

**Title** Evaluating abscission of sweet basil leaves induced by ethylene in MAP

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**Keyword** MAP; Sweet basil; ethylene

#### **Abstract**

Sweet basil (*Ocimum basilium* L.) is an aromatic culinary herb, used for flavor addition and decoration in many foods and drinks. A crucial problem of postharvest sweet basil is shortened shelf life due to water loss and abscission of leaves. Sweet basil branches were packed with different methods in 60 µm polyethylene (PE) bags (a 20 x 45 cm dimension) and stored at 13°C 95% RH. Abscission of leaves (%) in sealed PE bags with initially 2500 ppm ethylene was highest while it was least in the condition of sealed PE bags with ethylene absorbent. Ethylene biosynthesized at the initial stages of storage, accumulating in the bags, also induced leaf drops of the inside basil branches. Basil branches stored in all PE bags lost less fresh weight, resulting extended storage life, compared to non packaging. However, packing basil in non-perforated PE bags exhibited decay after 6 days. Perforated bags with 16 holes (12.56 cm<sup>2</sup>/bag) could provide the best condition to maintain quality of stored basil for over 9 days of storage life.