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Technological Needs of Dry Land Farm Women in Cotton 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 dry land farm women in cotton farming operations. Sample size of 60 dry land farm women were selected using proportionate random sampling technique. The mean score ranging from 1.746 to 2.143 indicated low level of technological needs in the major subject matter areas of weed management (2.143), post-harvest (2.082), field preparation (1.983) and irrigation management (1.746) securing ranks from VIII to XI respectively.

Keywords: Technological needs , small farm women and cotton 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 Tamil Nadu', was taken up to analyse the Technological Needs of Small Farm Women Cotton Cultivation.

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Methodology

The study was taken-up in Nagapattinam district in Tamil Nadu which comprised of maximum area under dry land farming system. A sample size of 60 dry land farm women was taken for analysing the technological needs of farm women in cotton 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 dry land farm women in cotton cultivation

The relevant data regarding the technological needs of farm women in dry land cotton cultivation is presented in Table-1.

Table I. Technological needs of dry land farm women in cotton cultivation

(n = 60)

S. No.	Technologies	Mean score	Rank order
1	Field preparation		
	(i) Stubble collection	1.826	
	(ii) Cleaning the field boundaries	1.712	
	(iii) Digging the corners of field	1.646	
	(iv) Time of land preparation	2.216	
	(v) Quantity of FYM to be applied	2.518	
	Average mean score	1.983	X
2.	Varieties		
	(i) Varieties recommended in the area	2.614	
	(ii) Characteristics of recommended varieties	3.004	
	Average mean score	2.809	VI
3	Seeds and sowing		
	(i) Removal of fuzz from seeds	2.814	
	(ii) Method of seed hardening	3.146	
	(iii) Method of seed treatment with chemicals	3.216	
	(iv) Method of seed treatment with bio-fertilizers	2.986	
	(v) Method of sowing	2.614	
	(vi) Thinning and gap filling	2.786	
	(vii) Maintenance of plant population	2.976	
	Average mean score	2.933	III
4.	Irrigation management		
	(i) Economic use of water	1.478	
	(ii) Time of irrigation	2.016	
	Average mean score	1.746	XI
5.	Inter-cultivation		
	(i) Method of earthing-up	2.732	
	(ii) Application of growth regulators	3.612	
	(iii) Pinching of terminal buds	3.014	
	Average mean score	3.119	I
6.	Weed management		
	(i) Weedicides	1.824	
	(ii) Method of application of weedicides	2.022	
	(iii) Identification of weeds	1.812	
	(iv) Time of weeding	2.914	
	Average mean score	2.143	VIII
7	Fertilizer application		
	(i) Application of inorganic fertilizers	2.516	
	(ii) Nutrient deficiency in cotton	2.712	
	(iii) Method of application	3.134	
	Average mean score	2.787	V
8.	Plant protection		
	(i) Identification of pests	3.162	
	(ii) Identification of diseases	2.912	
	(iii) ETL for various pests and diseases	2.018	
	(iv) Recommended pesticides and fungicides	3.000	
	(v) Preparation of spray fluid	2.817	
	Average mean score	2.781	VI
9.	Harvest		
	(i) Time of picking	2.762	
	(ii) Method of picking	2.615	
	Average mean score	2.688	VII
10.	Post-harvest		

	(i) Method of cleaning the kapas	**2.015**	
	(ii) Method of drying	**1.627**	
	(iii) Method of grading the kapas	**2.712**	
	(iv) Method of storage	**1.974**	
	Average mean score	**2.082**	**IX**
11	**Farm implements**		
	(i) Labour saving implements	**3.082**	
	(ii) Method of using implements	**2.915**	
	(iii) Maintenance of farm implements	**3.212**	
	Average mean score	**3.069**	**II**
	Overall mean score	**2.558**	

It is evident from the results in Table 40, that the dry land farm women expressed high level of technological needs in the major subject matter areas of inter-cultivation (3.119), farm implements (3.069), seeds and sowing (2.933), varieties (2.809), fertilizer application (2.787), plant protection (2.781) and harvest (2.688), securing ranks from 1 to VII with the overall mean score of 2.558. The mean score ranging from 1.746 to 2.143 indicated low level of technological needs in the major subject matter areas of weed management (2.143), post-harvest (2.082), field preparation (1.983) and irrigation management (1.746) securing ranks from VIII to XI respectively.

It may be seen from Table 40, that out of forty specific subject matter items, only fifteen technologies were perceived as highly needed technologies by the farm women. They were application of growth regulators (3.612), method of seed treatment with chemicals (3.216), maintenance of farm implements (3.212), identification of pests (3.162), method of seed hardening (3.146), method of fertilizer application (3.134), labour saving implements (3.082), pinching of terminal buds (3.014), characteristics of recommended varieties (3.004), recommended pesticides and fungicides (3.000), method of seed treatment with bio-fertilizers (2.986), maintenance of plant population (2.976), method of using implements (2.915), time of weeding (2.914) and identification of diseases (2.912). The mean score under high technological need category ranged from 2.902 to 3.612. Deshpande and Ali (2002) expressed that majority of the farm women needed production tools and post-harvest operation machines.

The next group of technologies which were moderately preferred by dry land farm women were preparation of spray fluid (2.817), removal of fuzz from seeds (2.814), thinning and gap filling (2.786), time of picking (2.762), method of earthing-up (2.732), nutrient deficiency in cotton (2.712), method of grading kapas (2.712), method of picking (2.615), method of sowing (2.614), varieties recommended in the area (2.614), quantity of FYM to be applied (2.518) and time of land preparation (2.216). The mean score ranged from 2.190 to 2.901.This finding is in line with the findings of Arul rai(2013). The rest of the twelve technologies wherein low level of technological needs was expressed by farm women were viz., method of application of weedicides (2.022), ETL for various pests and diseases (2.018), time of irrigation (2.016), method of cleaning the kapas (2.015), method of storage (1.974) stubble collection (1.826), weedicides (1.824). identification of weeds (1.812), cleaning the field boundaries (1.712), method of drying (1.627), digging the corners of fields (1.646) and economic use of water (1.478). Most of these technologies do not affect the production and they are commonly practised by the farm women. Another reason is that these technologies do not require much scientific knowledge and hence the farm women would have not preferred these technologies to a greater extent. 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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