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# Management of Transaction of Perishable Vegetable/Fruits

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**Abstract:** In this research paper with the help of survey method attempt was done to verify whether producer are gaining large share of profit and having complete control over transactions.

**Keywords:** Chi-square test farmer, wholesaler, retailer, consumer.

## 1. Introduction

Agricultural produce includes food-grains, vegetables and fruits. Among these agricultural produce, vegetables and fruits are the most perishable items which need different marketing strategy as well as financial strategy.

Yavatmal is an agricultural city in the state of Maharashtra, located in Vidarbha region in central India.The cluster type of sampling is take for this project. The objectives of the present study will be to survey the retail vegetable market and fruit market in order to know the ways of costing and selling the perishable items and how they accounts for loss due to perishable nature of items. The scope of the present study will be restricted to Yavatmal town only.

## 2. Literature Review

Supply Chain Management (SCM), currently a popular topic in research literature, breaches the boundaries of many academic disciplines.Food Supply Chains (FSC) are distinct from other product supply chains. The fundamental difference between FSC and other supply chains is the continuous and significant change in the quality of food products throughout the entire supply chain until the points of final consumption[1, 2]. In addition, FSC is complex as compared to other supply chains due to the perishable nature of the produce, high fluctuations in demand and prices, increasing consumer concerns for food safety[3-6] and dependence on climate conditions[6].

## 3. Research Methodology

The data can be collected from producer, i.e. farmer, wholesaler, retailer and consumer of vegetable and fruits. Questionnaire properly designed in Marathi language is used for this purpose. Secondary data can be made available from PanjabraoKrishiVidyapith Research Centre at Yavatmal, related books and internet.

## 4. The Factors Included in the Questionnaire

Questionnaire given in Appendix-I constituted of sections:

A. Personel information

B. Opinion about important related factors relating to many factors of agriculture as a profession and practice.

## 5. Results and Discussions

The tables and related graphs indicate the real picture of the research.

Table 1:Visual questionnaire Results for producer

| Sr. No. | Activity | No (%) | Yes (%) |
|---|---|---|---|
| 1 | Product personally transported &sale in wholesale market | 18.75 | 81.25 |
| 2 | Product personally transported & sale in retail market | 93.75 | 06.25 |
| 3 | Product directly sale at the farm | 81.25 | 18.75 |
| 4 | Proper vehicle used for transportation of perishable product from farm to market | 100 | 00.00 |
| 5 | Vehicle required for transportation of perishable product is immediately available after packing | 100 | 0.00 |
| 6 | Proper packing is done for transportation of perishable product | 75.00 | 25.00 |
| 7 | Special care taken during transportation of perishableproduct | 100 | 00.00 |

| | | | |
|---|---|---|---|
| 8 | Cost of your Agricultural produce to be sold is decided by yourself | 100 | 0.00 |
| 9 | Cost of spoiled product up-to reaching to the market is added in the sale cost of balance material | 0.00 | 100 |
| 10 | Minimum selling cost is decided by considering the expenditure incurred on production, picking, packing, transportation, commission of middlemen | 0.00 | 100 |
| 11 | There is restriction on the sale cost due to same type of product of other producer available for sale in the market | 87.5 | 12.50 |
| 12 | Proper storing arrangements available for perishable product in the market | 00.00 | 100 |
| 13 | Proper care is taken for extension of shelf life of product to be sale | 25.00 | 75.00 |
| 14 | Product store in the cold storage product from farm to market | 0.00 | 100 |
| 15 | Financial position improved due to production of perishable vegetables and / or fruits | 50.00 | 50.00 |

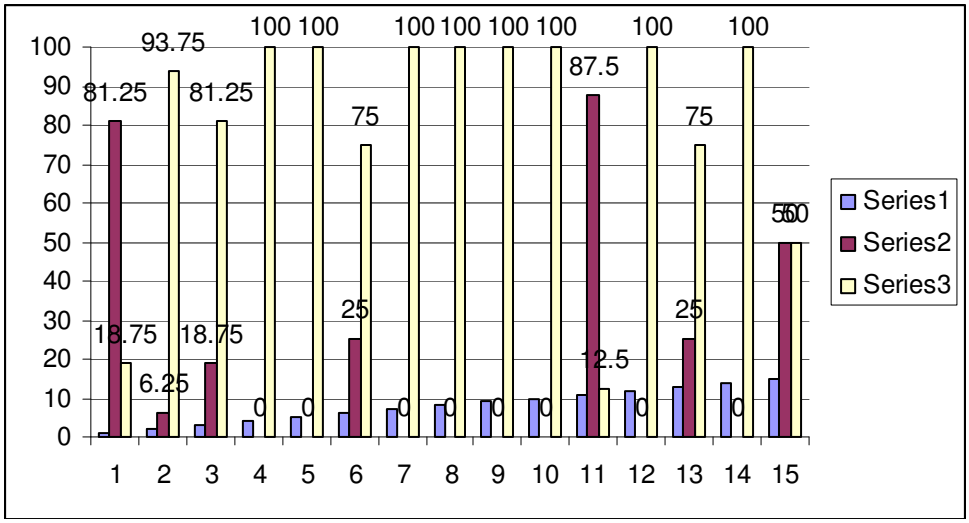


Figure 1

## 6. Perpetration

1. Out of 16 producer, 13 producers have personal transport and sale theirproduce in wholesale market and they fave in an average minimum loss of 25% of total production due to spooling of product because of improper packing as well as poor and time spending transportation facility.
2. Out of 16 producers, only one producer have personal transport and sale their produce in retail market as a retailer.Hence he earns much more than other producer because he needs not to pay any commission to the middleman. But also face minimum average loss of 25% of total production due improper packing as well as poor and time spending transportation facility.
3. Out of 16 producers, product of 3 producers was purchased and transported by middleman from farm. Hence they earn much more than other producer because they need not to engage manpower for picking, packing as well as arranging proper vehicle for transportation also not face any loss to supply the product upto the market.
4. No one utilized proper, i.e. refrigerated vehicles for transportation to improve the shelf life of perishable items.
5. Every one fails to arrange any vehicles immediately after packing of the product.They always wait atleast 1 to 2 hours for vehicles because they have not in position to purchase and manage own vehicles. Through time saving is very important factor for perishable product.
6. Out of 16 producers, fruit products of only 4 producers have properly packed for minimize spoiling during handling and transportation.
7. Out of 16 producers, no one has taken any special care during transportation to improve the shelf life of perishable items.
8. Costs of the all 16 producers of perishable agricultural produce to be sold not have power to decide by themselves.
9. All 16 producers not in the position to add the cost of special product upto reaching to the market in the sale cost of balance material.

10. All 16 producers not in the position to decide the minimum selling cost of their product by considering the expenditure incurred on production, picking, packing, transportation, commission of middlemen and their profit. In most of the time they have not recovered their expenditure on particular product.

11. Out of 16 producers, 14 producers have face restriction on the sale cost due to same type of product of other producer available for sale in the market.

12. No any proper storing arrangements available for perishable product at the wholesale and retail market.

13. Out of 16 producers, only 4 producers have taken proper care for fruits only for extension of perish period, i.e. shelf life of product to be sold.

14. All 16 producers not utilised the facility of cold storage provided by M/S Malik Cold Storage at Yavatmal, though it is very chip proprietor. M/S Malik Cold Storage told that they charged only 15 paisa per kg. per months and 8 paisa per kg. per week.

15. Out of 16 producers, only 8 producers think that their financial position improved due to production of perishable vegetables and / or fruits. Because they compare them to other agricultural producer but fact is that no one in the position to purchase and manage the own vehicle for efficient as well as proper transportation of perishable product.Also not in the position to wait to earn more money by storing their product in the cold storage.Because they are not in position to retain for payment of their produce after production.

## 7. Testing of Hypothesis by Chi-Square Test

Null hypothesis = $H_0$ = Producers are gaining large share of profit and having complete control over the transaction

Table 2

| Sr. No. | Observed % ( O) | Expected % (E) | (O-E) | (O-E)2/E |
|---|---|---|---|---|
| 1 | 81.25 | 10 | 71.25 | 508 |
| 2 | 6.25 | 100 | -73.75 | 87.89 |
| 3 | 18.75 | 100 | -81.25 | 66.02 |
| 4 | 0 | 100 | -100 | 100 |
| 5 | 0 | 100 | -100 | 100 |
| 6 | 25 | 100 | -75 | 56.25 |
| 7 | 0 | 100 | -100 | 100 |
| 8 | 0 | 100 | -100 | 100 |
| 9 | 0 | 100 | -100 | 100 |
| 10 | 0 | 100 | -100 | 100 |
| 11 | 87.5 | 10 | 77.5 | 600.63 |
| 12 | 0 | 100 | -100 | 100 |
| 13 | 25 | 100 | -75 | 56.25 |
| 14 | 0 | 100 | -100 | 100 |
| 15 | 243.75 | 1120 | -876.25 | 2074.6875 |

$lX^2 = \mathring{a}(0-E)^2 / E = 2074.69l$ Degree of Freedom $= df = (n-1) = 14-1 = 13.$

## 8. Conclusion

From table 2, value of $X^2$ for 5% of significance $= 22.36l$ .Since the observed $X$ is very larger than the table value, hence the null hypothesis that the producer are gaining large shape of profit and having complete control over the transaction is wrong. Hence our hypothesis that the producer carryout the business under compulsion without having control over the transaction is proved.

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