

A Study on Agriculture Marketing Information System Models and Their Implication with Special Reference to Tirunelveli City

T. Krishna karthika¹ and Dr. I. Meenakshi²

II M.Com, PG & Research Department of Commerce¹

Associate Professor, PG & Research Department of Commerce²

Sri Sarada College For Women (Autonomous), Tirunelveli, Tamil Nadu, India

Affiliated to Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India

Abstract: *The main purpose of the study marketing information system (MIS) is to assist businesses and farmers in their marketing decisions and marketing efforts. This necessitates the employment of dependable software that collects and disseminates accurate and valuable information in a farmer-friendly manner. It is not enough to simply provide knowledge; the exercise must also include the ability for farmers to market their produce. In recent years, the production of agricultural goods has become more dependent on farm inputs, such as improved seeds, fertilizers, insecticides, and pesticides, as well as farm equipment, implements, and funding. The importance of agriculture marketing Agricultural marketing is crucial for boosting consumption and production as well as quickening the pace of economic growth. It is the most significant agricultural development multiplier. In this study both the primary and secondary data's has been collected through various journals, websites etc, and the tools which have been used like percentage analysis, chi- square and ranking table to know the marketing information of agriculture.*

Keywords: Agriculture, Farmers, Information, Marketing, Source, pre-and post-harvest

I. INTRODUCTION

Agricultural marketing is a process that begins with the decision to produce a saleable farm commodity and encompasses all aspects of the market structure or system, both functional and institutional, based on technical and economic considerations, and includes pre- and post-harvest operations such as assembling, grading, storage, transportation, and distribution. Farmers, merchants, and policymakers can profit from effective market information. It is critical to develop market intelligence. Systems that seek to give information on prices, arrivals, availability, trends, analysis, laws, etc. This necessitates the employment of dependable software that collects and disseminates accurate and valuable information in a farmer-friendly manner. It is not enough to simply provide knowledge; the exercise must also include the ability for farmers to market their produce.

1.1 Objectives of the Study

- To identify socio- demographic profile of the respondents in tirunelveli city.
- To analyse the factors influence in this field.
- To analyse the financial facility for farmers.
- To determine the factors of pre –harvest sales.
- To study the problem faced by farmers.
- To determine the source for cultivation.
- To offers suggestions effective implication marketing information system.

II. REVIEW OF LITERATURE:

- Ninsansala p. vidanapathirana (2012) “A review study on agricultural information systems and their use for rural community development” Discussed include the utility of information for agriculture, sources of

agricultural information, the many forms of information required for agricultural progress, and issues with agricultural information transmission. The purpose of the study is primarily to identify the components of agricultural information systems, their availability, an understanding of how well they function, issues related to them, and recommendations for how to enhance their performances.

- **Azam, Md sikandar and musarrat saheen (2019) “Decisional factors driving farmers to adopt organic farming in India: a cross- sectional study.”** this essay's objective is to conduct an empirical examination into the influence of numerous elements, including economics, society, marketing, agriculture, and the government, on the acceptance of organic farming. Additionally, this study looks at the demographic-based characteristics, such as education level, farm size, farming experience, and land ownership that affect farmers' decisions to adopt organic farming.
- **Nwauwa et al (2014) “The role of Agricultural market reform in enhancing farmers’ income in Nigeria”** study, agricultural market changes in Nigeria have a positive impact on farmers' income. The broad indication on agricultural market reforms is highlighted by the author in Nigeria. This change was supported by the conviction that lessening government oversight of agricultural marketing would encourage private sector participation in agricultural marketing and stimulate market competitiveness, both of which would increase agricultural output.
- **Giagnocavo, cynthiya ,et al.(2022) "Reconnecting farmers with nature through agro ecological transitions: interacting niches, experimentation, and the function of agricultural knowledge and innovation systems”** Analysis of niche initiatives within a common production system that utilize sustainable transitions, multi-level perspectives, and agro ecological frameworks, as well as multi-actor, agricultural knowledge, and innovation systems, explores sustainability transitions in agriculture (AKIS). The article focuses on how farmers' relationships with nature and the reconceptualization of the production system in which they operate, particularly when this system is embedded in less sustainable conventional or dominant regimes and landscapes, are impacted by experimental niches and sustainable activities.

2.1 Statement of the Problem

- Inadequate transport to the farmers to produce their products for the market.
- Lack of capital means that farmers do not have access to adequate funds to invest in better technologies, machinery, and equipment, which results in poor-quality agricultural produce.
- Irrigation problems are facing farmers, i.e., irrigation is known to help improve agricultural production, and while irrigation methods have improved to help increase the income of farmers.
- One of the major problems facing farmers has to be the loss of agricultural land, as when more land is lost, it becomes increasingly difficult to produce the volume of food required to feed the entire population.
- One of the major problems faced by farmers is the lack of adequate farm equipment, which can hamper their ability to adapt to the requirements of modern farming practices. When farmers are trained to use the equipment, their lives can significantly improve. Implementation of said equipment is important.

2.2 Scope of the Study

The market starts to place more emphasis on farming. Information marketing research seems to be quite new. Farmers employed agricultural crops like local seeds and farmyard manure in the past. Farmers hardly ever purchased inputs for crop production from the market because they had ready access to these supplies. In recent years, the production of agricultural goods has become more dependent on farm inputs, such as improved seeds, fertilizers, insecticides, and pesticides, as well as farm equipment, implements, and funding. Modern agricultural technology responds to input. Both product and input marketing are essential components of agriculture marketing.

2.3 Importance of Agriculture Marketing:

Agricultural marketing is crucial for boosting consumption and production as well as quickening the pace of economic growth. It is the most significant agricultural development multiplier. The main issue in the transition from traditional

to modern agriculture is marketing due to production surpluses brought on by the change. These facts demonstrate the significance of agricultural marketing.

Optimization of resource use and output management:

An effective agricultural marketing system optimizes resource usage and output management. An efficient marketing strategy can also help to improve the marketable surplus by reducing losses caused by inefficient processing, storage, and transportation. A well-designed marketing system can effectively disperse the available stock of modern inputs, allowing the agricultural industry to grow at a quicker rate.

Increase in farm income:

An efficient marketing system promotes higher levels of income for farmers by minimizing the number of middlemen or by limiting the cost of marketing services and malpractices in farm product marketing. An effective system assures farmers better pricing for farm products and encourages them to spend their surpluses on the acquisition of modern inputs, increasing productivity and production. This leads to an increase in the farmers' marketed surplus and income. If the producer lacks a conveniently accessible market outlet where he can sell his excess produce, he has no motivation to create more.

Widening of markets:

A well-knotted marketing system broadens the market for the products by taking them to remote corners both within and outside the country, i.e., to locations far from the manufacturing points. The expansion of the market aids in the constant increase of demand, ensuring a higher income for the producer.

Price signals:

An effective marketing strategy assists farmers in planning their production in accordance with economic needs. This work is accomplished by transmitting pricing signals.

Employment creation:

Millions of people are employed by the marketing system in a variety of operations such as packing, transportation, storage, and processing. Individuals such as commission agents, brokers, traders, retailers, weigh men, packagers, and so on. The marketing system directly employs regulatory personnel. Aside from that, various others are employed in the supply of goods and services required by the marketing system.

Better living:

The marketing system is crucial to the success of development initiatives that aim to improve society as a whole. Any economic growth strategy that aspires to reduce food prices for consumers, increase foreign exchange earnings, or reduce economic waste must thus pay special attention to the creation of an effective marketing strategy for food and agricultural products.

III. METHODOLOGY

- **Primary data:** Primary data was collected from the respondents through systematically prepared questionnaire methods.
- **Secondary data:** The main source of information for secondary data was collected from old records and the websites, books, journals, news papers etc.

IV. DATA ANALYSIS AND INTERPRETATION

4.1 Demographic Profile of the Study

Gender	No. of .respondents	Percentage
Male	25	45
Female	30	55
Total	55	100
Age wise		
15-20	18	33
21-25	23	42
Above 25	14	25
Total	55	100
Education Qualification		
Illiterate	20	36
Up to 8 th std	6	11
SSLC	10	18
HSC	7	13
UG	12	22
Total	55	100
Marital status		
Married	29	53
Unmarried	26	47
Total	55	100
Annual Income		
Below 25,000	10	18
25,001-45,000	8	15
45,001-75,000	20	36
Above 75,000	17	31
Total	55	100
Occupation		
Agriculture	25	45
Business	18	33
others	12	22
Total	55	100

Source: Primary data

Interpretation:

According to the above table 55 percentage of the respondents belong to female respondents and 45 percentage of male respondents. In age wise 42 percentage of the respondents are 21-25 age, 33 percentage of respondents are 15-20 age and 25 percentage of respondents are Above25 age. In the Education qualification with 36 percentage of the respondents are Illiterate, 22 percentage of respondents are UG, 18 percentage of respondents are SSLC , 13 percentage of respondent are HSC and 11 percentage of respondents are up to 8th std. In the Marital status 53 percentage of the

respondents are Married, 26percentage of respondents are Unmarried. In the Annual income 36 percentage of respondents are 45,001-75,000, 31 percentage of respondents are Above 75,000, 18 percentage of respondents are Below 25,000 and 15 percentage of respondents are 25,001-45,000. In the occupation 45 percentage of respondents are in Agriculture, 33 percentage of respondents are in Business and 22 percentage of respondents are in others.

4.2 Chi Square Test:

NULL HYPOTHESIS- There is no significant association between gender respondents and the Annual Income.

Gender	Below 25,000	25,001-45,000	45,001-75,000	Above 75,000	Total
Male	4	4	9	8	25
Female	6	4	11	9	30
Total	10	8	20	17	55

RESULT IN CHI SQUARE:

O	E	(O-E)	(O-E) ²	$\Sigma(O-E)^2/E$
4	4.5	0.5	0.25	0.05
4	5.45	-1.45	2.10	0.38
9	4	5	25	6.25
8	4.36	3.64	13.25	3.04
6	9	-3	9	1
4	11	-7	49	4.45
11	8	3	9	1.125
9	5	4	16	3.2
				$\Sigma(O-E)^2/E=19.495$

SOURCE: Computed data

$$\begin{aligned} \text{Degree of freedom} &= (r-1) (c-1) \\ &= (2-1) (3-1) \\ &= (1) (2) \\ &= 2, 0.05 = 19.495 \end{aligned}$$

Inference:

The calculated value of chi square is (19.495) is Greater than the table value. The null hypothesis is rejected. Hence there is significant association between the gender of the respondents and Annual income.

4.3 Ranking Table

Factors affecting in your field

S.NO	VARIABLE	MEAN SCORE	RANK
1	Natural calamities	40.38	II
2	Lack of knowledge	25.18	IV
3	Lack of finance	35.42	III
4	Unavailability of resource	50.32	I

According to the above table got Unavailability of resource Ist rank with the mean score of 50.32, Natural calamities got IInd rank with the mean score of 40.38, Lack of finance got IIIrd with the mean score of 35.42 and Lack of knowledge got IVth rank with the mean score of 25.18.

V. FINDINGS AND SUGGESTIONS

5.1 Findings

- Majority of the respondents are female with 55 percentage.

- Majority of the respondents are in age wise of 15-21 age with 33 percentage.
- Majority of the respondents are in Education qualification of illiterate with 36 percentage.
- Majority of the respondents are in marital status of Married with 53 percentage.
- Majority of the respondents are in Annual income of 45,001-75,000 with 36 percentage.
- Majority of the respondents are in occupation of Agriculture with 45 percentage.

5.2 Suggestions

- The elimination of mediators is necessary from agricultural marketing because unless the farmer is allowed the facility of direct sales to the customer, he cannot receive a fair price for it. Thus, with the elimination of mediators, 'consumer grain centers' should be established where the farmer sells his produce.
- For improving agricultural marketing standard weights are specifically required, these should be manufactured and organized by the government. If any defect in weights is reported, a strict punishment system should be started so that, there should be no fraud in marketing. This would not only improve the marketing system but the fraudulent tendencies of the traders would also be restricted.
- The backbone of agricultural marketing is the means of transport. Thus, such roads should be constructed in rural areas which remain capable of transportation during all seasons. The tire made bullock carts, diesel, or patrol trucks or tractors should be available in rural areas.

VI. CONCLUSION

In a marketing system, market knowledge is a crucial facilitating function. An effective marketing information system may manage timely product delivery, minimize marketing expenses, boost production and productivity, and help the market stay healthy. Existing marketing information system techniques mainly concentrate on the gathering of selling prices of various agricultural commodities, volume of arrival, and source of origin. Farmers are interested not just in current price information but also in marketing issues such as waste generation and demand forecasting. The systems have tried to provide market information, but their efforts are frequently disconnected.

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