ABSTRACT

Study on Adoption and Marketing behaviour of Maize growers”, aimed to bring out a strategy to increase the adoption level of maize growers. The study was undertaken at three blocks viz. Udumalpet, Pollachi and Palladam blocks of Coimbatore district in Tamil Nadu. The analysis of extent of adoption indicated that the most favorable season for sowing was Adipattam by most of the farmers (54.44 %). Majority of the farmers followed all the maize field practices like basal urea application (61.11 %), top dressing (60.00 %), micronutrient application (46.70 %), seed treatment (34.50 %), weed crop protection (78.90 %) and water management (74.40 %). Most of the farmers in the study area (53.33 %) harvested the produce only when the seeds became dry and hard. The analysis of marketing behaviour indicated that the farmers sold the cobs in nearby town transporting through tractor. Study also indicated that one half of the respondents sold the entire harvested produce immediately after harvest through wholesalers. Majority of the farmers did grading and weighing before marketing the produce. Most of the farmers did not follow the storage pest protection measures. The neighbour farmers living in the same village were the main sources of information to the vast majority of maize growers. The crucial characteristics of the maize growers towards marketing behaviour were educational status, socioeconomic status, extension agency contact, storage facilities, market perception and market potential indicators.

Key words: Maize growers, Adoption, Marketing behaviour.

INTRODUCTION

Focus of extension agencies on production technologies yielded very good results and hence India become self reliant on food production. Significantly, the extension system had played its role untiringly in transfer of production technologies from lab to land, besides the agricultural scientists, farmers and marketing network (Kotler and Philip). But the farmers at individual level are not realizing remunerative prices for their produce. In addition to this, the Indian farmers have to face challenges of global force that are affecting or are likely to affect Indian agriculture. This assumes greater significance in the light of the new international trading regime under WTO and the export opportunities being opened up. Therefore extension functionaries need to play a major role to build the capacity of the farmers to meet the emerging challenges, increase the adoption level of the farmers through training and effective extension services and make the farmers to realize better prices to their farm produce (Malik, D.P., S.N. Singh and K.N. Rai). Maize crop is taken for the study because this crop is notified to have special adoption practices and that lacks adequately in the study. Further, the area and production of maize in Tamil Nadu is steadily increasing every year. During 2000-01 the area under maize was 6.61 million hectares. During 2007-08 the area has tremendously increased to 7.92 million hectares. The use of maize in poultry feed by poultry industry, particularly located in Salem, Namakkal, Pollachi, and Udumalpet areas are getting remarkable importance. As the maize crop shows a promising scope, it was selected for the study.

An efficient network of agricultural marketing system is a vital link between farmers and consumers. There has been a feeling that the producers do not realize the full benefit of their hard
work inspite of the fact that the new technologies are readily accepted by the farmers. Higher productivity gained in their farm is lost when they take the produce to the market. The marketing system on one hand comprises operating freely private merchants without any state intervention and on the other hand, district market committees which are completely under state control. In between these two extremes, other systems with varying degree of government interventions and support in areas of price fixation procurement quota, buffer stocks, credit controls, etc, are also prevalent. The need for trying out so many marketing systems arises from the greatly dissimilar conditions of production and marketing as well as between commodities and states. These systems are also subject to changes and modifications as maybe warranted from time to time by changing production and marketing situations and also the economic policies of the state. Apart from the regulated market for the benefits of the farming community, Government is implementing programmes like Co-operatives marketing societies, State trading corporation, etc. These marketing reforms have vastly changed the marketing scenario after independence. However, these programmes are not adequate for the purposes. Still the weakness in marketing system like pre-harvest or immediate post-harvest sales at low prices, tie-in-sales, intermediaries obtaining huge benefits and absence of adequate numbers of bidders in regulated markets resulting in uneconomic price to farmers prevail (P. Marimuthu).

One could perceive that agricultural problems are very complex. The production activity is scattered over a wide area; majority of the farmers are small and marginal having small marketable surplus, crop production is season – specific and market supply is heterogeneous in nature; majority of the commodities are perishable in nature and they have to be sold at the earliest opportunity; waiting capacity of the majority of the farmers is also very poor thereby creating market glut; and instability in agricultural production widen inter and intra year fluctuation in price (Ponnusamy). Unlike other developing countries, markets and road networks in the maize growing regions of India are not well developed (Seema and Suruliappan). Markets for food grains in general and maize in particular are very meagerly spread throughout the maize growing regions. Most of the maize grain produced is sold in local village markets, where grain prices are 2 – 8 per cent lower than those in the nearest regulated markets. Grain prices in the latter markets are still lower than the government established minimum support price. The present study deals with adoption of maize growers and also the drawbacks in the existing marketing systems which would provide a clear understanding about the maize marketing. This would help the people involved in maize marketing to chalk out a need based plan. The study would be much helpful in creating sufficient awareness on critical technologies, improving the marketing structure and marketing behaviour of maize growers (Swamidasan). The findings of association and contribution of profile characteristics towards marketing behaviour of maize growers would help the marketing personnel to formulate different extension strategies for various categories of riots. A realistic appraisal of the problems encountered by the maize growers would help the policy makers and research workers to bring out necessary changes which would brighten the prospects of the maize growers.

MATERIALS AND METHODS

The study was taken in Coimbatore Dt of Tamil Nadu in which specifically three blocks viz, Udumalpet, Palladam and Pollachi south were selected since the area of maize was found to higher compared with other 20 blocks surrounding Coimbatore. Keeping in view, the objectives and the variables under study, a comprehensive structured interview schedule covering all aspects of marketing was prepared. The items included in the interview schedule were structured questions and objective type questions which were suitable to all categories of maize growers. Each of the maize growers were personally contacted and interviewed with the help of interview schedule. The data collected were subjected to statistical analysis to get inferences. The tools used for analyzing the adoption level of maize growers are, simple correlation coefficient which was used to find out the correlation between any two sets of variable to know the degree of association between the variables.

\[
Y_{xy} = \frac{\Sigma xy - (\Sigma x)(\Sigma y)}{n} \\
\sqrt{\frac{\Sigma x^2 - (\Sigma x)^2}{n} \frac{\Sigma y^2 - (\Sigma y)^2}{n}}
\]
Multiple regression analysis was also carried out to find out functional relationship between independent and adoption level
\[ y = a + b_1x_1 + b_2x_2 + \ldots + b_nx_n \]

The tools used for analyzing the marketing behaviour of maize growers are, percentage analysis to find out simple comparisons, simple correlation coefficient which was used to find out the correlation between any two sets of variable to know the degree of association between the variables.

Multiple regression analysis was also carried out to find out functional relationship between independent and marketing behaviour
\[ y = a + b_1x_1 + b_2x_2 + \ldots + b_nx_n \]

**RESULTS AND DISCUSSION**

**Distribution of respondents on the basis of marketing behaviour:**

The success and failure of the technology is found only after assessing its impact over farming community. The adoption of identified maize cultivation technologies have been studied in following sections. Season of sowing plays a major role in maize cultivation. Adipattam (July – August) was the main sowing season for 54.44 per cent of the maize growers. Among the adoption of seed varieties for cultivation it was found from the findings that Private varieties were ruling in the study area. The reason is because, the private agency produces high quality hybrid seeds whose seed rate is very low and would give ten times higher yield when compared to other varieties. This could be one possible reason for adopting private varieties / hybrids. Adoption on main field practices were also found adopted predominantly like basal urea application, micronutrient application etc. From the study it could be further inferred that most (80.00 percent) of the maize growers apply urea \(\frac{3}{4}\) bags as their basal dose and 61.11 percent does first top dressing (\(\frac{1}{4}\) bags with urea) followed by 60.00 percent who applied urea as their second top dressing with a quantity of \(\frac{1}{2}\) bag. Further Azospirillum is also used for seed treatment by (46.70 per cent). Application of micronutrients was also found among maize growers. From the findings it is identified that nearly (13.33 percent) of the maize growers applied 50 kg of micronutrient mixed with sand per hectare followed by (10.00 percent) of the maize growers who applied 75 and 100 kgs of micronutrient mixed with sand per hectare. The quantities of dosage are all recommended by the university. Other management measures like water management, weed management and plant protection management were all found adopted by the farmers as per the recommendation of university in the study.

**Table 1: Distribution of maize growers according to overall adoption of technologies**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Extent of adoption</th>
<th>Numbers</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Low</td>
<td>30</td>
<td>33.33</td>
</tr>
<tr>
<td>2</td>
<td>Medium</td>
<td>45</td>
<td>50.00</td>
</tr>
<tr>
<td>3</td>
<td>High</td>
<td>25</td>
<td>27.77</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>90</td>
<td>100.00</td>
</tr>
</tbody>
</table>

It could be inferred from the table that two fifth of maize growers (50.00 per cent) had medium level of adoption where as one third of respondents (33.33 per cent) had low level of adoption. This is followed by 27.77 percent of the maize growers with high level of adoption. It could be understood that most of the respondents posses the medium levels of adoption.

The marketing behaviour of maize growers was studied with the identified eleven components namely mode of transport, distance of market, time of sale, grading behaviour, weighing behaviour, sale agency, terms and conditions of sale, payment pattern, pest protection behaviour, sources of knowing price trend and middle man involvement. It was found that Cent per cent of the maize growers reported that they transported their produce to markets. There were 68.89 per cent of the maize growers who used tractor for transporting their produce. Majority of the maize growers (52.22 per cent) sold their produce in nearby towns with the help of tractor. From the above findings it could be inferred that farmers preferred to sale their produce in the markets because of consumer preferences and more remunerative income. It
was observed during the survey that considerable proportion of the respondents owned tractor and therefore they utilized the tractor to transport the produce to nearby towns and outside the towns. Bicycles have been used for transporting the produce within the local village itself. Others used public transport like city bus for transporting the produce too far off places. 35.56 per cent of the respondents sold their produce to the wholesalers followed by local merchants (27.78 per cent). The wholesalers and the village merchants were easily approachable and well known. Existence of more number of retailers and commission agents in Coimbatore and Tirupur areas would have attracted 18.89 per cent and 14.44 per cent of the maize growers to market their produce through retailers and commission agents respectively. With regard to time of sale 46.67 per cent of the maize growers sold the entire produce immediately after harvest whereas 42.22 per cent sold their produce after initial storage. little more than half of the maize growers (52.22 per cent) graded their produce before marketing. The rest (47.78 per cent) did not grade their produce before marketing. The majority of the respondents (57.78 per cent) reported for having received full payment and the rest (42.22 per cent) received only partial payment. The wholesalers and village merchants who procure the entire produce from the farmers pay them reasonable amount. The private companies which are involved in contract farming seem to pay the entire amount during procurement. This could be a possible reason for the maize growers in receiving the full payment. two third (62.22 per cent) of respondents came to know the price trends in the market through neighbor farmers in the village. One fourth (20.00 per cent) of the respondents came to know the market trends from shops keepers. The fellow farmers living in the villages were found to have acted as the sources to provide market information to a vast majority of the respondents. Since the mass media communication and frequent extension agency contact were found more among the farmers, this could be one of the reasons for the fellow farmers to get updated with the recent price trends. middlemen partly assisted the marketing to 45.56 per cent of the respondents, whereas 22.22 per cent of them reported for marketing through the middlemen. Direct sale without the involvement of middlemen was a practice for 32.22 per cent of respondents. The maize growers who receive loan and advances from the village merchants sold their produce partly through middlemen. The persons appointed by the village merchants acted as middlemen to procure the maize produce during harvest on behalf of the merchants.

<table>
<thead>
<tr>
<th>Marketing behaviour</th>
<th>Numbers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>21</td>
<td>23.33</td>
</tr>
<tr>
<td>Medium</td>
<td>57</td>
<td>63.33</td>
</tr>
<tr>
<td>High</td>
<td>12</td>
<td>13.33</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>100.00</td>
</tr>
</tbody>
</table>

It could be inferred from the table that two fifth of maize growers (63.33 per cent) had medium level of marketing behaviour where as one third of respondent (23.33 per cent) had low level of marketing behaviour. This is followed by 27.77 per cent of respondents with high level of marketing behaviour.

**CONCLUSION**

In this study the findings that nearly 50.00 % of the farmers were all found to have medium level of adoption. This might be due to varied reasons viz., lack of participation in social organizations, low level of scientific orientation, low level of awareness on critical technologies that particularly influences greater yield. Marketing behaviour was studied under different dimensions. Mode of transport, distance from the market, time of sale, grading behaviour, weighing behaviour, terms and conditions of sales, payment pattern, pest protection behaviour, sources for price trend, conditions of sale and middlemen involvement. The data clearly shows that the existence of positive marketing behaviour was observed in the middle level farmers. This might be due to varied reason namely, distance access to market, knowledge in reasoning market trends, level of production which may lead to lower marketable surplus etc.
REFERENCES


