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## Introduction

Kenya has a favourable climate for high guava production. The fruit grows naturally and unattended to. However, it is neglected leading to high postharvest losses due to limited processing and preservation, as well as poor marketability.

The fruit is highly prone to mechanical damage which reduces its shelf life. It attacked by numerous diseases that cause fruit rotting leading to the huge losses (Soares-Colletti et al., 2015)

## Study Objective

- To establish Post Harvest Handling, Hygiene Knowledge and Practices of guava fruit Handlers in Kitui and Taita Taveta counties, Kenya.

## Materials and Methods

A cross-sectional baseline survey using semi-structured questionnaires utilizing the open Data Kit (ODK), Focus group discussion and key informant interviews. A total of 417 respondents were interviewed.



Fig 1: Post harvest losses of guava in Kitui and Taita Taveta, Kenya

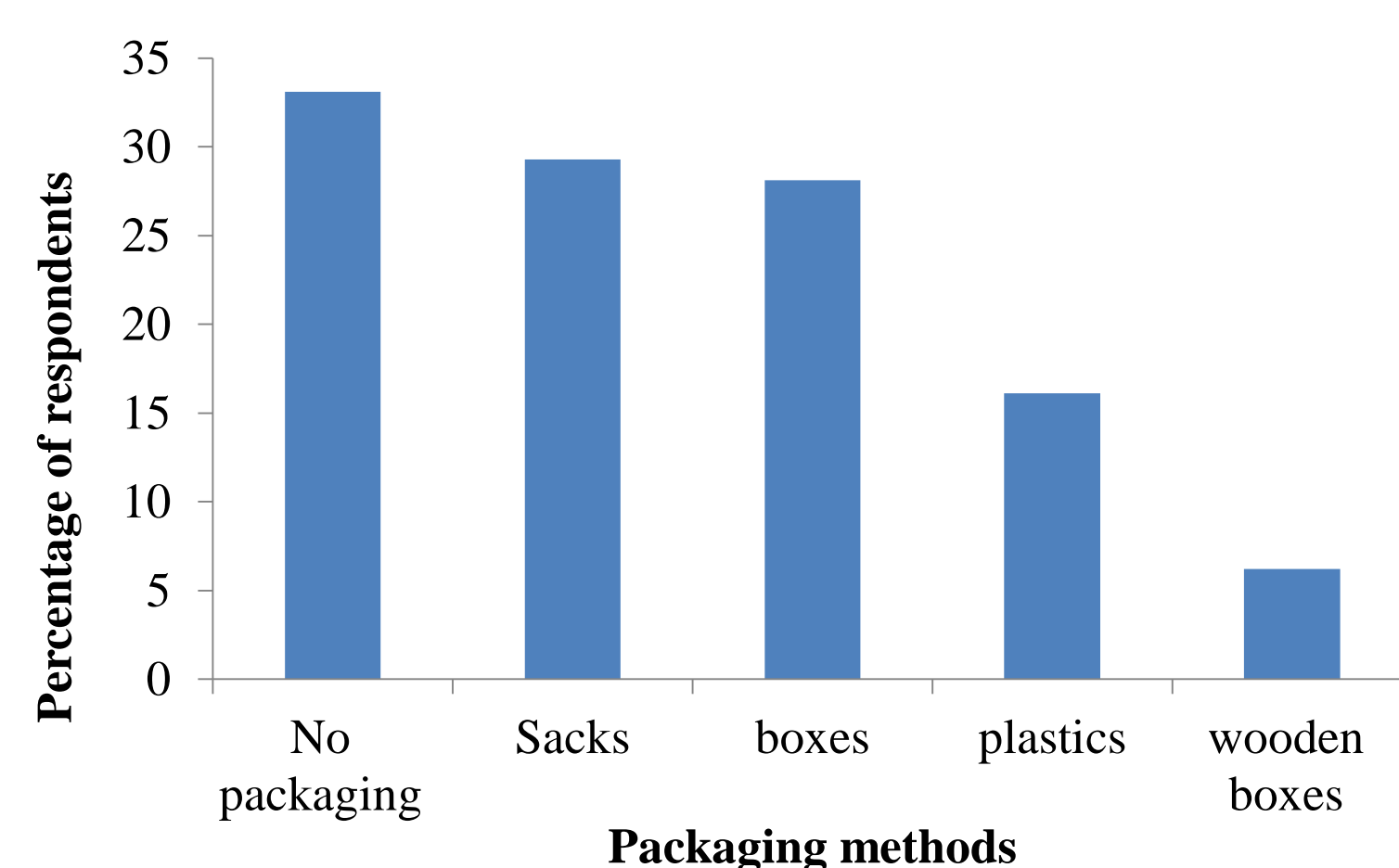


Fig 2: Packaging of guava fruit in Kitui and Taita Taveta, Kenya.



Fig 4: Guava varieties found in Kitui and Taita Taveta, Kenya.

## Results

- The results showed that the main indicative maturity indices of guavas in Kitui and Taita Taveta were skin colour (98.59%, 92.12%) and full ripe level (38.79%, 18.72%) respectively. Storage of harvested fruits was significantly different ( $t(415) = 2.8, P < 0.05$ ) between the two and relatively uncommon and for very short duration, with Kitui at 41.6% and Taita Taveta's at 55.2% of storing farmers. Guava shelf life in the two counties differed significantly ( $t(415) = 8.4, P < 0.001$ ) averaging  $3.4 \pm 1.8$  and  $4.2 \pm 1.9$  days in Kitui and Taita Taveta respectively. Most respondents did not package guavas (33.1%) and the few who package use sacks (29.3%) as the main form packaging.
- More than seven in every ten households (76.7%) had experienced post harvest losses
- A cluster analysis indicated that farmers either had high or low hygiene and postharvest knowledge with female farmers being more knowledgeable than male.

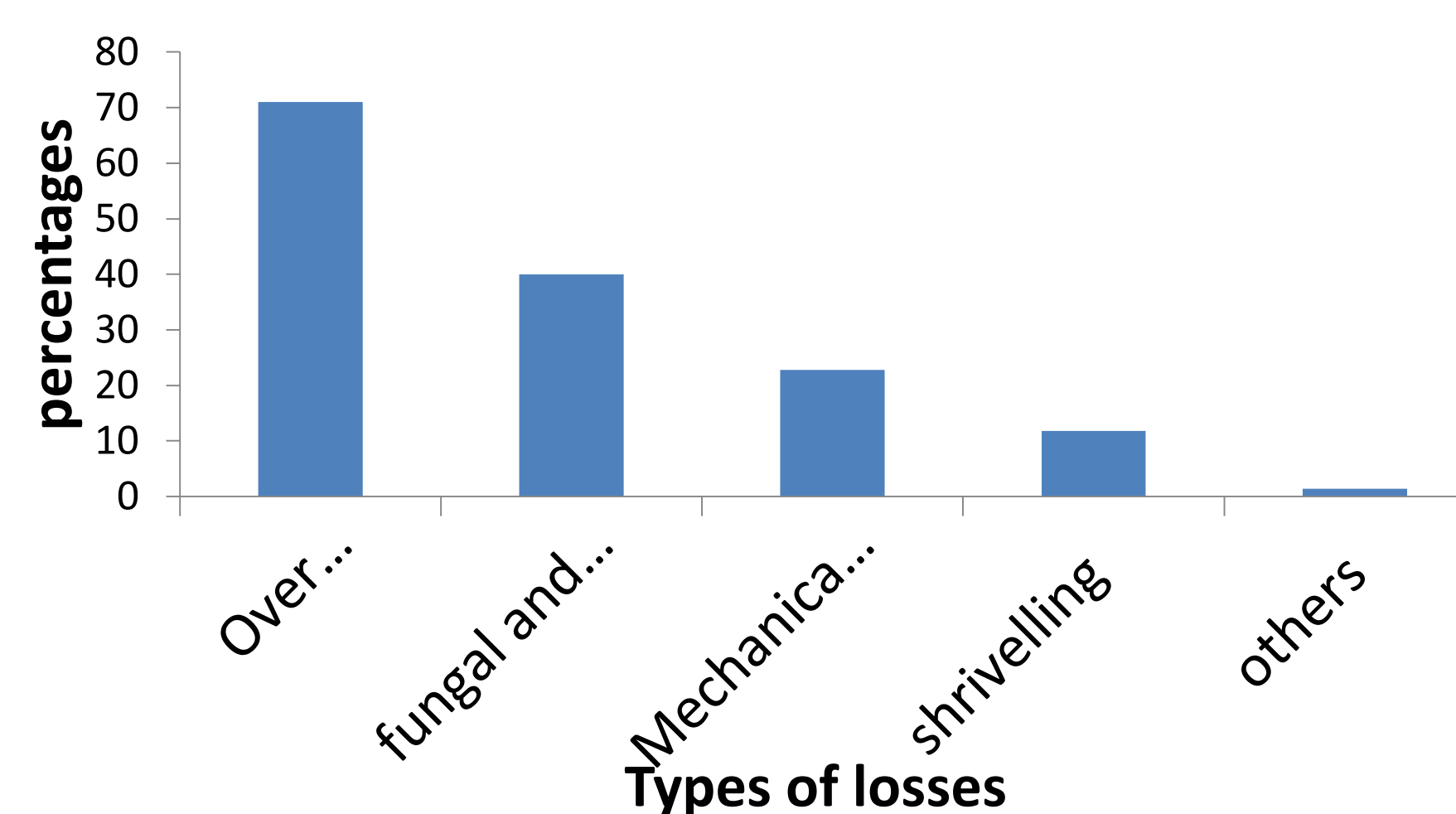
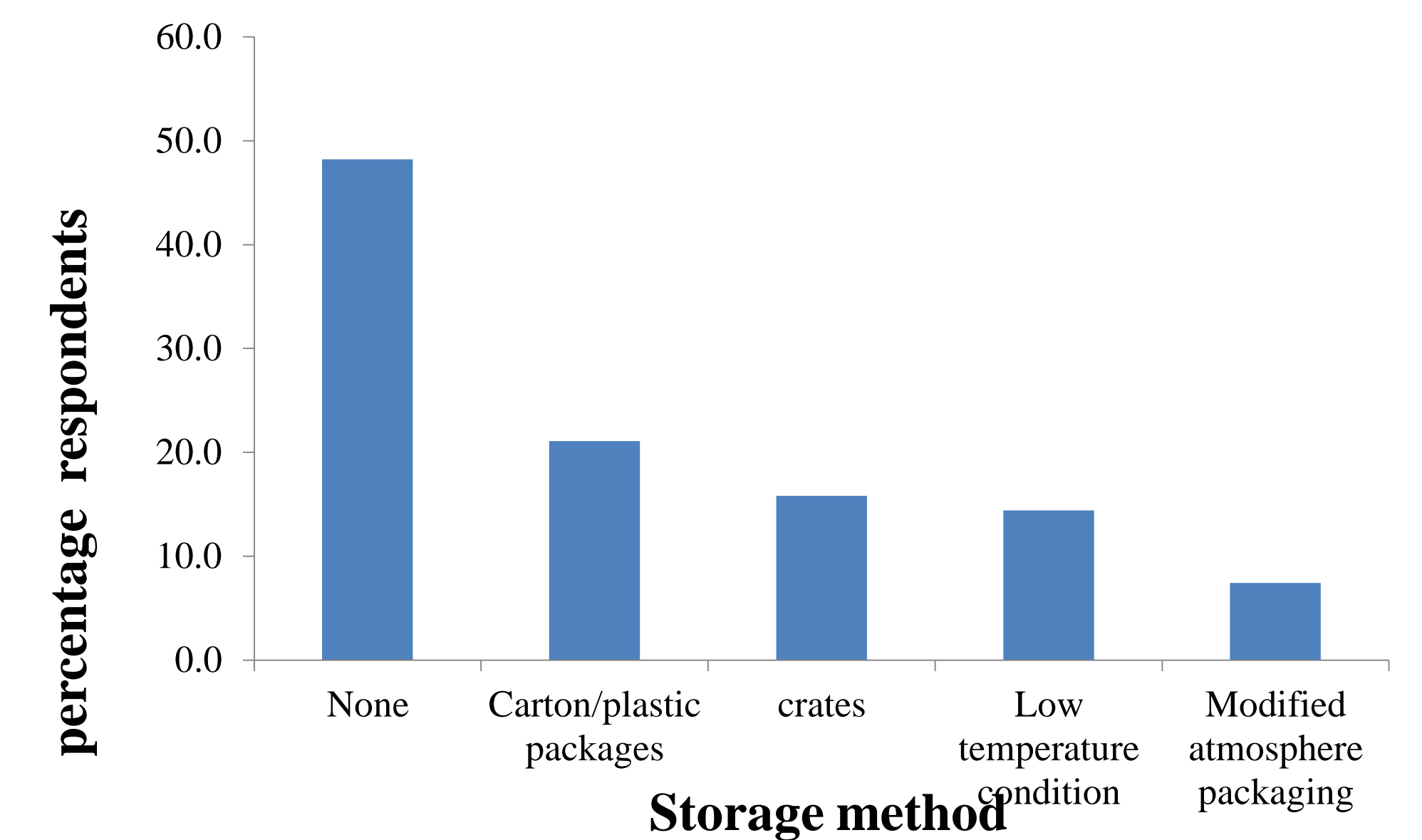


Fig 3: Types of guava losses experienced in Kitui and Taita Taveta, Kenya



Guava storage methods used in Kitui and Taita Taveta

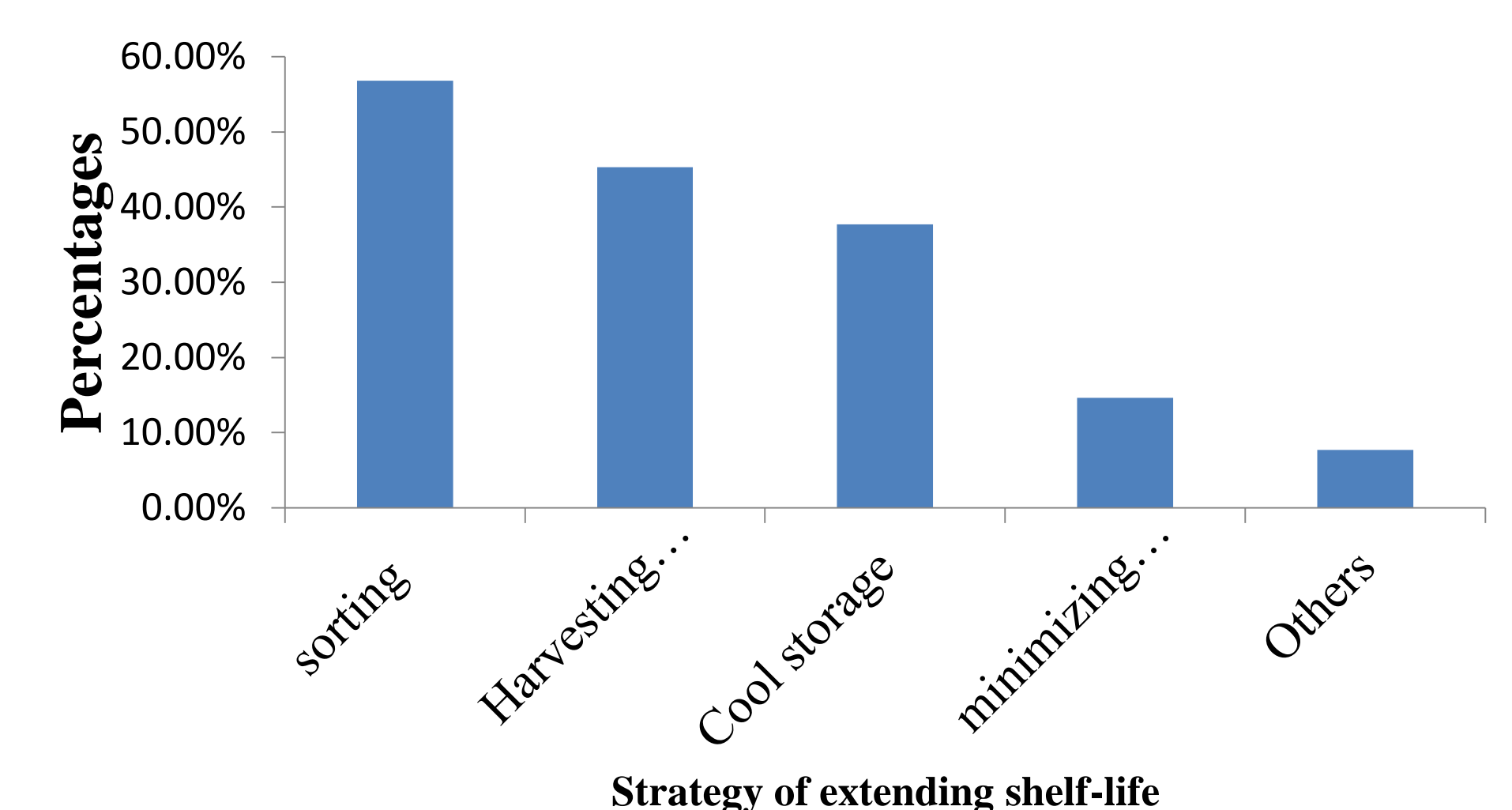


Fig 5: Strategies used to extend guava shelf life in Kitui and Taita Taveta, Kenya

## Discussion

- The guava value chain in Kenya remains highly underexploited as it is a neglected crop and not processed.
- Low consumption has contributed to huge post harvest losses. Over 60 million tonnes of guava is lost in Kenya annually.
- The losses are majorly due to pests and diseases and poor post harvest management practices
- There is lack of knowledge on the guava growth trends and post harvest handling practices

## Conclusions

- Guava grows wild and farmers term it non-valuable. Huge post harvest losses are experienced due to low value addition and consumption .It is rich in vitamin C, Vitamin A and antioxidants which are required to boost the immune system.

## Recommendation

- There is need for guava value addition and processing to reduce the huge post harvest losses.

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