



RESEARCH ARTICLE

Knowledge of Vegetable Farmers on Marketing Strategies as an Outcome of Market-Oriented Extension Initiatives in Thrissur District, Kerala

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ABSTRACT

The study intended to assess the knowledge of vegetable farmers on marketing strategies as an outcome of the three-flagship market-oriented programs, namely, Ecoshops, Weekly Markets, and Karshakamithra, implemented by the Department of Agriculture Development and Farmers' Welfare in Thrissur District, Kerala. The sample consisted of 120 vegetable farmers involved in these programs and were randomly selected from ten panchayats drawn randomly from four blocks in the district. The knowledge level of farmers was measured using a customized knowledge test. Based on the data analysis, it was found that the market-oriented extension programmes of the department were only partially successful in imparting knowledge on marketing strategies. More than half of the farmers were found to possess a medium level of knowledge on marketing strategies of vegetables. This would necessitate awareness creation and capacity building for individual farmers as well their collectives in the domain of marketing. Market-oriented programs of the Department of Agriculture Development and Farmers' Welfare should be reoriented with more components of marketing.

Received: 16 Jan 2024

Revised: 27 Jan 2024

Accepted: 12 Feb 2024

Keywords: Marketing; Knowledge; Vegetable Farmers; Kerala

INTRODUCTION

Kerala has uniquely diverse agro-climatic conditions, which enable the cultivation of many types of crops. In addition to traditional crops like rice, coconut and spices, which contribute to a greater part of Kerala's economy, vegetable production has also gained significance recently. It is reported that production of vegetables has increased from 6.5 lakh tonnes in 2016 to 9.5 lakh tonnes in 2019 (The New Indian Express, 2019). Area under vegetable cultivation in the state has also increased from 52,830 hectares in 2016-17 to 82,166 hectares in 2018-19 (GOK, 2021). However, Kerala is known to be a consumer state even now. As reported by The Hindu (2010), more than 1500 crores worth of vegetables are imported to the state every year.

Since vegetables are perishable and seasonal, farmers face a number of uncertainties right from the initial stages of production till marketing. The highly perishable nature of vegetables warrants

efficient marketing systems, among various other prerequisites, to help farmers sustain their production. It is estimated that almost 30 per cent of vegetables produced in the state are lost every year. This is mostly due to lack of proper infrastructure facilities, higher marketing cost, unpredictable price behaviour etc. Farmers have to be made aware of different methods and techniques of market-oriented production. This would influence their market behaviour and thereby increase the market value of their produce. Hence, knowledge on marketing strategies is very important. In this regard, Naghabhushana (2001) in his study on marketing practices and problems of vegetable growers conducted at Kolar district in Karnataka observed that majority of vegetable growers had low level of marketing knowledge.

The Government of Kerala has formulated several market-oriented extension programmes to improve



marketing of vegetables. The most important among them is Ecoshops, which provide farmers in a Grama Panchayat with the facility to sell their produce at a market outlet. Ecoshops were established under the Department of Agriculture Development and Farmers' Welfare, Kerala to strengthen the organic produce marketing and ensure farmers' profitability. These outlets provide customers with locally grown organic produce with GAP certification. All these are sold at premium prices so that producers and consumers would be equally benefited.

The department also conducts weekly markets to provide opportunity for small producers to sell their produce. They were also established as a part of a strengthening market development scheme to provide farmers with opportunities for direct sales in the market. This program is mainly meant for efficient marketing of perishable and ethnic produce near their production centers and thereby reducing transaction loss. The programme works under agriculture department, in association with Kudumbasree and the local self-governments.

In addition to these two programs which are implemented statewide, a special programme viz. Karshakamitra had also been piloted in Thrissur district. This programme is characterised by a facilitator to exclusively manage market functions, particularly to collect vegetables from the producers and help them sell it directly to the consumers. The major purpose of this scheme is to bridge the gap between department and farmers in marketing and to ensure market for surplus agricultural produce from the households, particularly for small scale farmers. It is a novel mechanism of engaging 'Karshakamitras' for the efficient marketing of agricultural produce which includes reporting of production, facilitating procurement and marketing of the produce, so as to ensure quality produce for the consumers. The facilitator is paid honorarium by the government for harnessing the produce, transporting and helping the farmers to manage transactions and trade.

Since these programmes were intended to facilitate marketing of farmers' produce, it is likely that these programmes have enhanced the capability of farmers to address the challenges of marketing. This could be through significant gain of knowledge or acquisition of skills to manage marketing. This study was conducted to find out whether the farmers who were involved in these three programmes had adequate knowledge

on marketing strategies, as a possible outcome of these programmes. This would also throw light on the gaps in knowledge and help formulate programmes accordingly.

MATERIALS AND METHODS

The study followed ex post facto research design. Four blocks namely Anthikad, Chowanoor, Chalakkudy and Kodakara were randomly selected from the block panchayats in Thrissur district. Ten panchayats were randomly drawn from among the total panchayats in these four blocks. The panchayats selected were Anthikad, Manalur, Chazhur, Choondal, Kadavallur, Kattakambal, Melur, Koratty, Alagappanagar and Matathur. Data were collected from a sample of 120 respondents, drawn at the rate of 40 respondents from each of the three programmes described above.

Knowledge of marketing strategies was operationally defined as the farmer's knowledge of various strategies to effectively market their produce. In the present study, a standardized knowledge test developed by Bonny (1991) was used with slight modifications to measure the variable. The scale comprised of 13 objective statements that could elicit the knowledge of the respondent based on their agreement with each statement expressed as true or false. The scale had specific statements on various aspects of marketing, viz., assessing market demand, product differentiation, pricing, modes of marketing, sorting, grading, packaging, labeling, price spread, procurement, shelf life, logistics, financial support, etc. Correct and incorrect responses were given scores 0 and 1 respectively. Total score for each respondent was calculated by summing up the scores obtained for the statements. The maximum score obtained would be 13 for all correct answers, and the minimum will be 0 for all wrong answers. The summated score will represent the respondents' knowledge on marketing strategies. Knowledge index of each respondent was calculated using the formula

$$\text{Knowledge index} = \frac{\text{Total score obtained by a respondent}}{\text{Total no of items}} \times 100$$

Since the distribution of respondents based on knowledge level didn't obey the assumption of normality and mean and median didn't coincide, they were categorized on the basis of quartile scores. Quartiles are the measure of dispersion based on



upper quartile Q3 and lower quartile Q1. For a given distribution, 25 per cent of the observations lies below Q1 and 25 per cent above Q3, remaining 50 per cent of the observation lies between Q1 and Q3. Based on the distribution of index scores on quartile range, the respondents were categorized into three groups, viz., low (<Q1), medium (Q1-Q3) and high (>Q3) category. Frequency and percentage of respondents belonging to each category were also determined.

Non-parametric Kruskal Wallis test was performed to check whether there existed any significant difference among beneficiaries of the three programmes with regard to knowledge level.

RESULTS AND DISCUSSION

The distribution of respondents based on their knowledge on marketing strategies of vegetables revealed that majority of the respondents (64.17%) had a medium level of knowledge with quartile scores between 69.23 and 76.92 ie., It could also be observed that 24.17 per cent of them had high knowledge level with scores above 76.92 and only 11.67 percent of

them had lower knowledge level with scores below 69.23. (See Table 1)

An analysis of the knowledge level of beneficiaries of the three programmes showed that majority of the beneficiaries of Ecoshop (67.5%), Karshakamitra (62.5%) and Weekly market (62.5%), had medium level of knowledge on marketing strategies (Table 2). In the case of Eco shop 20 percent of the beneficiaries had high level of knowledge. 25 per cent of Karshakamitra and 27.5 per cent of Weekly market beneficiaries also constituted high knowledge level category. 12.5 per cent of the beneficiaries of both Ecoshop and Karshakamitra, and 10 per cent beneficiaries of Weekly market had low level of knowledge on marketing strategies.

Interestingly, these results showed that the beneficiaries of these programmes had better knowledge on marketing. However, a close look at the components of the programme showed that training was not given any particular emphasis in the scheme of activities envisaged in the programme.

Table 1 Distribution of respondents based on knowledge level

Sl no	Knowledge level	Frequency (N=120)	Percentage
1	Low (<Q1)	14	11.67%
2	Medium (Q1-Q3)	77	64.17%
3	High (>Q3)	29	24.17%

Q1 = 69.23, Q3 = 76.92, Interquartile range = Q3-Q1 = 7.69

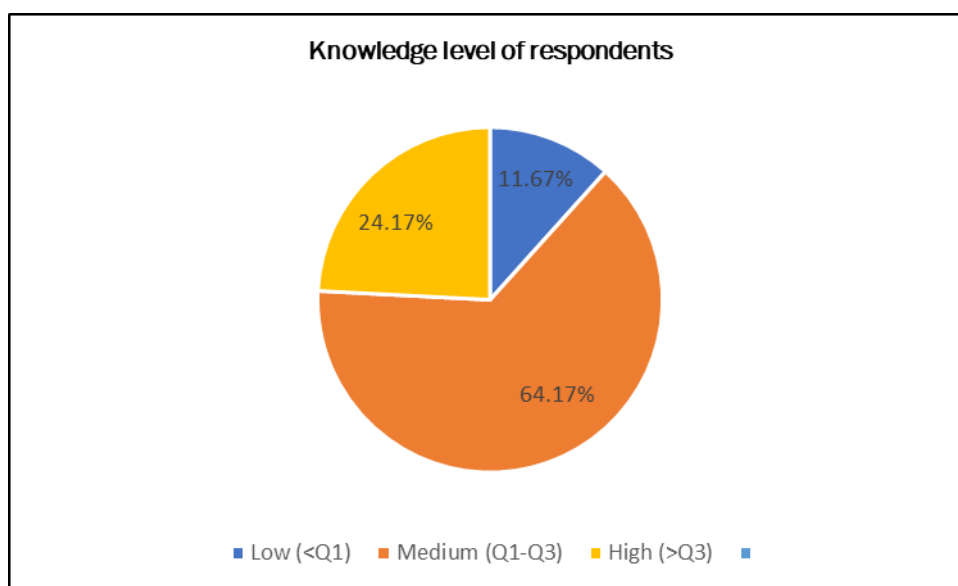


Figure 1 Pie diagram showing the distribution of respondents based on knowledge



Table 2. Knowledge level of beneficiaries of the three programmes

Programme	Knowledge level	Frequency (N=40 each)	Percentage (%)
Ecoshop	Low	5	12.5
	Medium	27	67.5
	High	8	20
Q1 = 69.23, Q3 = 76.92, Interquartile range = Q3-Q1 = 7.69			
Karshakamithra	Low	5	12.5
	Medium	25	62.5
	High	10	25
Q1 = 69.23, Q3 = 82.69, Interquartile range = Q3-Q1 = 13.46			
Weekly Market	Low	4	10
	Medium	25	62.5
	High	11	27.5
Q1 = 69.23, Q3 = 84.62, Interquartile range = Q3-Q1 = 15.39			

The knowledge level of beneficiaries of the three programmes were also compared to check whether there existed any significant difference among them. Independent sample Kruskal Wallis test was performed to test the null hypothesis, “The distribution of knowledge level is same across the three programmes”. The test results shown in table 4 reveal that, p value for the two tailed test is larger than 0.01. Therefore, at one per cent level of significance, null hypothesis has been accepted and there existed no significant difference among the knowledge level of beneficiaries of the three programmes.

Table 3. Kruskal Wallis test statistics for knowledge level

Total N	120
Test statistic	0.023
Degrees of freedom	2
p value	0.989

Knowledge level of the beneficiaries of the three programmes were not found to differ significantly, which indicated that the three programmes could not be distinguished from one another based on the knowledge imparted by the programme. Since the knowledge level of majority of the farmers were not high, contribution of these market-oriented programmes towards enhancing the knowledge and skill sets of farmers can not considered to be substantial. This could be due to lack of mandatory components to create awareness about marketing functions and build skills in marketing.

CONCLUSION

It can be concluded that, majority of farmers who were involved in the three market-oriented programmes of the Department of Agriculture and Farmers' welfare in Thrissur district of Kerala possessed medium level of knowledge on marketing strategies. It has been widely accepted that less knowledge on technology, market demand and financial incentives lead to lack of proper planning and management practices in vegetable supply chain (Shukla and Jharkharia, 2013). The producer farmer requires sufficient logistics support and reliable information on market trends for exploring better selling options. Complying with quality standards to ensure acceptability among different types of consumers is another important factor that would help farmers acquire better marketing opportunities. All the market-oriented programmes of the state government have to be dovetailed and co-ordinated with singular objective so as to widen those opportunities. This implies that farmers have to be made aware of different methods and techniques of market - oriented production. Awareness of the stakeholder communities on various schemes and programmes has to be enhanced to make them more market orientated. Moreover, they have to be provided with real time information on market trends as well. This could be done only by extension agencies, through concerted efforts to orient them to market led production. This approach of extension demands the extension personnel to be trained to acquire new skills to impart training to farmers, as farmers require



to be aware of quality, consumer preferences, market intelligence, processing, value addition etc. (Kumar et al., 2012). Awareness programmes need to be conducted on scientific farming and marketing aspects in collaboration with other institutes and government agencies. Even though there are schemes that address problems related to marketing, lack of efficient advisory system and proper delivery of services render the farmers incompetent in the market. Extension systems need to respond to these challenges seriously and in a time bound manner. The development programmes of the government should consider integrating marketing related components that can facilitate farmers to carry out marketing functions and manage the marketing initiatives of their collectives.

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