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RESEARCH PAPER

Problems and the requirements of the women organic farmers of agro-climatic zones of northern Karnataka

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Abstract : Women are the major stakeholders in organic farming. Women often shoulder the increased labour to a greater degree than men. Hence, the present study is an attempt to identify the problems and requirements of the women organic farmers, the present study was conducted in the selected agro-climatic zones of northern Karnataka. The results revealed that irrespective the agro-climatic zones, women organic farmers were facing many personal, marketing and production related problems like lack of encouragement, non availability of certified seeds, less rains, time consuming certification procedure, lack of proper storage facilities and lack of consumer awareness regarding organic markets. The selected women organic farmers demanded the training on rain water harvesting, integrated farming system and role of bio fertilizers and bio pesticides in organic farming, marketing strategies and linkages, labeling and packaging, value addition to organic produces and scientific and organic methods of preservation of organic produces were on list for future action. These programmes were suggested to help the organic farm women to overcome the problems related to production and marketing, to update their knowledge with recent technologies and research.

Key Words : Organic farming, Northern agro-climatic zones, Production and marketing, Related problems

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INTRODUCTION

Organic farming is a holistic production management system which promotes and enhances the health of an agroecosystem related to biodiversity, nutrient cycle and soil biological and microbial activities (Source: Bhattacharya, 2004). The term 'organic agriculture' refers to a process that uses the methods respectful of the environment from the production stages through handling and processing. Organic production is not merely concerned with a product, but also with the whole system used to produce and deliver the product to the ultimate consumer. India has tremendous potential to grow crops organically and emerge as a major supplier of organic products in the world's organic market.

The recent growth of organic farming, a labour intensive system has turned the focus towards women. Organic farming is women oriented as they do most of the operations like cleaning the seeds for sowing, transplanting, weeding, harvesting, threshing, winnowing and seed preservation. All these are done with an admirable patience and commitment. Women are the major stakeholders in organic culture. The adoption of organic farming significantly increases labour requirements compared to conventional farming. Women often shoulder the increased labour to a greater degree than men (Eisses and Chaikam, 2002). Apart from the advantages of organic farming, women organic farmers are facing many

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personal, marketing and production related problems, which have to be focused and need solutions. In the present study an effort has been made to know the problems and the requirements of the women in organic farming with the following objectives :

- To identify the problems and requirements of technical knowledge and skills for women involved in organic farming.
- To suggest training programmes and make recommendations based on the requirements and demands of the women organic farmers.

According to Kang (2007) 'no subsidy for the organic agriculture', 'no proper standards for organic certification' and 'lack of state government's initiation to promote organic agriculture' were the complaints of the women organic farmers in Orissa. 'Lack of marketing facilities' (43.7 %) and 'non availability of premium prices' (39.5 %) were the major problems faced by the farmers to adopt organic farming in the selected villages of Madhya Pradesh (Ramesh *et al.*, 2007). According to Badodiya *et al.* (2011) 'high cost of inputs' and 'difficult methods of bio fertilizer and bio pesticides preparation' were the major problems for adoption of organic farming in Morar block of Gwalior.

MATERIAL AND METHODS

The present study was conducted in three northern agro climatic zones of Karnataka *viz.*, northern dry zone -3 (NDZ), northern transitional zone-8 (NTZ) and northern hilly zone-9 (NHZ) of Karnataka. Further, three villages *viz.*, Hirehandigol, Ammangi and Kamadheneu were selected from the selected agro-climatic zones, respectively. From each village, fifty farm women involved in organic farming were selected for collecting the required information for the study. Pre structured questionnaire with personal interview method was used to collect the required information from the sample. Co-efficient of concordance was used to analyse the rankings of the problems faced by the women organic farmers and the percentages were computed to analyse the data on the training requirements of the women in organic farming.

RESULTS AND DISCUSSION

The results of the present study are discussed as below:

Problems of the organic farming families of agro-climatic zones of northern Karnataka :

Co-efficient of concordance for the production and marketing related problems of the women organic farmers of the selected agro-climatic zones of northern Karnataka is presented in Table 1 and 2. The data indicated that in NDZ and NTZ, 'lack of encouragement' was the major problem experienced by the organic farm women and was ranked first. They ranked other problems such as 'lack of freedom to take decisions', 'lack of formal education' and 'lack of child care facilities' as second, third and fourth ranks, respectively. The above findings were found to be statistically significant at one per cent level as the co-efficient of concordance was high (0.61 and 0.60, respectively) indicating the agreement of the respondents with their response.

The organic farm women of NTZ ranked 'lack of encouragement', 'lack of freedom to take decisions', 'lack of formal education' and 'lack of child care facilities' as first, second, third and fourth, respectively. The agreement of the organic farm women regarding ranking of their personal problems was found to be not consistent.

Irrespective of the agro-climatic zones, the organic farm women ranked the personal problems *viz.*, 'lack of encouragement', 'lack of freedom to take decisions', 'lack of formal education' and 'lack of child care facilities' as first, second, third and fourth, respectively.

With respect to the technical problems of production, the organic farm women of NDZ experienced 'non availability of certified seeds' as the major problem followed by 'nonavailability of appropriate literature', 'insufficient organic manure', 'lack of practical oriented trainings at grass root level'. They ranked these problems from first to fourth, respectively. Further, they experienced the problems such as 'lack of technical knowledge' and 'difficulty in immediate control over plant diseases' and ranked them as fifth and sixth. The co-efficient of concordance value was found to be non significant indicating the variational ranking style.

In NTZ, 'lack of practical oriented trainings at grass root level', 'non-availability of appropriate literature' and 'nonavailability of certified seeds' were the major problems experienced by the organic farmers and they were ranked first, second and third, respectively. They also experienced the problems such as 'insufficient organic manure', 'difficulty in immediate control over plant diseases' and lack of technical knowledge' and were ranked as fourth, fifth and sixth, respectively. There was high agreement between the rankings of the farmers with regard to technical problems of production as the value of co-efficient of concordance (0.69) was found to be significant at one per cent level.

However, the organic farm women of NTZ experienced 'insufficient organic manure', 'non-availability of certified seeds' and 'non-availability of appropriate literature' as the technical major problems of production. They ranked them as first, second and third, respectively. Further, they ranked 'lack of technical knowledge', lack of practical oriented trainings at grass root level' and 'difficulty in immediate control over plant diseases' as fourth to and sixth. The value of co-efficient of concordance (0.66) was found to be significant. *i.e.*, there was agreement between the farmers with respect to the ranking of technical problems.

Irrespective of the agro-climatic zones, under technical problems 'non-availability of certified seeds, 'non-availability

of appropriate literature', 'insufficient organic manure', 'lack of practical oriented trainings at grass root level' 'lack of technical knowledge' and 'difficulty in immediate control over plant diseases' were ranked as first to sixth, respectively.

The major problems of production faced by the organic farm women of all three zones were 'less rains', 'irregular rains', 'labour is expensive' and labour intensive operations' and 'laborious operations'. These were ranked from first to fifth, respectively.

The organic farming families of NDZ, faced the problems like, 'time consuming procedure of organic certification', 'lack of knowledge about organic certification' and 'high cost of certification' as the major problems regarding organic certification. They ranked them from first to third. They ranked 'low education level' and 'lack of service provider in the area', as fourth and fifth.

The organic farming families of NTZ experienced the major problems viz., 'time consuming procedure of organic certification', 'lack of knowledge about organic certification' and 'lack of service provider in the area', 'high cost of certification' and 'low education level' and ranked them from first to fifth, respectively.

'Time consuming procedure of organic certification', 'lack of knowledge about organic certification', 'high cost of certification', 'lack of service provider in the area', 'high cost of certification' and 'low education level' were the major problems experienced by the NTZ organic farming families and ranked them from first to fifth, respectively.

The organic farming families of NHZ experienced the major problems like, 'time consuming procedure of organic certification', 'high cost of certification', 'lack of service provider in the area', 'lack of knowledge about organic certification' and 'low education level' and ranked them from first to fifth, respectively. The value of co-efficient of concordance (0.63) was found to be significant. *i.e.*, there was agreement between the farmers with respect to problems

Table 1 : Co-efficient of concordance for the production related problems of the organic farming families of agro-climatic zones of northern Karnataka (n=150)							
Problems	NDZ (n=50)		NTZ (n=50)		NHZ (n=50)		Combined
1100101115	Mean score	Rank	Mean score	Rank	Mean score	Rank	Rank
Personal							
Lack of freedom to take decisions	1.96	Π	2.02	II	2.38	II	II
Lack of encouragement	1.80	Ι	1.94	Ι	2.86	III	Ι
Lack of formal education	2.24	III	2.04	III	1.38	Ι	III
Lack of child care facilities	4.00	IV	4.00	IV	3.38	IV	IV
Value of co-efficient of concordance		0.61*		0.60*		0.43NS	
Technical aspects of production							
Non-availability of appropriate literature	3.04	Π	3.69	II	2.90	III	II
Lack of practical oriented trainings at grass root level	3.90	IV	2.54	Ι	4.90	V	IV
Non-availability of organic certified seeds	1.26	Ι	3.85	III	1.82	Π	Ι
Insufficient organic manure	3.88	III	5.26	IV	1.42	Ι	III
Lack of technical knowledge	4.70	V	5.66	VI	4.66	IV	V
Difficulty in immediate control over plant diseases	4.22	VI	5.14	V	5.30	VI	VI
Value of co-efficient of concordance		0.47NS		0.69*		0.66*	
Production							
Labour intensive operations	4.20	IV	4.10	IV	4.22	IV	IV
Laborious operations	4.40	V	4.80	V	4.66	V	V
Irregular rains	2.00	П	2.00	II	2.00	Π	II
Less rains	1.00	Ι	1.00	Ι	1.00	Ι	Ι
Labour is expensive	3.40	III	3.10	III	3.12	III	III
Value of co-efficient of concordance		0.75*		0.76*		0.66*	
Organic certification							
Lack of knowledge about organic certification	2.32	П	2.02	II	4.00	IV	II
Low education level	3.44	IV	4.40	V	5.00	V	V
High cost of certification	2.64	III	3.40	IV	1.92	II	III
Time consuming procedure	2.20	Ι	1.98	Ι	1.64	Ι	Ι
Lack of service provider in the area	4.40	V	3.20	III	2.44	III	IV
Value of co-efficient of concordance		0.32NS		0.41NS		0.63*	0.45NS

* indicate significance of values at P=0.05

NS : Non-significant

regarding organic certification.

Irrespective of the agro-climatic zones, the organic farming families faced major problems like 'time consuming procedure of organic certification', 'lack of knowledge about organic certification', 'high cost of certification', 'lack of service provider in the area' and 'low education level' and ranked them from first to fifth, respectively.

Further, it is noticed from the data presented in the Table 2 that, 'limited government support', 'lack of skills to market organic products' were the major technical problems of marketing experienced by the organic families of NDZ. They ranked them as first and second, respectively. Further, they faced the problems like, 'lack of proper storage facilities', 'lack of proper market', 'lack of market knowledge' and ranked them from fourth to sixth, respectively. The value of co-efficient of concordance (0.67) was found to be significant.

However, the organic farming families of NTZ-8 experienced the major problems *viz.*, 'lack of proper storage facilities', 'lack of proper market linkages', 'lack of market knowledge', 'lack of skills to market organic products', 'non-availability of proper market', and 'limited government support', 'non-availability of proper market' and ranked them from first to sixth, respectively. The value of co-efficient of concordance (0.78) was found to be significant.

It is further noticed from the data that the organic farming families of NHZ experienced the major problems *viz.*, 'limited government support', 'lack of proper storage facilities' as the major problems and ranked them I and II, respectively. Further, they ranked the other problems like, 'lack of market knowledge', 'non-availability of proper market', 'lack of proper market linkages', 'lack of skills to market organic products' as III, IV, V and VI ranks, respectively. The value of co-efficient of concordance (0.63) was found to be significant indicating

Table 2 : Co-efficient of concordance for the marketi Karnataka	ng related	l problems	of the org	anic farming	families of	agro-climatic	zones of northern (n=150)
Technical aspects of marketing	NDZ	(n=50)	NTZ	(n=50)	NHZ (n=50)		Combined
Lack of skills to market organic farming products	3.30	II	4.67	IV	5.56	VI	IV
Lack of proper market linkages	4.30	IV	3.90	Π	4.94	V	III
Non-availability of proper market	4.60	V	5.64	VI	4.50	IV	V
Lack of market knowledge	5.00	VI	4.80	III	3.28	III	IV
Lack of proper storage facilities	3.80	III	1.99	Ι	2.72	II	Ι
Limited government support	1.00	Ι	4.98	V	1.00	Ι	II
Value of co-efficient of concordance		0.67*		0.78*		0.63*	
Marketing							
No/lesser consumer demand for organic produce	3.89	IV	3.18	IV	3.47	IV	IV
Limited market access	2.31	III	2.67	III	2.98	III	III
Limited market size	2.00	II	2.25	II	2.37	II	II
Lack of consumer awareness regarding organic markets	1.80	Ι	1.9	Ι	1.18	Ι	Ι
Value of co-efficient of concordance	-	0.61*		0.68*		0.66*	
* indicate significance of values at P=0.05	NS: Non-significant						

Table 3 : Suggested training programmes to the organic farm women based on their needs						
Training programme	NDZ (n=50)	NTZ (n=50)	NHZ (n=50)	Total (n=150)		
Accreditation and certification of organic farming	-	50(100)	-	50 (33.333)		
Dairy	-	20 (40.00)	_	20 (13.33)		
Rain water harvesting	50 (100)	50 (100)	50 (100)	150 (100)		
Integrated farming system	50 (100)	50 (100)	50 (100)	150 (100)		
Precision farming	12 (24.00)	13 (26.00)	-	25 (16.66)		
Bio fertilizers and bio pesticides utilization	50 (100)	50 (100)	50 (100)	150 (100)		
Marketing strategies and linkages	50 (100)	50 (100)	50 (100)	150 (100)		
Labeling and packaging	50 (100)	50 (100)	50 (100)	150 (100)		
Technology based value addition to organic produces	50 (100)	50 (100)	50 (100)	150 (100)		
Scientific and latest methods of preservation of organic produces	50 (100)	50 (100)	50 (100)	150 (100)		
Drudgery reducing farm implements	26 (52.00)	12 (24.00)	10 (20.00)	48 (32.00)		
Importance of agni homa in agriculture	03 (6.00)	08 (16.00)	12 (24.00)	23 (15.33)		
Cow horn manure	03 (6.00)	01 (2.00)		04 (2.66)		
Figures in the parenthesis indicate percentage						

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high agreement between the organic farming respondents' opinion.

Further, the data revealed that 'lack of consumer awareness regarding organic markets', 'limited market size', 'limited market access' and 'no/lesser consumer demand for organic produce' were the market related problems of the organic farmers of all the selected zones. They were ranked from I to IV, respectively and the co-efficient of concordance value of all three zones was found to be statistically significant indicating high agreement between the farmers' opinion.

Suggested training programmes based on felt needs of women in organic farming :

Based on the needs and requirements of the organic farm women, training programmes suggested for the organic farm women were listed and presented in the Table 3. Feedback data on need based training for the organic farm women of the selected zones disclosed that cent per cent of the selected women organic farmers demanded the training on rain water harvesting, integrated farming system and role of bio fertilizers and bio pesticides in organic farming, marketing strategies and linkages, labeling and packaging, value addition to organic produces and scientific and organic methods of preservation of organic produces were on list for future action. These programmes were suggested to help the organic farm women to overcome the problems related to production and marketing, to update their knowledge with recent technologies and research. Further, considering their interest, enthusiasm and empowerment with knowledge training programmes on precision farming, importance of agni homa in agriculture and cow horn manure were also suggested. The following recommendations were made based on the requirements and demands of the organic farm women.

- Practical oriented training at grass root level exclusively for farm women have to be arranged.
- Special insurance scheme for organic farms that reduces the risk of farmers in case of failure of crops should be implemented.
- Establishment of separate marketing channel for organic products.
- Establishment of organic co-operatives to facilitate group dynamism.
- The government policies and regulations should be in support of organic farmers to overcome the constraints they face along the path of conversion to organic farming.
- It is essential to formulate package of practices of

organic farming methods in local language.

- Extension agencies operating in the area should concentrate their efforts to make available different inputs needed for the organic farming package of practices.
- Mass media can play an important role in dissemination of awareness regarding organic markets.
- Subsidy on irrigation facility has to be given to farmers especially to organic farmers.
- Certified organic seeds have to be made available in local raita samparka kendras during sowing season.
- Establishment of cold storage facilities for grain storage at grass root level.

Conclusion :

Thus, it could be summarized from the data that lack of encouragement, non-availability of certified seeds, less rains, time consuming certification procedure, lack of proper storage facilities and lack of consumer awareness regarding organic markets were the most burning problems of the women organic farmers of the selected agro-climatic zones of northern Karnataka as per the ranking of the sample. Extension agencies operating in the area should concentrate their efforts to make available different inputs needed for the organic farming package of practices and in creating consumer awareness regarding organic markets. The policies and regulations should be in support of organic farmers to overcome the constraints they face along the path of conversion to organic farming and after adoption of organic farming.

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