THE VIABILITY AND SURVIVAL OF COFFEE (*Coffea robusta S-274*)SCIONS AS AFFECTED BY PACKING MATERIALS AND STORAGE DURATIONS

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ABSTRACT

A total of 1,200 pieces of predefoliated coffee scions taken from the registered mother trees of *Coffea robusta S-274* were packed in newspaper, cheesecloth and cottonette by 20 pieces each and were stored for a period of 1, 3, 5, 7, and 9 days under room temperature before grafting. Viable scions of each package from the storage were further grafted on the 8 months old sexually propagated rootstock and were observed for a period of 60 days.

Wetted coffee scions packed in different materials and stored at different durations were hydrated and had significantly increased in weight. Higher weight increase was taken from scions stored for 9 days and from scions packed in cottonette.

The viability of coffee scions was significantly affected by the kind of packing materials used and the duration of storage employed. Higher viability percentage was taken at scions stored for 1 day and 3 days respectively and on scions packed in newspaper. Scions stored for a period of 5, 7, and 9 days have relatively low viability. Lower viability percentage was taken from scions stored for 9 days.

Early occurrence of flushing was detected on scions grafted 1 day after storage and on scions packed in newspaper. Grafted coffee scions stored for more than one day had developed dormancy. Longer dormancy period was taken from grafted scions stored for 9 days.

The development of lateral shoots on grafted coffee scions was significantly affected by the length of storage duration, irrespective of packing materials used. Most of the grafted scions stored for 1 day had developed lateral shoots. Scions stored for 9 days failed to develop lateral shoots at 60 days after grafting.

The survival rate of grafted coffee scions subsequently decreased with the increase in number of days in storage regardless of packing materials used. Generally, grafted scions stored for 1 day have higher survival rate in all periods of observation made from 5 to 60 DAG. Percent survival was lower at 60 DAG.

At 60 days after grafting, coffee seedlings grafted with one day storage old scions were vigorous than those grafted with 3, 5, 7, and 9 day storage old scions. Grafted scions had developed large functional leaves and longer lateral shoots. Incidence of mortality in grafted scions was minimal and dormancy was not noted. Grafted scions stored for a longer period of 7 and 9 days were very weak, exhibited longer dormancy period and high mortality rate.

Both packing materials and storage durations had significantly affected the weight and viability of coffee scions during storage. To a slight extent, newspaper appears to be relatively better packing material. No significant interaction effect exists between the type of packing material and storage duration in the performance of grafted coffee scion. The relative effect of storage condition appears similar regardless of packing material used.