

Efficacy Of Eucalyptus Ash (*Eucalyptus Globules L*) On The Tomatoes' (*Solanum Lycoperscum*) Shelf Life Under Room Temperature Storage Conditions In Central Uganda Tumwizere Collin, Dr.Murongo

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Introduction

The cultivated tomato, (*Solanum lycopersicum L.*) is the world's most highly consumed vegetable due to its status as a basic ingredient in a large variety of raw (Wu et al., 2022), cooked or processed foods. It belongs to the family Solanaceae, (Lima et al., 2022) which includes several other commercially important species. Tomato is grown worldwide for local use or as an export crop. In 2014, the global area cultivated with tomato was 5 million hectares with a production of 171 million tons (Camara et al., 2022), the major tomato-producing countries being the People's Republic of China (hereafter "China") and India (FAOSTAT, 2017). Tomatoes can be grown in a variety of geographical zones in open fields or greenhouses, and the fruit can be harvested by manual or mechanical means (Masetti et al., 2020).

Methodology

The researcher used a Completely Randomized Block Design which was a plan, strategy and investigation structure in a certain element, so this was used as a tool for obtaining the answers to research questions and problems. This was used in obtaining an operational plan in executing a few required steps for completing the research and ensures that the chosen research design was as sufficient and adequate as possible for seeking the authentic findings, answering the objective of the study and pointing sharply on research questions. The treatment which was replicated into three different quantities; this treatment was eucalyptus ash under measurements of 0.5g, 1g and 1.5g and the control where no ash was added to the tomatoes.

Results & Discussion

Analysis of variance showed that different quantities of eucalyptus ash based storage media significantly ($P < 0.05$) influenced decay percentage in stored tomatoes (Table 2 and Figure 4). The results indicated that the first two weeks of storage and data collection, tomatoes stored in the different eucalyptus ash based storage media showed no significant differences ($P < 0.00$) in decay percentage. The results also indicated that the different eucalyptus ash based storage media and control gave the same decay percentage of 0.00% in week one and week two. This could be attributed to the fact that in the first two weeks, tomatoes had not fully undergone physiological changes which can lead to rotting. On another hand, in the first two weeks of storage, tomatoes had not yet started losing water to the surrounding which could favor microbial attack. The results indicated that tomatoes stored in 1.5kg of eucalyptus ash gave the lowest significant ($P < 0.00$ and < 0.003) decay percentage of 7% and 79% in week three and eleven of data collection respectively. The results further indicated that there were no significant differences in same weeks among tomatoes stored in 1.5kg of eucalyptus ash for instance in week three and four which gave a decay percentage of

Conclusion

It was concluded that 1.5 kg of eucalyptus ash gave the lowest decay of tomatoes, this further gave the lowest weight loss and also the lowest level of softness of the tomatoes.

Keywords

Eucalyptus, Bio ash, Soggy, decay percentage, tomato