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A study of post-harvest management in Kinnow: A managerial analysis

Babita Kherwa**Abstract**

According to the report of India's National Commission on Agriculture, defects and in adequate facilities in postharvest handling transport storage and marketing cause up to 20 to 40 percent loss of fruit and vegetables. This is true for Kinnow as well and the value of this loss amounts to millions of rupees annually. Following are the prominent causes of pre and Post Harvest loss of Kinnow in India. Poor Farm Management, Improper Harvesting, Absence of anti-fungal treatment, Delays in the lifting of Harvested crop, Poor non-refrigerated transportation, Below standard Fruit Markets (Sabzi-Mandies), Inadequate Packing, Absence of proper cold storage facility.

It is a study concerning Kinnow fruit processing units of Southern Punjab. It is a study of Human Resource employed in it and finance requirement for running Kinnow fruit processing units. This it is a study of Human Resource management and financial management.

The Study is concerned to the Southern Punjab Kinnow Production Area. Only Kinnow fruit processing units is under Survey. It is delimited to 50 Kinnow Processing units running in the district of Fazilka and Muksar. Personal Interview was conducted to serve the purpose of the Study.

The subjects were taken from Southern Punjab. Fifty Kinnow processing units were under the survey. These units were selected to serve our purpose so Random purposive sampling procedure is applied to select the samples and collect the data. For this case study, interview of owners of the processing plants were conducted and found that most of the owners do not possess professional degree. The employees and workers are untrained and going with their own experience only. Most of the plants availed the subsidy but there is more need of Government Funding for upgradation of technology, training of the workers and there is a need to educate the owners about the world level standards. There is a need to develop the professional ethics in the industry also.

Keywords: Post-harvest management, Kinnow, managerial analysis

Introduction

In India, agriculture is the largest sector which provide livelihood to nearly 50% of up population of the labour force. It is because of its central importance in the economy that the government has identified agriculture as one of the major drivers of growth. In this sector production of fruits and vegetable plays pivotal role. In fact Nature has blessed this country with ideal climate for growing a wide range of delicious fruits and large varieties of vegetables. Over the years, India's experts have developed unique stains of exotic fruit varieties unmatched for their rich flavor and taste. From the selection of the finest fruits grown, a reasonable quantity is processed and property packed for sales and consumption in local market and exporting abroad.

Post Harvest Issues

According to the report of India's National Commission on Agriculture, defects and in adequate facilities in postharvest handling transport storage and marketing cause up to 20 to 40 percent loss of fruit and vegetables. This is true for Kinnow as well and the value of this loss amounts to millions of rupees annually. Following are the prominent causes of pre and Post Harvest loss of Kinnow in India. Poor Farm Management, Improper Harvesting, Absence of anti-fungal treatment, Delays in the lifting of Harvested crop, Poor non-refrigerated transportation, Below standard Fruit Markets (Sabzi-Mandies), Inadequate Packing, Absence of proper cold storage facility.

Kinnow Distribution and Marketing Channel Current Status

Harvested Kinnow is currently being marketed and consumed through the following channels.

Wholesale (Sabzi Mandi) Markets

Wholesale markets of fruits and vegetable are commonly known as 'Sabzi-mandies' and these markets exist in almost every major city.

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Seasonal crops are brought mostly by middleman (Theka-i-Dar) and in some cases by grower himself in trucks or trolleys markets. Here the commodity is auctioned and the price is mostly based on the principles of supply and demand.

Juice Manufacturing factories

Juice processing plants consume approximately 10% per season of the total available crop of Kinnow. These processing factories produce a Kinnow extract known as frozen concentrated Kinnow juice. Kinnow because of its unique taste and aroma when mixed with orange juice gives its flavor and better taste.

Export of fresh Kinnow through processing units.

Waxing and Processing of Kinnow is done to maintain its Freshness and to enhance its shelf life According to an estimate shelf life is enhanced to 90 days provided 4-10 degree centigrade is maintained. At present fresh Kinnow is being processed at both local and imported processing units.

Statement of the Problem:-

The Statement of the Problem is "A Study of Post Harvest Management in Kinnow - A Managerial Analysis". It is a study concerning Kinnow fruit processing units of Southern Punjab. It is a study of Human Resource employed in it and finance requirement for running Kinnow fruit processing units. This is a study of Human Resource management and financial management.

Objectives of the Study:-

1. To Assess the working of kinnow fruit processing units.
2. To Study the factor affecting work performantce
3. To determine the skill requirement for the labour running the unit.
4. To assess the financial requirement for establishing and running the fruit processing units.
5. To determine the hurdles while processing the fruit at different stages it moves.
6. To determine the hurdle while processing the fruit at different Stages it moves.

Hypothesis:- IT is hypothesised that

1. Working of the Kinnow processing unit is both manual as well as automatic.
2. Kinnow fruit processing unit is labour Intensive and facing critical labour shortage of skilled worker.
3. Load shedding and high tariff of electricity is a major obstacle in Kinnow fruit processing unit.
4. Management involved in Kinnow fruit processing units are Non-qualified and Non Skilled.
5. Expensive big machinery is used for processing the fruit.
6. The Operator Operating Machinery in Kinnow fruit processing unit is self skilled.
7. Most of the Staff Member works on temporary basis and Seasonal Basis

De-limitation of the Study

1. Study is concerned to the Southern Punjab Kinnow Production Area.
2. Only Kinnow fruit processing units is under Survey
3. It is delimited to 50 Kinnow Processing units running in the district of Fazilka and Muktsar.
4. Personal Interview was conducted to serve the purpose of the Study.

Limitation of the Study

Inspite of taking due diligence in conducting the survey, the information may vary due to any change in any of the relevant factor e.g. Plant Management market prices, inflation, depreciation rate, energy crisis, export policies etc. and the actual results may differ substantially from the presented information.

Significance of the Study

1. To support skill development and create employment generation.
2. To promote growth of Horticulture.
3. To Enhance Kinnow production, augment farmer's income
4. To improve the performance of workers by providing them proper training, education etc.
5. Enhance the efficiency of machinery, quality packing and proper transportation to avoid wastages and compete in the world market.

Review of Literature

To minimize post-harvest losses of fruits and vegetables it is of high importance for the actors to apply suitable post-harvest technology procedures, in order to have long shelf-life and acceptable safety and quality of fruits (Kader, 2004)^[2]. Even though fruit and vegetables are produced in high quantities and with acceptable quality the products also need to reach the consumer in an efficient way, or losses will occur (Kader, 2004)^[2].

This is the case in many developing countries, often due to bad communication between actors and shortage of market information. Another factor contributing to losses of fresh produce is the poor wholesale markets in many developing countries. The facilities like storage, unloading, loading and packaging are often poor or do not exist at all. Adequate transportation is another essential part of avoiding losses, which is often lacking in developing countries (Kader, 2004)^[2]. To have access to suitable equipment for harvest and post-harvest practices is important in order to minimize post-harvest losses (Kader, 2004)^[2]. Knowledge and information regarding how to best handle the fruit to minimize losses are of high importance, but without the proper equipment this is for no use. The access to knowledge, information and equipment are often low in developing countries (Kader, 2004)^[2].

According to Kitinoja *et al.* (2011)^[5] there are three strategies to lower losses of fresh produce; (1) use cultivars that have potential to last long after harvest, together with good flavor and high nutrition, (2) maximizing yield without lowering quality and (3) optimal handling of the product at all post-harvest stages.

Aman Ullah Malik (2011)^[1] Citrus industry in many parts of the world, especially in developing countries, has been facing numerous postharvest problems, leading to both high quantitative as well as qualitative losses and an overall reduction in the profitability of the industry. The improved understanding of citrus physiology, interacting factors, and the latest technological advances has made it possible to reduce theses losses to a great extent and to make it a sustainable and profitable enterprise. The current paper will provide an overview of the postharvest handling of fresh citrus fruit.

Research Methodology

To achieve the purpose of study, the procedure adopted like selection of sample, tables and diagrams, flow chart of Kinnow processing units, Statistical procedure will be discussed in detail in this chapter.

Samples

The subjects will be taken from Southern Punjab. Fifty Kinnow processing units will be under the survey. These units will be selected to serve our purpose so Random purposive sampling procedure is applied to select the samples and collect the data.

Data Collection

Following identified Primary and Secondary sources will be used to achieve the aim of this study.

Primary Source

Interviews, with the entrepreneurs, workers will be conducted. Opinions of the farmers will be taken to provide information relating to quality of kinnow, their cutting and transportation their problems etc.

Secondary Source

1. Published and printed work i.e. books, journals, research work, newspaper and articles
2. Internet Sources.

To find out the purpose of study data's were put into statistical procedure. Tables and diagrams were prepared to provide information.

Conclusions

1. It was found that most of the owners do not have any professional degree and they are not technically trained.
2. It was found that owners using both computerised and manual account books and mostly dependent on hired accountant.
3. It was found that the processing plant are mechanical in nature and there is a big need of upgradation of technology. These plants are not used in full capacity and averagely using for 100 days only.
4. It was found that operators supporting the plant and machinery do not having any professional degree and they are doing with their experience only and same is in the case of other labours also.
5. It was found that supervisors, plant labours, packing labour are also not professionally trained and they are doing with their own experience which is a big hurdle to maintain the quality and the owners are facing lot of complaints regarding their packing and loading.
6. It was found that owners are hiring the employees mainly on daily wages seasonly and there is no norms and standards for their quality job. The owners not securing the employees by providing them provident fund, ESI etc.
7. It was found that most of the owners are not aware about the world level standards and norms for the exports and due to less knowledge, they have no ideal to compete the world.
8. It was found that kinnow processing plants are subsidised by the Central Government under National Horticulture Mission Schemes and most of the processing plants having knowledge about the subsidy and tried to avail the subsidy. They found it helpful but industry is in need of

increased subsidy. Most of the owners dependent on other professionals to get the subsidy and they were never educated by the Government departments.

Recommendations

1. It is recommended that this is the main industry of this area now a days and provide a big employment to the local as well as the migrant labourers so the government should keep in touch with the owners to facilitate them and to make the aware about the Government policies, world level standards, exports, upgradation of technology.
2. It is recommended that Government should set up professional training institutes to train the owners, supervisors, operators, labours.
3. It is also recommended that Government should help the owners to set up the Automatic Packing Plants and photogenic, vision based, weighing based, optical fibre graders to meet the world level standards.
4. There is a lot of scope for research scholars to study the other variables related to the processing plants, post harvest issues, economic conditions of plants, economic conditions of employees, economic conditions of kinnow production etc.
5. The industry is at a stagnant position and Government should take care to upgrade the plants.

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