

Potato is the second most important food crop after maize in Kenya. In the traditional areas of potato production with a bimodal rainfall pattern in the country, poor sprouting, due to seed tuber dormancy, is a major drawback. There is little time between growing seasons to permit adequate sprouting of the seed tubers. Therefore, effects of pit, dark and cold pre-storage treatments and their duration on dormancy breaking and sprouting of seed potato tubers of variety Asante were determined. Tubers were evaluated for sprouting, number of sprouts per tuber and sprout vigor for 12 weeks. Pit and dark pre-storage treatments resulted in significantly higher sprouting, number of sprouts per tuber and vigor scores than cold pre-storage treatment and the control (diffused light storage). 100% sprouting of seed potato tubers was attained under pit storage by the fourth week for all pre-storage treatment durations while dormancy ended after 6 weeks of storage in the control. Sprouting was suppressed during cold pre-storage treatment. In pit and dark pre-storage treatments, vigor scores increased with increasing duration of pre-storage treatment while in the cold, vigor scores were reduced with longer pre-storage treatment duration. Pit and dark pre-storage treatments for short durations of up to one week respectively followed by two weeks of diffused light storage are recommended to break dormancy and promote sprouting of good quality seed potato tubers of Asante variety.