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RESEARCH ARTICLE

A STUDY ON CONSTRAINTS AND SUGGESTIONS AS EXPRESSED BY RESPONDENTS IN ORGANIC RED GRAM CULTIVATION IN DRYLAND AREAS OF KARNATAKA

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ABSTRACT

Pulse is largely produced crop in India accounting to a share of 34.44 per cent of the total pulse crops produced that makes it the leading gram producing country in the world. The present study was confined to the constraints and suggestions as expressed by respondents in organic red gram growers of Gulbarga district. In this study the major components were taken as technological constraints, socio-economic constraints, supply and marketing constraints, transfer of technology constraints and situational constraints. Among the technological constraints, majority (79.76%) of the farmers perceived the constraint of complex and costly certification process for organic red gram cultivation and hence it was ranked I. In case of socio-economic constraints, majority of the respondents (83.33%) had expressed the constraint on increased cost of cultivation and hence it was ranked I and in transfer of technology constraints, majority (85.00%) of farmers faced t of lack of regular visits by extension workers to give guidance to farmers on organic red gram farming and hence it was ranked I. and in case of situational constraints, majority (70.83%) of farmers faced constraint on transportation of organic manure is costly and laborious and hence it was ranked I.

Key words: Organic farming, Red gram, Cost of cultivation, Organic manure, Awareness, Bio pesticides.

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INTRODUCTION

The side-effects of the modern agricultural chemicals and machines raise serious problem about the overall benefits of the new technology (Oelhaf, 1978). Chemical fertilisers and pesticides pollute the air and water. Agricultural chemicals, including fertilizers and pesticides leave residue in food that may cause ill effect on the environment. Soil and energy resources are being depleted. The un-sustainability of modern agricultural practices through its devious use had led farming communities world over to look for alternatives. The important one among all these alternatives call for a back to nature policy, a return to traditional, eco-friendly practices. Organic farming is one among them. Organic agriculture is a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity. It emphasizes the use of management practices in preference to the use of on-farm inputs, taking into account that regional conditions require locally adapted systems. This is accomplished by using wherever possible, agronomic, biological and mechanical methods, as opposed to using synthetic materials, to fulfil any specific function within the system' (FAO 1999).

It is a method of farming which excludes the use of compound chemicals such as chemical fertilizers, pesticides and herbicides. Instead of that natural resources such as organic matters, mineral and microbes are used. Organic farming systems rely on large scale application of animal waste or FYM, compost, crop rotations, crop residues, green manuring, vermicompost, bio fertilizers, bio-pesticides and biological control of pest and diseases. In India the use of organic manures in subsistence farming is an age old practice. Organic manures improve physical, chemical and biological properties of the soil. The study by Balachandran (2004) reported the non-availability of organic plant protection formulations and adequate quality organic manure which forced farmers to choose the chemical option, much to their dislike. Therefore constraints faced by the farmers to follow the organic farming need to be identified and suggestions to overcome the constraints as expressed by the organic red gram growers need to be probed.

MATERIALS AND METHODS

The study was conducted in Gulbarga district of Karnataka involving 120 organic red gram growers. This district was purposively selected as it ranks first in area and production of red gram. There are ten (10) mandals in Gulbarga district, among these, three mandals were selected randomly for the

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study. From each mandal two (02) villages i.e. a total of six (06) villages were selected randomly. From the prepared list, 20 farmers were selected by simple random sampling procedure from each village thus the total sample for the study constituted 120 farmers. The results were analyzed with the help of different statistical tools such as frequency, percentage and rankings

RESULTS AND DISCUSSION

Constraints expressed by the respondents in organic red gram farming

Constraints of the organic red gram farming by the respondents were operationally defined as constraints faced by the respondents in organic red gram cultivation in their field. The respondents were asked to express the Constraints faced by them in organic red gram farming and the problems as stated by them were recorded. Frequency and percentage were calculated and ranking was given in the order of magnitude. The respondents should invariably follow the certification procedures. Hence, they expressed that the certification process involved in organic red gram cultivation is very complex and costlier. The continuous realization of low yields in organic red gram farming forced them to express the constraint as lack of community approach. Seldom were the prices of organic red gram unsteadiness and no price stability in the local market, there by the farmers were forced to go for distressed sales. The respondents expressed that existing market system is very weak. The farmers elicited one of the constraints as the minimal usage of various channels of communication to disseminate the information on organic red gram farming. This might be due to giving information through wrong channel to the targeted audience. High transportation cost of manure was one of the major constraint expressed. The farmers could not able to import enough organic inputs due to high cost of transportation charge.

Technological constraints

The constraints elicited by the respondents were shown in the above table 1, majority (79.76%) of the farmers expressed the problem of complex and costly certification process for organic red gram cultivation and hence it was ranked I, among the technological constraints, followed by (70.83%) of farmers expressed that, lack of recommended low cost technologies for organic red gram farming was ranked as II, followed by 54.16 per cent of the respondents had constraints on lack of skill regarding the preparation and usage of organic inputs was assigned rank III. The farmers also expressed problems like lack of knowledge on identifying the harmful and beneficial insects and to conserve natural predators (54.16%) was assigned rank IV, lack of recommended low cost technologies for organic red gram farming (41.66%) was assigned as rank V. The similar constraints have reported by Saxena and Singh (2000), Buck *et al.* (2001) and Gorade *et al.* (2008)

Socio-economic constraints

Among the socio-economic constraints, majority of the respondents (83.33%) had expressed the constraint on increased cost of cultivation and hence it was ranked I, followed by (75.00%) of farmers expressed that low yield due to organic farming practices was assigned rank II. The farmers also expressed problems like lack of community approach

(62.50%) was assigned rank III, and lack of support from the family members (41.66%) was assigned as rank IV.

Supply and marketing constraints

With regard to the supply and marketing constraints, majority (81.66%) of the respondents were faced constraint of the market intelligence on organic red gram farming is weak among the farmers was ranked as I, followed by (69.16%) of farmers that non availability of organic inputs in critical time (Bio-pesticides, Bio-agents and Pheromone traps) and hence it was assigned rank II. The farmers also expressed problems like strong fluctuation of prices in the market on organic red gram produce (62.50%) this was ranked as III, and lack of warehouses, to store the red gram produced under organic farming (45.83%) was ranked as IV. This study is in line with Jain and Bhattacharya (2000) and Sivaraman (2007).

Transfer of technology constraints

Among the transfer of technology constraints majority (85.00%) of farmers faced constraint of lack of regular visits by extension workers to give guidance to farmers on organic red gram farming and hence it was ranked I. The farmers also expressed problems like minimal usage of various forms/ channels of communication to disseminate the information on organic red gram farming (75.00%) were ranked as II.

Situational constraints

With regard to the situational constraints, majority (70.83%) of farmers faced constraint on transportation of organic manure is costly and laborious and hence it was ranked I, followed by (66.66%) of farmers perceived non- availability of biologically treated seed in the market was assigned rank II. The similar constraints have reported by Ploomi *et al.* (2006).

Suggestions expressed by the respondents in organic red gram farming

Suggestions by the respondents were operationally defined as the solutions given by them for the improvement in knowledge and adoption of organic farming practices effectively. Respondents were requested to give their suggestions in order to improve their existing knowledge and adoption of organic cultivation practices, measures to overcome the existing problems faced by them in production and marketing. Frequencies and percentages were calculated and ranking was given in the order of magnitude.

Technological suggestions

The major technological suggestions expressed by the respondents on organic farming (table 2) were more awareness may be created among the farmers on skilful handling of various methods of biological pest control under organic farming and inputs like FYM, seed treatment, compost etc., (79.16%) was ranked as I, followed by the surveillance and diagnosis mechanism should be imparted to the farmers for identifying the pest ETL (70.83%) and hence it was ranked as II, followed by, to provide more on-farm demonstrations regarding input preparation to the farmers by extension agents (66.66%) it was ranked as III. Produce may be certified by formation of groups (65.83%) and hence it was ranked as IV, followed by the importance and the method of maintaining the

Table 1. Constraints expressed by the respondents in organic red gram farming

Sl. No.	Constraints in organic red gram farming expressed by the organic red gram farmers	F	%	Rank
A. Technological constraints				
	Lack of methods for easy detection of the pest economic threshold levels	40	33.33	V
	Lack of skill regarding the preparation and usage of organic inputs	65	54.16	III
	Complex and costly certification process	95	79.76	I
	Lack of knowledge on identifying the harmful and beneficial insects and to conserve natural predators	50	41.66	IV
	Lack of recommended low cost technologies for organic red gram farming.	85	70.83	II
B. Socio - economic problems				
1.	Low yield	90	75.00	II
2.	Increased cost of cultivation	100	83.33	I
3.	Lack of community approach	57	62.50	III
4.	Lack of support from the family members.	50	41.66	IV
C. Supply and Marketing problems				
1.	Non availability of organic inputs in critical time (Bio-pesticides, Bio-agents and Pheromone Traps)	83	69.16	II
2.	The market intelligence on organic red gram farming is weak among the farmers.	98	81.66	I
3.	Lack of warehouses, to store the red gram produced under organic farming.	55	45.83	IV
4.	Strong fluctuation of prices in the market on organic red gram produce.	75	62.50	III
D. Transfer of technology problems				
1.	Minimal usage of various forms/ channels of communication to disseminate the information on organic red gram farming	90	75	II
2.	Lack of regular visits by extension workers to give guidance to farmers on organic red gram farming	105	87.50	I
E. Situational constraints				
1.	Transportation of organic manure is costly and laborious	85	70.83	I
2.	Small herd size	60	50	III
3.	Non - availability of biologically treated/organically produced seeds in the market	80	66.66	II

Table 2. Suggestions expressed by the respondents on organic red gram farming (n=120)

Sl. No.	Suggestions expressed by the respondents for promotion of organic farming in red gram crop	F	%	Rank
A. Technological suggestions				
1.	The surveillance and diagnosis mechanism should be imparted to the farmers for identifying the pest ETL	85	70.83	II
2.	More awareness may be created among the farmers on skilful handling of various methods of biological pest control under organic farming and seed treatment.	95	79.16	I
3.	Produce may be certified by formation of groups	79	65.83	IV
4.	The importance and the method of maintaining the records and scientific procedure of converting the land for organic farming may be imparted to the farmers	50	41.66	V
5.	To provide more on-farm demonstrations regarding input preparation to the farmers by extension agents	80	66.66	III
B. Socio -economic suggestions				
1.	High price may be fixed for organic red gram produce to differentiate between organic and conventional farmers profitability	105	87.50	I
2.	The key organic inputs like compost, cakes, and manures should be available in large quantities at low cost in time at subsidies from Govt/ NGOs	90	75.00	III
3.	Formation of organic red gram grower groups should be initiated.	98	81.66	II
4.	Support from the family members	70	58.33	IV
C. Supply and Marketing suggestions				
1.	Bio pesticides and bio fertilisers, pheromone traps and light traps should be available in time for effective management of pest population	100	83.33	I
2.	The data on market intelligence of organic red gram marketing should be strengthened and made availability to the farmers	98	81.66	II
3.	Govt. should take initiatives to develop separate warehousing facilities for organic produces	95	79.16	III
4.	The uncertainty of prices of red gram produce should be minimised to build the confidence among the farmers	95	79.16	III
D. Transfer of technology suggestions				
1.	More number of informative programmes specific to organic red gram production should be broadcasted through different mass media channels	98	81.66	II
2.	There should be more number of field visits, demonstrations etc by extension workers as well as experts in organic farming	100	83.33	I
E. Suggestions for situational constraints				
	The farmers should be trained on on-farm production of different organic inputs.	90	75.00	II
	Govt/NGOs. should provide sufficient quantity of organic inputs at proper place and in time	98	81.66	I
	The farmers should be trained on biological seed treatment methods	90	75.00	II

records and scientific procedure of converting the land for organic farming may be imparted to the farmers (41.66%). This study is in line with Pramila (2004)

Socio-economic suggestions

The major socio-economic suggestions were high price may be fixed for organic red gram produce to differentiate between organic and conventional farmers profitability (87.50%) and it was ranked as I, followed by formation of organic red gram grower groups should be initiated (81.66%) and the rank was II, and majority of the respondents were suggested the key

organic inputs like compost, cakes, and manures should be available in large quantities at low cost in time (75.00%) it was ranked as III, and support from the family members (58.33%) and it was ranked as IV. The similar suggestions have reported by Yogesh *et al.* (2006) and Savitha (2009)

Supply and marketing suggestions

Under supply and marketing suggestions the farmers expressed that the bio pesticides and bio fertilisers, pheromone traps and light traps should be available in time for effective management of pest population (83.33%) and it was ranked as

I, followed by the data on market intelligence of organic red gram marketing should be strengthened (81.66%) was ranked as II, and the uncertainty of prices of red gram produce should be minimised to build the confidence among the farmers (79.16%) and Govt. should take initiatives to develop separate warehousing facilities for organic produces were ranked as III. This study is in line with Singh and Christman (2003) and Toralf and Annamaria (2006)

Transfer of technology suggestions

The major suggestions expressed under transfer of technology were, there should be more number of field visits, demonstrations etc., by extension workers as well as experts in organic farming (83.33%) and it was ranked as I, followed by more number of informative programmes specific to organic red gram production should be broadcasted through different mass media channels (81.66%) and it was ranked as II.

Situational constraints

The major suggestions expressed under situational constraints were Govt/NGOs should provide sufficient quantity of organic inputs at proper place and in time (81.66%) and hence it was ranked as I, followed by the farmers should be trained on biological seed treatment methods and the farmers should be trained on on-farm production of different organic inputs (75.00%) were ranked as II. The similar suggestions have reported by Trivedi (2007)

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