Conjoint analysis of farmers' preferences towards Pandal Vegetable Growers' Association in Tamil Nadu

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 Received: 21.6.2016/Accepted: 17.12.2016

ABSTRACT

Farmers associations are the aggregations of producers to share the scale of economies and provide service in terms of knowledge, agro-advisory, supply of input, credit, procurement, processing, marketing and distribution etc. At present there are no studies relating to the Pandal Vegetables Growers' Association in Tamil Nadu. There is need of information regarding farmers' preferences, perceptions about the association, problems faced by the farmers, services expected by the farmers for providing new services in future and further expansion of association. Conjoint analysis was used to analyze the farmers' preferences towards services of the association. With respect to type of production methods the farmers preferred the Pandal method of production followed by drip irrigation cum fertigation method. Most of the farmers did not prefer the mulching method in production. Conjoint analysis estimation results for the farm inputs attribute indicated that farmers preferred the farm input information from the association.

Keywords: Conjoint analysis; Pandal; vegetables; preferences; service

INTRODUCTION

Farmers' associations concept is one of the options available for the farmers to get organized themselves to move up in the value chain and have business ownership. Farmers' associations are the aggregations of producers to share the scale of economies and provide service in terms of knowledge, agro-advisory, supply of input, credit, procurement, processing, marketing, distribution etc. Such associations amplify the political voice of shareholders, reduce the input, transaction and transport costs, provide platform for sharing information, coordination of common activities and involve in collective decision making.

In Tamil Nadu they are registered under Tamil Nadu Societies Registrations Act, 1975. They are expected to provide access to risk-bearing capital, manage risk through product diversification, set market standards and provide marketing conditions like removing intermediaries, practicing new innovations and provide economic democracy at grossroot level.

Based on the above aspect the farmers organize themselves and start associations for their own effort to fulfill their needs and wants like mitigate the production and marketing problems, remove the intermediaries, reduce transportation costs and increase productivity by sharing technologies and information. At present there are no studies relating to the Pandal Vegetable Growers' Association in Tamil Nadu. There is need to have information regarding farmers' preferences, perceptions about the association, problems faced by the farmers, services expected by the farmers for providing new services in future and further expansion of association. Only then the association can fulfill the expectations and resolve the problems faced by the farmers. This study was conducted to analyze the farmers' preferences and

perceptions towards the association, their expectations and the problems faced by them.

Earlier Ara (2003) conducted a conjoint analysis to determine consumers' preferences of multiple attributes of organic rice. Health risk was the primary concern. Consumers revealed organic certification and improvement of the farm environment to be the second most important factor. Tano et al (2003) estimated the preferences of farmers for cattle traits in southern Burkina Faso using conjoint analysis, a survey-based system for measuring preferences for multiple-attribute goods. van der Pol and Ryan (1996) suggested that the conjoint analysis could successfully be used to establish consumer preferences for alternative food products that are commercially feasible.

METHODOLOGY

Coimbatore district in Tami Nadu was purposefully selected for the study. In Coimbatore district, Anamalai and Madukkarai blocks were selected based on the maximum area and in each block three villages were selected based on the maximum number of farmers cultivating Pandal vegetables. The villages selected for the study were Odayakulam, Sethumadai and Kaliyapuram in Anamalai and Mavuthampathi, Pichanur and Thirumalayampalayam in Madukkarai block. Almost all Pandal vegetable growers in the selected villages were members of Covai Pandal Vegetable Growers' Association. From the list of members of Covai Pandal Vegetable Growers' Association in each selected village 20 farmers were selected by following simple random sampling method. Thus the total sample size was 120. Primary data were collected from the selected member farmers using a pre-tested interview schedule developed for the present study. Data on area, farmers' perceptions, preferences and expectations regarding the Covai Pandal Vegetables Growers' Association were collected.

RESULTS and DISCUSION

Services rendered by the Pandal Vegetable Growers' Association

The services provided by the association were ranked by the sample farmers (Table 1). The price related information from the association (mean score 72.92, Rank I) was the major service from the association. The wholesale price information of the vegetables in various markets in Kerala, Coimbatore and Oddanchathiram was provided to the farmers through mobile phones and on the farmers' request. Input related information (mean score 60.98, Rank II) related to new farming inputs like pesticides, fertilizers, farming equipments etc was also provided to the farmers. The subsidy related information (Rank III) like subsidies on drip irrigation, fertilizers, Pandal erection etc was provided to the farmers and association also helped the farmers to get the subsidies.

Farmers' preferences towards the Pandal Vegetable Growers' Association

The importance of association's service attribute relative to all other attributes was assessed using the conjoint study. Part-worth estimates for three attributes (production method, price and farm inputs) assessed in the conjoint analysis are presented in Table 2.

Each attribute level had a unique estimate of part-worth that indicated to attribute level's contribution to overall utility when contained within a product profile. The attribute level's part-worth direction as well as the magnitude relative to other levels of the same attribute provided an indication of its effect on overall utility. With respect to the production technology the farmers preferred the Pandal method of production followed by drip irrigation cum fertigation method. Most of the farmers did not prefer the mulching method in production. In contrast analysis there was positive utility for preference of production technology wrt technology for Pandal and technology for drip irrigation cum fertigation. Under price parameter attribute farmers mostly preferred price fixed every fortnight by the association followed by price information through SMS to them and wholesale price at farm gate. Conjoint analysis estimation also indicated that the farmers preferred the farm quality input information from the association.

Problems faced by the farmers in production of Pandal vegetables

The sample farmers were asked about the problems faced in production of Pandal vegetables. The problems mentioned by the farmers were analyzed and the results are presented in Table 3.

The farmers reported that pests and diseases was their major problem in production of Pandal vegetables followed by high price of fertilizers since these involved a huge amount of money. High seed price was reported by the farmers to be the third major problem.

Table 1. Services rendered by the association (n= 120)

Service	Garett's mean score	Rank
Price related information	72.92	I
Input related information	60.98	II
Subsidy related information	51.20	III
Technology related information	39.88	IV
Market and dealers related information	38.17	V
Conducting training of the farmers	36.83	VI

Table 2. Part-worth utility estimates of conjoint analysis for attributes of Pandal Vegetable Growers' Association

Attribute	Attribute level	Part-worth estimate	Standard error
Production Technology	Provided technology for Pandal	0.545	0.361
	Provided technology for drip irrigation cum fertigation	0.069	0.423
	Provided technology for mulching	-0.476	0.423
Price	Price fixed every fortnight	0.584	0.469
	Price information through SMS	0.241	0.469
	Better price at farm gate	0.148	0.469
	Value for produce	-0.491	0.469
Farm inputs information	Easy access of association for information	0.139	0.327
	Timely availability of input information	-0.278	0.653
	Information on quality inputs	-0.416	0.980
Constant		4.869	0.639

Table 3. Problems faced by the farmers in production of Pandal vegetables (n= 120)

Problem	Mean score	Rank
Pests and diseases	70.41	I
High price of fertilizers	64.20	II
High price of seed	64.00	III
High initial investment	55.93	IV
Irrigation related problems	48.41	V
Labour scarcity	40.75	VI
Insufficient credit	29.13	VII
Monocropping	28.20	VIII

Table 4. Problems faced by the association (n= 120)

Problem	Mean score	Rank
Low coordination among the farmers	64.84	I
Poor coordination of association with farmers	60.93	II
Less government support	46.38	III
Improper communication by the farmers	39.06	IV
Problems from non-member farmers	37.80	V

Problems faced by the association

The problems faced by the association are presented in the Table 4. It can be observed that low coordination among the farmers was the major problem faced by the association followed by poor coordination of association with the farmers, less government support, improper communication by the farmers and the problems from the non-members.

CONCLUSION

The farmers preferred services like price-related, input-related and subsidy-related information from the association. Thus the association must continue to provide all the information to the famers regularly. Monocropping in pandal was one of the problems reported by the farmers. So the farmers could practice intercropping technology in Pandal vegetable cultivation with the intercrops like leafy green vegetables, onion, chilli, tomato etc. Farmers were not interacting among themselves. Therefore the association should conduct regular meetings with the farmers for effective coordination with the farmers and also among the farmers.

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