Title	Modified atmosphere packaging improved quality of kohlrabi stems
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Abstract

To improve the keeping quality of the kohlrabi stems and avoiding wilting of the leaves, modified atmosphere packaging (MAP) with oriented polypropylene and amide-polyethylene copolymer bags was applied. Avoiding wilting of the kohlrabi leaves is crucial because European consumers consider the freshness of kohlrabi leaves as a key quality parameter. Whole kohlrabies were stored within, above-mentioned sealed bags, for 14 days at 0 °C and 95% RH, followed by 3 days at 10 °C. In the MA packages gas compositions of about 5 kPa O_2 and 10–15 kPa CO_2 were generated. The respiratory activity, C_2H_4 production, firmness (of stems and leaves), sugars, organic acids contents, as well as chemical and sensory quality attributes were monitored. The respiratory rate of the kohlrabi stems in air at 0 °C was 10–11 mg CO_2/kg/h with a C_2H_4 production lower than 0.05 μl/kg/h (traces). However, when the temperature was increased at 10 °C the respiration rate raised 3.5 folds. Acidity, pH, soluble solids, sugars and organic acids content and firmness did not show significant changes at the end of both cold storage and retail sale periods. MAP was very effective improving keeping quality of the stems and retarding wilting of the leaves. During the retail sale period at 10 °C, the bags must to be perforated to avoid anaerobic conditions.