

## **Efficacy of activebag® packaging on postharvest quality of purple passion fruit (*passiflora edulis* Sims)**

Water loss after harvest results in wilting and shrivelling and is one of the major causes of postharvest losses in perishables. Passion fruit is susceptible to rapid water loss after harvest leading to diminished quality and limited longevity. This study evaluated the efficacy of Activebag®, a new modified atmosphere packaging product in the Kenyan market, to maintain quality and prolong the shelf life of purple passion fruit. Fruits were harvested at 60-65 and 75-80 days after anthesis with peel color being 50-70% and full purple respectively. Fruits were either packaged in Activebag® or ordinary polyethene bags and allowed to ripen under ambient room conditions. Evaluation of the physiological parameters included ethylene production rate, respiration rate, cumulative weight loss and other physicochemical parameters associated with ripening and quality. In both stages unpackaged fruits lost more weight compared to packaged fruits. The two forms of packaging (active bag and ordinary bag) effectively reduced weight loss though the difference between the two was not statistically significant ( $P>0.05$ ). Both forms of packaging also significantly reduced and delayed the rate of respiration (both stages), ethylene production and other postharvest quality attributes. These results indicate that Activebag® packaging was most effective in fruits harvested at stage 60-65 days after anthesis as it maintained the quality and prolonged the shelf life by eight days longer compared to ordinary packaging.