PERCEPTION OF FARMERS TOWARDS CULTIVATION AND MARKETING OF VEGETABLES IN NILGIRIS DISTRICT

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Introduction

India is an agricultural country and one third population depends on the agricultural sector directly or indirectly. Agriculture remains as the main stay of the Indian economy since times immemorial. Indian agriculture contribution to the national gross domestic product (GDP) is about 25 per cent. With food being the crowning need of mankind, much emphasis has been on commercializing agricultural production. For this reason, adequate production and even distribution of food has of late become a high priority global concern.

Most of the agricultural products in India are sold by farmers to the middlemen especially to village traders. Products are sold in various ways. For example, it might be sold at a weekly village market in the farmer's village or in a neighboring village. If these outlets are not available, then produce might be sold at irregularly held markets in a nearby village or town, or in the mandi.

Vegetable Marketing in Tamilnadu

Traditionally, Vegetable Marketing in Tamil Nadu revolves around central markets, where commission agents and wholesale traders collect produce from farmers and distribute it to retailers. Commission agents act as middlemen and retain 10 per cent of all transactions; since they do not make a direct financial investment, they have a low margin of risk. Producers are highly dependent on commission agents. Whilst larger-scale farmers usually sell directly to central market commission agents, small farmers who produce smaller volumes of vegetables may have to sell to local traders, especially during the dry season when production is lower. However, local traders are often “assemblers” for commission agents, and it is the latter who fix prices. Price fixing is not achieved in open competition between agents, but as a joint decision of

all agents in one given market. Prices vary throughout the night and the early morning, depending on arrivals, leaving room for commission agents to pay the farmers at the lowest price of the day, regardless of the actual sale price. This increases the official 10 per cent profit of commission agents.

Farmers' markets explicitly exclude all traders. The markets are under the administration of the local Agricultural Marketing Committee, and eligible farmers are selected by officials from the departments of agriculture and horticulture in feeder villages located within a 40-kilometre radius from each market. Officials seconded to the markets are responsible for ensuring that only genuine farmers attend to do so, they issue them with photo-identity cards and cards specifying the produce they are allowed to sell in the market. Both cards are checked daily when farmers arrive at the markets. A committee, which includes officials and farmers' representatives, is charged with fixing the maximum prices allowed in the market. These are based on the conventional market system and are 15 to 20 per cent above central market prices, which corresponds to about 20 per cent less than retail prices. The markets are constantly supervised to ensure that price ceilings are respected. Business hours are usually between 6.30 am and 2 pm. Early closing time is preferred by staff from the departments of agriculture and horticulture, as this allows them to finish all paperwork and return home quite early; however, it can be a significant constraint on farmers, and especially for low-income consumers. Construction costs for the markets are covered by the local Agricultural Marketing Committee and the District Rural Development Agency. Land is provided mainly by local government, sometimes resulting in opposition from local administrators who are not otherwise involved in the management of the markets.

Waste management is provided by voluntary organizations which recover their costs through parking fees, the markets' canteen profits and the recycling of green waste. It is estimated that the average monthly costs of a farmers' market, including salaries of seconded and dedicated staff, interest repayment for construction costs and utilities costs, are between 80,000 and 90,000 rupees. In addition, farmers initially benefited from free transport for their vegetables on state transport corporation buses, which were re-routed to provide early morning direct connections between feeder villages and their designated market. This was discontinued with the change in State Government of Tamil Nadu in May 2001, and the whole initiative has been put on hold in the wake of criticisms relating to the cost-effectiveness of the markets and to whether they really benefit their primary target groups – producers and consumers.

Statement of the Problem

The Nilgiris District is basically an agriculture district. Major crops cultivated in this district are potato, cabbage, carrot, beans, peas, cauliflower, western vegetables like broccoli, leek, celery, lettuce, spices and condiments like pepper, garlic and ginger, plantation crops like coffee and tea, cut flowers like gerbera and carnations and aromatic crops like rosemary, geranium and thyme. The potato cultivation ranks first among all crops. As per the recent survey vegetables are grown in over 7,500 hectares of the total cultivated area. Cabbage is grown mainly in Udhagamandalam block. Bulk of the vegetables grown in Nilgiris are transported to other centres in the State for sale (Annual Plan of Nilgiris District -2015-16). The Vegetables cultivated in the district are marketed both at Udhagamandalam and Mettupalayam. The Gross area under cultivation is 75505 hectares. As per the 2015-16 final estimates, mostly Coffee, Potato and various Vegetable crops including Cabbage, Cauliflower were raised in this district.

Marketing constraints or challenges arise due to many factors such as limited knowledge and use of market information, lack of access to high-value reliable markets, high transactional costs, distance from the markets, poor quality of products, lack of storage facilities, low educational levels of small-scale farmers, poor agricultural extension services, lack of financial support, inadequate property rights, inadequate and inaccessible market infrastructure, lack of adequate access to finance, socio-economic factors of the farmer, for example: training, farming experience, age, level of education and household size, lack of access to decent roads, price risk and uncertainty, electricity, poor communication, information regarding prices, inadequate local markets, lack of bargaining power, excess of intermediaries etc.

These marketing constraints constitute the greatest barrier for small-scale farmers when it comes to access high value markets, and these factors restrain farmers from making decisions to participate in the market. Access to markets is an essential requirement for the poor in rural areas. It may also be easy to access markets, but retaining one's position in the market is more difficult and participation of small-scale farmers in high-value markets is unsatisfactory, and the perishable nature of vegetables necessitate effective marketing channels. Therefore, overcoming marketing constraints is critical for small-scale farmers to access lucrative markets. Shifting the focus from production-oriented programmes to more market-oriented interventions will place a renew attention on institutions of collective action, such as farmer groups, as an efficient mechanism for enhancing market performance hence, the present study to evaluate the Vegetable marketing Channels and Strategies for the Small and Marginal farmers in Rural Nilgiris District.

Objectives of the study

The study aims to identify the factors influencing vegetable cultivation

Methodology

Survey method is followed for the study. This study has primary as well as secondary data. But the study relies more on primary data. Sample size constituted 125. Secondary data on basic details of the panchayat, resources, population structure etc. are collected from Director of Horticulture and plantation crops of Tamil Nadu and District collectorate. Informal discussions were held with the people's representatives of the panchayat and other prominent leaders, social organizations etc. regarding the study.Statistical tools used such as factor analysis principal component method, Karl Pearson's Coefficient of correlation and One-way Analysis of variance (ANOVA).

SOCIO - ECONOMIC STATUS OF VEGETABLE FARMERS

Studying the demographic and socio-economic background of the people is an important segmenting variable for any research. These segregation of population helps to understand the socio-economic background, decision making ability, income generation and disposal of income of an individual. In particular, gender, age, educational qualification, marital status, family size, occupation and monthly income are essential to understand the sample respondents.

- Most of the farmers (41.6 percent) were upto 35 years old and 38.3 percent of them were in the age group of above 55 years old.
- Majority of the respondents (72.2 percent) were male and rest of them were female.
- Most of the respondents (59.1 percent) were having primary level education. There were 27.2 percent graduates found among the total respondents.
- Majority of the farmers (85.8 percent) were married and rest of them were single.
- Majority of the farmers (90.3 percent) belong to joint family system and rest of them belong to nuclear family system. Half of the total respondents (52.2 percent) have 5-7 members in their family, followed by 38.1 percent of farmers having above 7 family members.
- Most of the respondents i.e., 58.6 percent had no other alternative source of income whereas, 41.4 percent of the respondents had alternative sources of Income.

FARMERS' PERCEPTION ON THE CULTIVATION AND MARKETING OF VEGETABLES IN NILGIRIS DISTRICT

This study explores that the predominant factors influencing the vegetable cultivation. This is achieved through the higher order statistical tool called Factor analysis by principal component method. Factor analysis primarily concentrates on reducing the numerous related

variables into heterogeneous factors consisting of homogeneous variables. The result of factor analysis is presented in the table below.

Table - 1

Variables and Variable Loadings for Farmers' Perception on the Factors Influencing Cultivation and Marketing of Vegetables in Nilgiris District

Variables / Factors	Factors Loadings	Eigen Value	% Variation
Factor -1: Infrastructural Facilities			
Availability of sapling	.918	1.842	22.979
Power supply	.913		
Accessibility to boosting chemicals	.860		
Irrigation facilities	.902		
Factor - 2: Government Supports			
Government policy and support	.897	1.535	18.986
Support from agricultural officers	.890		
Minimum support Price	.833		
Training & Educational programmes	.944		
Factor -3: Performance of Labour			
Availability of labour	.969	1.494	13.943
Labour cost	.924		
Factor -4: Support of Financial Institutions			
Accessibility of bank loan	.850	1.433	12.948
Hassle free bank loan formalities	.805		
Rate of interest	.734		
Support from other funding agencies	.776		
Factor -5: Marketing functions			
Storage facilities	.728	1.352	10.935
Annual yield of coconut	.709		
Support from market intermediaries	.692		
Selling Price	.673		
Transportation	.658		
KMO Measure of Sampling Adequacy = 0.741 Bartlett's Test of Sphericity = 1362.183, Sig. .000; Cumulative Percentage Rotation Sums of Squared Loadings = 75.79%.			

The KMO and Bartlett's test for sampling adequacy for nineteen variables are found to be 0.741 and the chi-square value of Bartlett's test for Sphericity is 1362.183. This clearly indicated that all the nineteen variables are different and are perfectly distributed in a normal distribution. This also emphasized that the factor analysis is suitable for nineteen variables attitude of farmers towards performance of vegetable cultivation. The factor analysis by principal component method with varimax rotation has revealed five eigen values as 1.842, 1.535, 1.494, 1.433 and 1.352 respectively. This indicated that the eigen values greater than 1 led to the existence of five major factors with 75.79 percent of variance.

The variable loadings in each predominant factors of attitude of farmers towards performance of vegetable cultivation show that the first factor consists of four variables which are suitably named as *'Infrastructural Facilities'*. The second factor contains four variables which are suitably called as *'Government Supports'*. The third factor includes two variables which are named as *'Performance of Labour'*. The fourth factor contains four variables which are named as *'Support of Financial Institutions'*. The fifth factor contains five variables which are named as *'Marketing functions'* (Table 1).

RELATIONSHIP AMONG THE FACTORS INFLUENCING CULTIVATION AND MARKETING OF VEGETABLES

An attempt has been made to find out the relationship among factors of performance of vegetable cultivation such as infrastructural facilities, government supports, performance of labour, support of financial institutions and marketing performance. In this regard, Karl Pearson's coefficient of correlation is employed.

Table - 2: Relationship between Factors influencing Cultivation and Marketing of Vegetables

Factors	X_1	X_2	X_3	X_4	X_5
Infrastructural Facilities (X_1)	1				
Government supports (X_2)	.451**	1			
Performance of labour (X_3)	.429**	.542**	1		
Support of Financial Institutions (X_4)	.486**	.560*	.461**	1	
Marketing Performance (X_5)	.429	.483	.412	.412	1

*** Significant at 1% level* **Significant at 5% level*

The correlation results explores that there exist a perfect correlation between the factors of influencing vegetable cultivation. This shows that all these factors are highly influenced the cultivation and marketing of vegetables. (Table - 2).

Influence of demographic profile on cultivation and marketing of vegetables

The demographic variables directly influence on attitude of farmers. An attempt has been made to highlight the relationship between demographic profile and performance of vegetable cultivation. In this regard One-way ANOVA is employed (Table 3).

Table – 3
Influence of Demographic on the Cultivation and Marketing of Vegetables

Factors	Age	Gender	Marital status	Educational Qualification	Monthly income
Infrastructural Facilities	1.22**	1.17*	5.55*	6.22**	4.47**
Government supports	1.96*	1.23*	3.88	11.43*	2.78*
Performance of labour	3.02*	2.96	1.51	10.68**	1.88*
Support of Financial Institutions	2.32*	1.32*	3.02	17.28*	4.17*
Marketing Performance	1.89*	1.45*	2.49*	8.45*	4.48**

*** Significant at 1% level* **Significant at 5% level*

The ANOVA results indicates that age of the respondents significantly differs with infrastructural facilities, government supports, performance of labour, support of financial institutions and marketing performance. Gender significantly varies with infrastructural facilities, government supports, support of financial institutions and marketing functions. Marital status of the respondents significantly differs with infrastructural facilities and marketing performance. Educational qualification of the respondents significantly differs with infrastructural facilities, government supports, performance of labour, support of financial institutions and marketing performance. Monthly income of the respondents significantly differs with infrastructural facilities, government supports, performance of labour, support of financial institutions and marketing functions.

CONCLUSION

The farmers in Nilgiris District face more risks due to the intervention of middlemen and other factors influencing the cultivation and marketing practices such as Infrastructure facilities, Government support, Performance of labour, Support of financial institutions and Marketing functions. Age, Marital status and educational qualification differed significantly with various factors influencing the cultivation and marketing practices of farmers in Nilgiris District.

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