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# Post-Harvest Management of Agricultural Produce

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**Abstract:** *The minimization of wastage of agricultural produce is the ultimate goal of post-harvest management. The post-harvest management has increasing population and shrinking agricultural land and other resources. Present situation is the main global challenge to ensure food security in a sustainable manner safe to mankind and environment. The production of agricultural crops have increased during the recent years, but the development and adoption of post harvest technology is lacking and resulting in huge post harvest losses. The factors which affect on post harvest during harvesting, storing, transporting, and marketing is microbial activity. The highly perishable crop like horticultural produce need much more attention and to ensure promotion of processing and value addition. The value chain for processing has become a important to improve the food safety and strengthen national food security. The value chain in post-harvest management of horticultural crops mainly comprise of pre-harvest factors, harvesting, market preparation (common storage, sorting, grading, packaging and on-farm storage), transportation, storage by-product waste management.*

**Keywords:** Agricultural produce, economics, harvest, Post-harvest management, quality, Post-harvest techniques in vegetables. Post-harvest management, processing of vegetables

## I. INTRODUCTION

### 1.1 Objectives

- To improve awareness and understanding of environmental impact of product horticulture
- The use of such resources in a concentrated space and time has the potential to negatively impact on the local environment and worker welfare.
- In addition the transport of horticultural produce over long distances, particularly by air transport, and reported in term of food miles, is known to have a negative contribution to
- The overall process leads to postharvest deterioration of the produce. However, the losses can be reduced with adoption of postharvest management and use of processing technology of vegetable crops

## II. RESEARCH DESIGN AND METHODS /RESEARCH METHODOLOGY

The present study will be mainly based on primary and secondary sources of data. Primary data will be field based study and survey method where data will be collected through structured questionnaire.

### 2.1 Preliminary Work / Survey

This research is directly and indirectly contributed in understanding of post harvesting of crop issueOn horticulture production . It improves awareness of the public and communities to adapt to the impact on crop production

### 2.2 Expected Outcome

1. Researchers are trying to find out how to increase the horticulture production. And which environmental impact are affect the horticulture product
2. Research is useful to find out which crop is more affected by environment

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3. Research are trying to find out how the understanding of wider issues relating to the environment has developed over recent years

**2.3 Benefits to the Society**

1. Cultivation are dependent on the environment temperatures and carbon dioxide can increase crop yields. Chief benefits of global warming are fewer winter deaths and lower energy costs, better agricultural yields maybe richer biodiversity
2. Post-harvest management practices Post-harvest losses can be reduced by adopting breeding technologies for longer shelf life, improvement of pre-harvest factors and harvesting techniques, proper methods of handling, marketing, packaging, transportation and storage, development of appropriate processing technology change losses to horticulture production costly disruptions to society

**2.4 Cost Benefit Analysis**

This research will not be required that much cost for functioning. Here researchers trying to use reviewed 221 papers that used crop models to assess impacts of environment on horticulture production. The benefit of work is nothing but due to research we findout longer frost-free seasons, increases in growing degree days, and even increased atmospheric CO2 can, in theory, lead to better harvesting if crop yields and productivity..

## III. FUTURE SCOPE

Post-harvest technology useful in maintaining quality of agricultural produce .the importance of post-harvest, management is that it has been capability to meet food requirement of growing population by eliminating loss, making more nutritive food item from raw commodities i.e. fruits and vegetable, and by proper processing and fortification.

## IV. SWOC ANALYSISL/ LIMITATION

**Strength**

- Good climate for horticulture production
- Relative low labor cost
- Improved business environment

**Weakness**

- Lack of reliable data and weak rural infrastructure
- Limited access of finance
- Unclear land tenure system combined with land scarcity and growing population.

**Opportunity**

- New available techniques to improve productivity and quality of the crop (product and process upgrading)
- Reduce sing post-harvest losses via processing crop, transforming into marketable food product (functional upgrading)

**Challenges**

- Climatic change – un predictable weather pattern and lack of historical data undermine potential for development of agriculture insurance
- Inflow of free product, programs and food aid from donor countries may disrupt internal , market

## V. CONCLUSION

A study was conducted on the effects of postharvest handling and storage temperature on the quality and shelf of produce during 2021-2022. Which revealed that rough handling of produce can result in the destruction of the fruit cell wall leading to softening and reduced marketability of the produce. Also, high storage temperature can result in

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increased respiration (3.8 mlCO2/kg-h) and ethylene production (7.85 µl/kg/h) significantly as well as accelerate ripening (16.80) and weight loss (97.08 %). Therefore these conditions (rough handling and high temperature) accelerate the metabolic rate of produce and thereby reduce the shelf life of the produce. This research is based on the study on shelf life and quality of produce by using post-harvest technique like produce packed in perforated (0.25%) polyethylene bag and kept at ambient temperature (20-25 °C) & relative humidity 70-90%) condition resulted in substantial reduction in decay and weight losses.

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