detrashing	2.366	
	(iv) Method of propping	2.983	
	Average mean score	2.395	VII
6.	Weed management		
	(i) Weedicides	1.866	
	(ii) Method of application of weedicides	2.550	

	(iii) Identification of weeds	1.683	
	(iv) Time of weeding	2.683	
	Average mean score	2.195	VIII
7.	Fertilizer application		
	(i) Application of required inorganic fertilizers	2.850	
	(ii) Nutrient deficiency in sugarcane	2.416	
	(iii) Method of application	3.250	
	Average mean score	2.838	V
8.	Plant protection		
	(i) Identification of pests	3.016	
	(ii) Identification of diseases	2.816	
	(iii) ETL for various pests and diseases	2.416	
	(iv) Recommended pesticides and fungicides	3.416	
	(v) Preparation of spray fluid	2.533	
	(vi) Biological pest control	3.566	
	Average mean score	2.984	IV
9.	Harvest		
	(i) Assessing the maturity of cane	3.850	
	(ii) Time of harvest	3.033	
	(iii) Method of harvest	2.500	
	Average mean score	3.127	II
10.	Farm implements		
	(i) Labour saving implements	3.750	
	(ii) Method of using implements	3.583	
	(iii) Maintenance of farm implements	3.266	
	Average mean score	3.533	I
	Overall mean score	2.699	

The results in Table 38 revealed that the farm women of garden land cultivating sugarcane crop expressed high level of technological needs in the major subject matter areas of farm implements (3.553), harvest (3.127), varieties (3.014), plant protection (2.984), fertilizer application (2.838) and setts and planting (2.816) which were found to be above the overall mean score of 2.699.

The technological needs of farm women on inter-cultural operations (2.395), weed management (2.195), irrigation management (2.083) and field preparation (1.930) were found to be below the overall mean score value indicating low level of technological needs (2.013 to 2.395) which secured ranks from VII to X.

Out of 37 specific technologies in sugarcane, nine technologies were perceived under high level of technological needs among the farm women. They were assessing the maturity of cane (3.850), labour saving implements (3.750), method of using implements (3.583), biological pest control (3.566), recommended pesticides and fungicides (3.416), characteristics of recommended varieties (3.416), maintenance of farm implements (3.266), method of fertilizer application (3.250), method of sett treatment with bio-fertilizers (3.212) with the mean score ranging from 3.118 to 3.850. These technologies are the major crucial components in enhancing the productivity. Hence, high level of technological need would have been expressed for these specific subject matter areas. The finding on labour saving implement is in conformity with the findings of Allan (2004) who also reported that majority of the respondents were in need of processing implements.

Eighteen technologies fell under moderate technological need category and the mean score under this category ranged from 2.384 to 3.117. The technologies were method of sett treatment with chemicals (3.116), time of harvest (3.033), identification of pests (3.016), selection of good quality setts (3.012), method of propping (2.983), maintenance of plant population (2.917), application of inorganic fertilizers (2.850), identification of diseases (2.816), time of weeding (2.683), method of planting (2.631), varieties recommended in the area (2.612), time of trashing (2.566), method of application of weedicides (2.550), preparation of spray fluid (2.533), time of irrigation (2.516), method of harvest (2.500), nutrient deficiency in sugarcane (2.416) and ETL for various pests and diseases (2.416). The finding is in line with the findings of Arul raj (2013).

Low levels of technological need was perceived by farm women against several technologies and the mean score ranged from 1.650 to 2.383. The technologies were time of detrashing (2.366), time of gap filling (2.012), time of land preparation (2.012), quantity of FYM to be applied (2.000), stubble collection (1.986), digging the corners of field (1.862), weedicides (1.866), cleaning the field boundaries (1.792), identification of weeds (1.683) method of earthing-up (1.666) and economic use of water (1.650). The farm women were aware of these technologies and were actually involved in some of these technologies. Hence, the respondents had not attributed much importance to these technologies thereby resulting with low level of technological needs. This finding is in line with the findings of Vengatesan and Santha Govind(2009).

**Conclusion:**

No matter how technically feasible recommendations may be, they cannot increase productivity unless women are involved. Certain technologies may be less easily adopted by females than male farmers because technological needs of farm women in this study have been amply analysed and the results showed that female farmers differed in their performance under varied conditions. Labour and energy saving technologies are women farmers' greatest need. In addition, they require production technologies for their commodities, constraints and objectives.

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