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Opportunities and constraints faced by farmers on organic farming

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Abstract
Organic farming or organic agriculture is a system of agricultural design and management that creates an ecosystem of farm production without the usage of synthetic external input applications as chemical fertilizers, chemical pesticides and Genetically Modified Organisms. An Ex-post facto research design was employed for this present study. This research was conducted in Coimbatore district of Tamil Nadu. A total of 180 respondents were selected into two categories as 90 organic and 90 non-organic farmers. Problem Confrontation Index (PCI) was employed to study the constraints faced by farmers towards organic farming. Majority of the organic farmers had medium level of perception towards organic farming. Constraints were categorized as physical, psychological, social, institutional, economical constraints. They are mainly facing unaware of govt. policies and these should be sort out by the suggestive measure that more number of training and awareness campaigns should be taken by the central and state department of agriculture regarding cultivation to marketing of organic products for better price. This paper deals with what are all the opportunities perceived and constraints faced by both organic and non-organic farmers, what are all the suggestive measures that will improve their farming in detail.

Keywords: Organic farmers, non-organic farmers, opportunities, constraints, PCI

1. Introduction

Organic farming or organic agriculture is a system of agricultural design and management that creates an ecosystem of farm production without the usage of synthetic external input applications as chemical fertilizers, chemical pesticides and Genetically Modified Organisms (GMO) [2]. Organic farming is a developing and practicing in 187 countries and almost 72.3 million ha were managed by at least 3.1M farmers and cultivable land area under organic farming more than 38.09 lakh ha. Countries with the highest number of producers are India (13,66,226) and Uganda (2,10,353) [1]. Tamil Nadu occupies 14th position with 31,629 hectares of organic agriculture land. This includes 14,086 ha of organic certified area and 17,542 ha under conversion. Dharmapuri and Krishnagiri occupy first and second position in terms of total area. Tamil Nadu shares 11th position in organic production with 24,826 MT which includes farm and wild produce. It had exported 4,223 MT of organic products which fetched Rs.108 crore in the year 2020 -2021 (TN Organic farming Policy, 2023). Organic agriculture emerged as a reaction to the industrialization of farming and resulting environmental and social issues. Organic farming is being costly because of need of large quantities of organic manures, and it has an ecological effect on nearby ecosystem. On the other hand, natural farming is an extremely cost-effective approach, completely integrating with the local biological diversity [8]. Organic farming integrates tradition; innovation and science to benefit the shared environment and encourage fair relationships, ensuring good quality of life for all are involved. Organic farming, the innovative farming system, can leverage and enhance the traditional knowledge and practices of local and indigenous communities. The overall benefits of organic agriculture compared to conventional methods remains contentious. Introducing new equipment and knowledge exchange between conventional farmers following conservation tillage and organic farmers could enhance the adoption of conservation tillage in organic agriculture [10]. Small farmers in hill regions encounter various challenges in practicing organic farming. There is lot of opportunities for rural people for employment and improving the livelihood security [9]. The major challenge encountered by the small farm holders were economic and marketing including initial low prices for the organic produce, lack of specialized markets, initial loss of yield and high cost of transportation. Addressing these constraints requires appropriate interventions to ensure the success of organic farming practices [3]. Other constraints are lack of knowledge about prevalent prices, no separate place in regulated markets, certification agencies at distant places, lack of marketing news, need for certification to sale organic products, disagreement of family members, price is

not remunerative, lack of knowledge about benefits of organic among consumers[4].This paper deals with opportunities and constraints faced by both organic and non-organic farmers, what are all the suggestive measures that are recommended by those farmers to mitigate the problems and do better farming.

2. Research Methodology

An Ex-post facto research design was employed for this present study. This research was conducted in Coimbatore district of Tamil Nadu. The respondents were selected into two categories as organic and non-organic farmers. The list of organic farmers in Coimbatore district was obtained from the data provided by the officials of Tamil Nadu Organic Certification Department (TNOCD). Sample size of 180 farmers (90 Organic & 90 Non-organic Farmers) was selected as respondents for the study. Proportionate random sampling method was adopted to select the respondents. The data was collected with the use of a well-structured and pre-tested questionnaire. The farmers were contacted at their homes or farm as per their convenience. The opportunities were studied on the level of perception towards organic farming and categorized into three levels namely low, medium and high. The constraints were analyzed by using PCI [6].Problem Confrontation Index (PCI) was employed to study the constraints faced by farmers towards organic farming in Coimbatore district of Tamil Nadu.

The formula used to calculate PCI,

$$(PCI) = Ph \times 3 + Pm \times 2 + Pl \times 1 + Pn \times 0,$$

Where, Ph = total number of respondents that expressed "high" problems;
Pm = total number of respondents expressed "medium" problem;
Pl = total number of respondents that expressed "low" problems;
Pn = total number of respondents that expressed "not at all" problems

3. Findings and Discussion

The data were collected by using well structured interview schedule, the responses were analyzed and results are presented in the following tables.

Table 1: Organic Farmers perception towards opportunities

(n=90)

S. No	Category	Per Cent
1.	Low	17.78
2.	Medium	34.44
3.	High	47.78

It is revealed from Table 1 majority of the organic farmers (47.78%) had high level of perception towards organic farming. This is because that the farmers have good contact with the extension officials and attended many trainings related to organic farming organized by Agricultural Universities and other organizations. Respondents were interested in organic farming for their satisfaction was the main reason for following organic cultivation and want to prefer chemical-free vegetables for their culinary purpose.

Table 2: Non-Organic Farmers perception towards opportunities

(n=90)

S. No	Category	Per Cent
1.	Low	20.00
2.	Medium	51.11
3.	High	28.89

It is revealed from Table 2 half above the non-organic farmers (51.11%) had medium level of perception towards organic farming practices. This is because that even though the non organic farmers are not practicing but they are willing to do organic farming in future. The respondents are mainly interested to do organic farming but due to their time constraint and proper training needs are the major factors that play a major role for not practicing organic cultivation.

It is revealed from the Table 3 that majority of the organic farmers faced major constraint as lack of organic input (PCI value: 132) in the category of physical constraints followed by Poor knowledge and methods in psychological constraints category, Unaware of Govt. Policies in social constraints, complicated organic certification process in institutional constraints and low market price in economical constraints were considered as the topmost constraint in each category respectively. This is because most of the organic farmers have practicing organic farming but they need the improvised technologies and capacity building to succeed in future.

It is revealed from the Table 4 that majority of the non-organic farmers faced major constraint as Lack of access to market (PCI value:222) in the category of physical constraints followed by Lack of Awareness on benefits of organic farming in psychological constraints category, Unaware of Govt. Policies in social constraints, Complicated organic certification process in institutional constraints and low market price in economical constraints were considered as the topmost constraint in each category respectively. These are the reasons that the farmers are not able to do organic farming. The suggestions that will helps to satisfy the need of farmers and the measures were given and the responses were collected and tabulated.

It is evidenced from the Table 5 all non-organic farmers suggestion is providing regular training related to organic farming followed by nearly ninety per cent of the respondents provides the suggestive measure as providing subsidies and other financial support from the government and other organizations, this will improve the organic farmers for better cultivation and marketing and also attract the non-organic farmers to do organic farming for better living.

Table 3: Constraints faced by Organic farmers

(n=90)

S. No	Constraints	Level of Extent				PCI	Rank
		Not at all	Low	Medium	High		
		F	F	F	F		
I.	**Physical Constraints**						
1	Lack of organic inputs	12	30	42	6	**132**	**I**
2	Lack of seasonal labors	55	14	12	9	**77**	**II**
3	Duration for land preparation is more	51	18	15	6	**66**	**III**
4	Lack of access to market	63	18	9	0	**45**	**IV**
5	Lack of machineries	69	9	12	0	**33**	**V**
II.	**Psychological constraints**						
1	Poor knowledge and methods	48	15	21	6	126	I
2	Lack of confidence in organic farming	57	24	9	0	51	II
3	Mental fear for losing savings	72	6	9	3	45	III
4	Lack of Awareness on benefits of organic farming	72	15	3	0	21	IV
5	Lack of interest to continue organic farming	81	6	3	0	12	V
III.	**Social Constraints**						
1	Unaware of Govt. Policies	3	9	15	63	228	I
2	Lack of trainings	30	18	15	27	129	II
3	Lack of access to banking institutions	39	15	15	21	108	III
4	Lack of contact with other farmers	33	21	27	9	102	IV
5	Retailers prefer conventionally grown products	36	18	27	9	99	V
IV.	**Institutional Constraints**						
1	Complicated organic certification process	0	12	24	54	222	I
2	Lack of contact with SAU / KVK Scientist	6	12	24	48	204	II
3	Lack of contact with Agriculture departments	12	9	18	51	198	III
V.	**Economical Constraints**						
1	Low market price	27	33	21	9	102	I
2	Drop in regular farm income	52	15	18	15	96	II
3	Low Production	48	15	9	18	87	III
4	Consumers willing to pay for organic product is low	57	12	15	6	60	IV

Table 4: Constraints faced by Non-organic farmers

(n=90)

S. No	Constraints	Level of Extent				PCI	Rank
		Not at all	Low	Medium	High		
		F	F	F	F		
I.	**Physical Constraints**						
1	Lack of access to market	0	9	12	63	**222**	**I**
2	Lack of seasonal labors	12	15	12	51	**204**	**II**
3	Lack of organic inputs	15	12	18	45	**183**	**III**
4	Duration for land preparation is more	9	24	18	36	**168**	**IV**
5	Lack of machineries	42	15	12	21	**102**	**V**
II.	**Psychological constraints**						
1	Poor knowledge and methods	9	12	21	42	180	I
2	Lack of Awareness on benefits of organic farming	15	18	21	36	168	II
3	Lack of interest in organic farming	27	21	9	33	138	III
4	Lack of confidence in organic farming	30	18	9	33	135	IV
5	Mental fear for losing savings	42	30	12	6	72	V
III.	**Social Constraints**						
1	Unaware of Govt. Policies	9	15	24	42	189	I
2	Retailers prefer conventionally grown products	12	12	36	27	165	II
3	Lack of access to banking institutions	21	24	15	30	144	III
4	Lack of trainings	33	9	18	30	135	IV
5	Lack of contact with other farmers	27	24	21	21	129	V
IV.	**Institutional Constraints**						
1	Complicated organic certification process	0	9	18	63	234	I
2	Lack of contact with SAU / KVK Scientist	12	18	24	36	174	II
3	Lack of contact with Agriculture departments	18	9	27	36	171	III
V.	**Economical Constraints**						
1	Low market price	18	12	36	21	147	I
2	Consumers willing to pay for organic product is low	27	12	21	30	144	II
3	Low Production	27	18	33	12	120	III
4	Drop in regular farm income	54	9	6	21	84	IV

Table 5: Suggestive measures to overcome these constraints

S.No	Suggestions	No. of Respondents			
		Organic	Per cent	Non-Organic	Per cent
1.	Establishing appropriate and strong extension services	51	56.67	39	43.33
2.	Creating a strong linkage between producer and consumer	36	40.00	48	53.33
3.	Minimizing the cost of certification and easily approachable to farmer	69	76.67	75	83.33
4.	Ensuring the organic inputs available like bio-fertilizer and bio-pesticide to small scale farmers	57	63.33	84	93.33
5.	Establishing the domestic market	63	70.00	69	76.67
6.	Providing subsidies and other financial support	87	96.67	81	90.00
7.	Enhancing infrastructural facilities like cold storage and transportation	78	86.67	63	70.00
8.	Providing regular training related to organic farming	81	90.00	90	100.00

3. Summary and Conclusion

Organic and Non-organic farmers having the medium level of perception towards organic farming cultivation and they all are facing similar constraints in their cultivation to marketing aspects of farming. They are mainly facing unaware of govt. policies and these should be sort out by the suggestive measure that more number of training and awareness campaigns should be taken by the central and state department of agriculture regarding cultivation to marketing of organic products for better price. Even though, organic farmers are producing the crops in chemical free, but some of them will have little constraint as low market price, since they use their organic produce for their own consumption. Non-organic farmers are willing to do organic farming but they have constraints as how to sell their produce to buyers because many of the buyers preferred conventional produce. Unaware of marketing and fear of losing are the main reason that conventional farmers are not doing organic farming. This will be easily sorted by the following suggestive measure like establishing appropriate and strong extension services, creating a strong linkage between producer and consumer, establishing the domestic market, providing subsidies and other financial support, providing regular training related to organic farming etc.

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