

A study on the Importance of Post-harvest Management and Marketing of Horticulture Produce in Mizoram

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Abstract: *In Mizoram horticulture crops has been grown more than two decades earlier. The soil and climate are highly suitable for growing a variety of horticulture crops. Several crop varieties have been introduced by the government and have proven to be successful. A large number of Mizo farmers have adopted horticulture farming as a means of livelihood. What is lacking is an efficient marketing system and post-harvest management of the produce.*

Keywords: *horticulture crops, marketing, post-harvest management*

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I. Introduction

Horticultural products play an important role in the society for generating income and livelihood of the poor section of the society. It also offers huge employment opportunities for local labourers and also contributes to the overall economy of the state. Since, horticultural farming is labour intensive, labour management is very sensitive and critical for success. Since the horticultural products are highly perishable, care needs to be taken during the harvesting and marketing of the products.

Agriculture and allied sector contributes only 16.17 percent of Gross State Domestic Product. In order to boost up the GSDP in Mizoram, high value crops with value addition and foreign exchange earnings need to be taken up which can only be fulfilled through horticultural crops so that the economic income of farmers can be enhanced manifold.

Post harvest losses in fruits and vegetables are very high. Minimizing these losses can increase meeting the demands without bringing additional land under cultivation. Improper handling and storage cause physical damage due to tissue breakdown. In Mizoram, post harvest infrastructure and management is taken up by Mizoram Agricultural Marketing Corporation (MAMCO) while processing is taken up by Mizoram Food and Allied Industries Corporation Ltd. (MIFCO). MAMCO has constructed more than 100 Rural Primary Markets and Wholesale Markets at various strategic locations.

II. Review of Literature

According to Sarswathy, Preethi, Balasubramanyan, Suresh, Revathy and Natarajan (2008), the three main objectives of applying postharvest technology to harvested fruits and vegetables are to maintain quality in terms of appearance, texture, flavour and nutritive value, to protect food safety and to reduce losses between harvest and consumption. The reasons for postharvest losses could be due to poor packaging, grading, transportation and marketing of the perishable produce.

Meena and Yadav (2001) have stressed the need for adopting aggressive marketing strategy coupled with adequate export infrastructure. The All India Coordinated Research Project on Post-Harvest Technology of Horticultural Crops had estimated the annual loss of fruits and vegetables at 30 percent in 1993-94 due to poor infrastructure and post-harvest handling. According to the CII-Mckinsey report, farmers in India receive much lower prices for their produce and the consumer pay much higher prices for agricultural commodities as compared to the USA or UK, because of the existence of too many intermediaries between the farmer and the consumer. Meena and Yadav further stated that the cultivation of vegetables is carried out mostly by small farmers, without any organizational set-up for packing, storage, transport and marketing. The farmers face problems of inadequate irrigation due of power shortages and lack of availability of good quality seeds. There exists a gap between potential and actual yields.

Peter (2009) has noted that with the economic developments taking place, agriculture is becoming more and more market oriented. Prices of horticultural products fluctuate widely from year to year, season to season, and even day to day. This variance makes horticultural production both profitable and very risky. Often, success depends on marketing skills and obtaining good prices rather than production expertise.

The FAO (Food and Agriculture Organization) Agricultural Services Bulletin 76 (2007) has mentioned that the production/marketing chain for horticulture produce is a two-way process. Produce flows from the rural areas into the cities and money and market information should flow back. As tastes in the city market evolve the rural community can use this market information to target its production accordingly. In horticulture farming, where prices are rarely regulated, financial viability depends as much upon business and marketing skills as on the farmer's technical expertise.

Goswami (2000) examines the problems and prospects of marketing horticultural crops in the north-eastern hill region of India. The following aspects are examined: area and productivity of horticultural crops, market regulation, enactment of market legislation, market infrastructure, market intelligence and market performance. The discussion reveals that the north-eastern region of India has ample scope for increasing the horticultural sector. However, the main problems in the region are lack of adequate market infrastructure (such as transportation network, storage, and processing facilities), inadequate market intelligence and extension, and the lack of efficient market legislation and regulation.

III. Objectives of the study

The objectives of the study are:

1. To understand the need for an efficient marketing organisation of the horticultural products.
2. To understand the importance of post-harvest management of horticulture produce in mitigating post-harvest losses for the farmers

IV. Hypothesis

The proposed research study will attempt to prove or disprove the following hypotheses:

Lack of proper post-harvest management and marketing of horticulture produce leads to loss of crops and lower income for farmers.

V. Research Methodology

For the purpose of this research, the following horticulture products that have made significant gains in the recent past have been selected:

1. Grape (Fruit crop)
2. Turmeric (Spice crop)
3. Chayote (Vegetable crop)

The study was conducted with the help of primary and secondary data. A structured questionnaire was developed and administered to horticultural farmers engaged in the cultivation of grape, turmeric and chayote. Simple random sampling method was employed for selection of sampling units. The structured questionnaire was successfully administered on 361 farmers (113 turmeric farmers, 90 chayote farmers and 158 grape farmers).

VI. Results and Discussion

Likert scale was used to find out the opinion of respondents regarding several marketing variables that are pertinent for horticulture marketing. The results are presented in the following table.

Table 1: Likert scale on opinion of respondents on marketing variables

Criteria	Strongly agree	Agree	No opinion	Disagree	Strongly disagree	No Response	Total
Customers prefer superior quality of horticulture produce	0 (0%)	128 (35%)	2 (1%)	4 (1%)	225 (62%)	2 (1%)	361 (100%)
Customers prefer to buy cheaply priced horticulture produce	40 (11%)	82 (23%)	114 (32%)	115 (32%)	8 (2%)	2 (1%)	361 (100%)
Domestic customers prefer to buy home grown horticulture produce	46 (13%)	149 (41%)	116 (32%)	38 (11%)	10 (3%)	2 (1%)	361 (100%)
Well established distribution chain is essential for effective marketing of horticulture produce	238 (66%)	103 (29%)	12 (3%)	6 (2%)	0 (0%)	2 (1%)	361 (100%)
Proper post harvest management (storage, processing etc) is essential for horticulture farming	220 (61%)	132 (37%)	6 (2%)	1 (0%)	0 (0%)	2 (1%)	361 (100%)

Source: Primary data

Figures in parenthesis shows percentages

From table 1, we can infer that majority (62 percent) of the farmers do not agree that customers prefer superior quality of produce. 23 percent of the respondents agree that customers prefer cheap produce whereas 32 percent disagree. Regarding customers preference for home-grown produce, 13 percent strongly agree, 41 percent agree, 32 percent cannot form an opinion, 11 percent disagree and 3 percent strongly disagree. Regarding the importance of a well established distribution chain, 66 percent strongly agree and 29 percent agree. On the subject of the importance of post-harvest management, 61 percent strongly agree and 37 percent agree.

In order to study the hypothesis, a null hypothesis is set up viz, H₀: Lack of proper post-harvest management and marketing of horticulture produce does not lead to loss of crops and lower income for farmers.

Table 2: Observation of loss of crops and leading to lower income due to the Lack of facilities in Post Harvesting and Marketing of Horticulture Products

Crops	Post harvesting		Marketing		Total
	Lack of proper storage facility	Poor processing facility	Lack of market for produce	Poor distribution network	
Chayote	15	16	3	0	34
Turmeric	18	13	9	14	54
Grape	23	17	20	13	73
Total	56	46	32	27	161

Source : Primary data

Table 3 : Expected table showing Loss of Crops and lower income due to Lack of facilities in Post Harvesting and Marketing of Horticulture Products

Crops	Post harvesting		Marketing		Total
	Lack of proper storage facility	Poor processing facility	Lack of market for produce	Poor distribution network	
Chayote	11.83	9.71	6.76	5.70	34
Turmeric	18.78	15.43	10.73	9.06	54
Grape	25.39	20.86	14.51	12.24	73
Total	56	46	32	27	161

Source : Calculated value

The above table 2 and table 3 shows that observed data and expected data of the lack of facilities for Poor Harvesting and Marketing of Horticulture products of Chayote, turmeric and Grape. From the above two tables chi square is calculated to test the hypothesis as follows:

$$\chi^2 = \sum_{k=0}^n [(fo - fe)2]/fe]$$

The calculated χ^2 is found to be 0.003889697 while the table value for chi square for 6 (r-1)(c-1) degrees of freedom at 5% level of significance is 12.592. Since the calculated value is much lesser than the table value, it is insignificant it does not support the null hypothesis that the lack of the marketing facilities and post harvest facilities does not lead to loss of crops and lower income. So it means that proper post harvesting and marketing needs leads to better crop management and more income for farmers.

VII. Conclusion and Suggestions

The present study reveals the importance of the application of marketing management principles in the horticulture production in Mizoram, which is of great importance in the development of economy in the state of Mizoram. Efficient post-harvest management of the produce is necessary to mitigate post-harvest losses of the produce.

In this day of high market competition and higher consumer demand, marketing is an important aspect that cannot be ignored. The horticulture farmers of Mizoram are largely unaware of the marketing techniques. They need to educate themselves in areas such as sales, distribution, promotion and pricing so that they extract the maximum benefits and profits from their trade.

Investment in post-harvest technology is still very minimal in Mizoram. The government needs to invest more in facilities such as cold storage, drying, transportation, processing, packaging and marketing to increase the income of the horticulture cultivators. Investment in post-harvest technology will reduce post-harvest losses for the farmers.

References

- [1]. Saraswathy, S., Preethi, T.L., Balasubramanyan, S., Suresh, J., Revathy, N., and Natarajan, S. (2010), *Postharvest Management of Horticultural Crops*, Agrobios, Jodhpur.
- [2]. Peter, K.V. (2009), *Basics of Horticulture*, New India Publishing Agency, New Delhi.
- [3]. Meena, R.K., and Yadav, J.S. (2001), *Horticulture Marketing and Post Harvest Management*, Pointer Publishers, Jaipur.
- [4]. Goswami, S.N., Singh, S.B. (2000), "Problems and prospects of marketing of horticultural crops in North-East India", *Agricultural Marketing*, Vol. 43, No. 1, 23-30.
- [5]. Horticultural Marketing, (2007), FAO Agricultural Services Bulletin 76.
- [6]. Chauhan, Gian C. (2004), *Marketing of Perishable Horticultural Produce*, in Sharma, V.K., "Advances in Horticulture", Deep and Deep Publications Pvt. Ltd., New Delhi.
- [7]. Singh, I.S. (2009), *Post-harvest Handling and Processing of Fruits and Vegetables*, Westville Publishing House, New Delhi.

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