

Entrepreneurial behaviour and scientific orientation of organic pigeonpea growers

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ABSTRACT

Pigeonpea is an important pulse crop grown under organic practices in recent past especially in North Karnataka, The present study was conducted in Gulburga district of Karnataka State. The total sample for the study constituted 120 organic pigeonpea growers. The results revealed that majority of growers had medium level of entrepreneurial behaviour where as the individual entrepreneurial characteristics indicated that a good majority of respondents had medium level of innovativeness, achievement motivation, information seeking behaviour, leadership, scientific orientation and high decision making ability. Further the study also indicated that cent per cent of them followed manual grading, used jute bags to store the produce and none of the respondents had gone for certification of produce.

KEY WORDS : Entrepreneurship, Innovativeness, Decision making, Risk orientation, Scientific orientation and organic farming

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INTRODUCTION

India has golden history of ancient agriculture and has the credit of having contributed ancient agriculture practices to other parts of the world over the years. This has led to a number of changes at various levels of cultivation practices from sowing to harvest. Research revealed that the efficiency of fertilizers use in India is only 30-35 per cent and the rest 65.70 per cent is lost in the soil. The intensity of their use in a few regions and for few crops are causes of serious concern to human health, soil, water, environment and thus to the sustainability of agriculture production in the country.

Sustainable agriculture is a set of farming practices which can continue to maintain the farm productivity, efficiency and productivity in long run, without depleting natural resources and environment (Hegde, 2000). The organic farming systems rely on large scale application of animal waste, compost, crop rotation, crop residues, green manuring, vermi compost, biofertilizers, bio-pesticides and biological control of pest and diseases.

Pigeonpea or *Tur* or Red gram [*Cajanus cajan* (L) Mill sp.] accounts for 20% of the total output of all pulses. India accounts for 90 per cent of world output with an

area of 3.23 million hectares and production of 2.37 million tones of grains (Singhal, 2003). In Karnataka pigeonpea is grown in an area of 5.83 lakh hectares with a production of 2.57 lakh tones. It is largely grown in the northern parts of the state especially in Gulburga which is called "pulse bowl of Karnataka". In the recent past the pigeonpea grown under organic practices or organic cultivation (Anonymous, 2005). Farmers and scientists all over the world have recognized the limitations of modern agriculture. Efforts are being made to identifying alternative farming methods that are ecologically sound, viable and sustainable. In Northern Karnataka, especially in pulse grown areas, efforts are also made to evolve organic farming practices for field crops and the farmers are following their own methods of organic farming practices. There are no studies which throw light on such a shift of farmer's from inorganic farming to organic farming in pigeonpea and their entrepreneurial behaviour. Keeping this background in view, the present study was conducted with the following objectives to document the entrepreneurial behaviour of organic pigeonpea growers, to know the scientific orientation of organic pigeonpea growers and to understand post harvest operations carried

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out by respondents.

METHODOLOGY

The present study was conducted in Gulbarga district of Karnataka state. All the farmers of ten selected villages of Gulbarga and Jevargi Talukas who had grown organic pigeonpea under DBT's Bio Resource complex project during 2006-07 constituted the population for the study. From each village, list of organic pigeonpea growers were prepared with the help of Agril. Assistants and DBT project scientists of UAS Dharwad. From the list, 12 farmers were selected by simple random sampling procedure from each village thus the total sample for the study constituted 120 farmers, Based on the objectives of the study, an interview schedule was prepared with the help of experts and this was pre-tested in the non simple area, Then the data were collected from the respondents by personal interview method. The data were analyzed with the help of appropriate statistical tests.

OBSERVATIONS AND DISCUSSION

The results presented in Table 1 reveal that 51.67 per cent of the respondents had medium level of entrepreneurial behaviour with mean yield of 3.98 q/acre, while 27.50 and 20.83 per cent of organic pigeonpea growers had high and low entrepreneur behaviour with the mean yield of 4.33 q/acre and 3.41 q/acre, respectively. The possible reason for this type of results may be due to the fact that majority of farmers who were growing pigeonpea wanted shift from in organic farming to organic farming because of high cost of chemical and fertilizer and also harmful impact of these on crop and human beings. The present study gets the support from the finding of Patel *et al.* (2003) and Rao and Deepak Dec. (2003).

Individual entrepreneurial characteristics of organic pigeonpea growers:

Innovativeness:

Table 2 indicates that, nearly half of the respondents (45.00%) had medium level of innovativeness followed by 32.50 per cent and 22.50 per cent had exhibited low and high innovativeness, respectively. This may be due to

the fact that productivity of pigeonpea has been declining in the present scenario which might have motivated the farmers to adopt scientific and innovative cultivation practices to increase the production and productivity of the crop. This result is in line with the findings of Shashidhar (2003) and Suresh (2004), who found that majority of the respondents, had medium level of innovativeness. Where as Vijaykumar (2001) revealed that majority of farmers had low innovativeness.

Achievement motivation:

Table 2 reveals that pigeonpea growers had medium level achievement motivation (46.67) followed by low (36.67%) and high (16.67%) achievement motivation. Achievement motivation helps an individual to decide and complete the tasks in certain direction which in turn helps in achieving the desired results. The medium level of achievement motivation of pigeonpea growers reflected in their adoption of innovative organic practices to achieve higher economic return to obtain sustainable yield. The present finding are in inconformity with the results of studies conducted by Vijaykumar (2001) and Suresh (2004) who also revealed that majority of farmers had medium level of achievement motivation.

Decision taking ability:

Nearly half of the respondents had high decision making ability (46.67%) followed by 34.17 and 19.17 per cent of farmers belonging to medium and low decision making ability, respectively. (Table 2). In the present condition, taking decision in the farming is very difficult due to uncertainty of rains, pest and disease incidence, lack of stabilized price policy, large size of land holding of farmers and farmers in agriculture need to take calculated decision in each and every step. Similar findings were reported by Sureshkumar (1997).

Risk orientation:

Organic pigeonpea growers had low level of risk orientation 46.67%, followed by medium and high risk 29.17 and 24.17 per cent, respectively. The possible reason for this may be due to the fact that, agriculture is the only occupation of respondents they depend on farming for

Table 1 : Overall entrepreneurial behaviour of the respondents (n=120)

Category	Frequency	Percentage	Mean yield (q/acre)
Low (Mean-0.425*SD)	25	20.83	3.41
Medium (Mean±0.425*SD)	62	51.67	3.98
High (Mean+0.425*SD)	33	27.50	4.33

Mean: 38.69

SD : 6.39

Table 2 : Distribution of respondents according to their individual entrepreneurial characteristics (n=120)

Category	Frequency	Percentage	Mean score
Innovativeness			
Low (Mean-0.425*SD)	39	32.50	10.71
Medium (Mean±0.425*SD)	54	45.00	12.17
High (Mean+0.425*SD)	27	22.50	16.05
Mean		12.73	
SD		1.98	
Achievement motivation of the respondents			
Low (Mean-0.425*SD)	44	36.67	4.84
Medium (Mean±0.425*SD)	56	46.67	7.02
High (Mean+0.425*SD)	20	16.67	10.11
Mean		7.21	
SD		1.70	
Decision making ability of the respondents			
Low (Mean-0.425*SD)	23	19.17	5.69
Medium (Mean±0.425*SD)	41	34.17	7.46
High (Mean+0.425*SD)	56	46.67	10.55
Mean		7.95	
SD		2.55	
Risk orientation of the respondents			
Low (Mean-0.425*SD)	56	46.67	2.06
Medium (Mean±0.425*SD)	35	29.17	3.86
High (Mean+0.425*SD)	29	24.17	4.83
Mean		3.63	
SD		1.30	
Information seeking ability of the respondents			
Low (Mean-0.425*SD)	39	32.50	4.82
Medium (Mean±0.425*SD)	54	45.00	7.00
High (Mean+0.425*SD)	27	22.50	8.52
Mean		6.84	
SD		1.63	
Coordinating ability of the respondents			
Low (Mean-0.425*SD)	51	42.50	4.15
Medium (Mean±0.425*SD)	26	21.67	6.28
High (Mean+0.425*SD)	43	35.83	8.66
Mean		6.35	
SD		2.35	
Leadership ability of the respondents			
Low (Mean-0.425*SD)	38	31.67	4.03
Medium (Mean±0.425*SD)	55	45.83	6.9
High (Mean+0.425*SD)	27	22.50	8.92
Mean		6.73	
SD		2.50	

their livelihood and the pigeonpea is the major crop in that area, this has motivated the farmers to take low risk or calculated risk. These findings are in confirmity with the findings of Vijaykumar (2001). However, the findings are not inconfirmity with the findings of Suresh (2004).

Information seeking ability:

With regard to information seeking ability, nearly half of the (45.00%) respondents had medium level information seeking ability followed by 32.50 and 22.50 per cent of growers belonged to low and high information seeking category (Table 2). The probable reason for majority of farmers to fall in medium to low information seeking

behaviour might be due to their low level of education, low media exposure and since they have more farming experience they feel that their present knowledge is enough to carry out farm operations. The results are in line with the results of Vijaykumar (2001) but not in line with the results of Suresh (2004).

Coordinating ability:

A considerable percentage (42.50%) of respondents had low coordinating ability with mean score of 4.15 while 35.83 and 21.67 per cent of them had high and medium coordinating ability, respectively. In order to complete the required work in a stipulated time period, farmer has to harmonize and synchronize the various farm activities for better farming business.

Leadership ability:

About 45.83 of the respondents had medium leadership ability followed by 31.67 and 22.50 per cent of them had low and high leadership, respectively (Table 2) as leadership is the ability of an individual to lead the group with his personal calibre as well as with his portion in the society. The pigeonpea growers with their education experience in organic pigeonpea cultivation, had least participation in media and extension activity. The results are in line with the results of Suresh (2009) who found that majority of respondents had medium leadership ability.

Scientific orientation:

The results in the Table 3 revealed that great majority of the respondents possessed medium level of scientific orientation (69.17%) followed by low (16.67%) and high (14.17%) scientific orientation, respectively. It is nothing but the orientation of the farmers to adopt new

Table 3 : Overall scientific orientation of organic pigeonpea growers (n=120)

Category	Frequency	Percentage
Low (\bar{x} - 0.4255D)	17	14.17
Medium (\bar{x} - ± 0.425n)	83	69.17
High (\bar{x} - ± 0.4255n)	20	16.67
Total	120	100.00
Mean: 3.49		
SD : 1.11		

technologies in a scientific way. Over use of chemicals and fertilizers caused health hazards and environmental pollution. Pigeonpea being a traditional crop the farmers have adopted organic farming practices in pigeonpea cultivation to overcome above problem and to get sustained yield. These results are in line with the studies conducted

by Karpagam (2001) and Palaniswamy and Sriram (2001).

Post-harvest operations carried out:

It could be observed from Table 4 that cent per cent of pigeonpea growers did the manual grading of the produce, stored the produce in jute bags and stored the produce on the ground only. None of the respondents had certified his organically grown pigeonpea produce. The possible reason for manual grading might be simple and easy to carry out, and/or non-availability of scientific grading sieves. The jute bags are cheaper compared to cloth and polythene bags and jute bag are more durable than those bags, reason for non certification of produce might be that. There is no scope for such produce or growers may not be aware of the importance of such certification as are no studies to either support or contradict this result.

Table 4 : Post harvest operations carried out by organic pigeonpea growers (n=210)

Post harvest operation	Frequency	Percentage
Grading of produce		
Manually	120	100
By using scientific science	0.00	0.00
Type of bags used to store the produce		
Jute bags	120	100
Polythene bags	0.00	0.00
Cloth bags	0.00	0.00
Storage of produce		
On the ground	120	100
Under ground	0.00	0.00
Certification of produce	0.00	0.00
certified the produce		
Not certified the produce	120	100

Conclusion:

It could be concluded from this study that a considerable majority of farmers are shifting from inorganic farming to the organic farming practices in pigeonpea cultivation in pulse bowl district of Karnataka i.e. Gulburga. It is indicated by majority of growers had medium level of entrepreneurial behaviour followed by scientific orientation. The major indicators of entrepreneurial characteristic innovativeness, achievement motivation, decision making and information seeking ability showed that they are good entrepreneurs. Since the farmers are following the practices with variation, there is need to standardize the practice and evolve a standard package so that it will be common for all in the pulse grown area. Since cent per cent of farmers are going for manual

grading, bagging is a jute bag and stored on a floor. These is need to educate this growers the importance of using scientific seiving and certification or organic produce. Department of Agriculture and Agril. University should given training and demonstration on to the farmers to popularize these organic practices.

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