

Effects of Roof Materials on Onion Storage

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Abstract : Periodic scarcity of onion requires urgent solution in Nigerian agro-economy. The high percentage of onion losses incurred after harvesting period is due to non-availability of appropriate facility for its storage. Therefore, some storage structures were constructed with different roofing materials. The response of the materials to the weather parameters like temperature and relative humidity were evaluated to know their effects on the performance of the storage structures. The temperature and relative humidity were taken three times daily alongside with the weight of the onion in each of the structures; the losses as indicated by loss indices like shrinkage, rottenness, sprouting and colour were identified and percentage loss per week determined. The highest mean percentage loss (22%) was observed in the structure with iron roofing materials while structure with thatched materials had the lowest (9.4%); The highest temperature was observed in the structure with Asbestos roofing materials and no significant difference in the temperature value in the structure with thatched and Iron materials; highest relatively humidity was found in Asbestos roofing material while the lowest in the structure with Iron materials. It was conclusively found that the storage structure with thatched roof had the best performance in terms of losses.

Keywords : onion, storage structures, weather parameters, roof materials, losses

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