Title Effects of packaging on shelf life of fresh celery

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Abstract

Celery could be sold in a wide range of presentations, from without any kind of packaging until 'ready to eat'. The aim of this research was to analyse the effect of two packaging films on quality loss of celery due to frequent changes in temperature and relative humidity as well as to varying respiration rates. Shelf life could be extended by limiting storage temperature variations. Weight loss, discoloration and texture changes appear to be the primary symptoms for deterioration in quality. Celery stalks were packed in polyolefin (co-extruded polyethylene and polypropylene) with an antifogging additive (AF) and micro perforated polypropylene (MP). Samples were kept at 4 ± 1 °C, 90% RH for 35 days, using unpacked celery as control. Weight loss, firmness, pH, soluble solid content, titratable acidity, petioles and leaves colour, and total phenols were determined. The results showed that colour intensity and firmness decreased during storage; weight loss in AF packed celery was lower than 3%. Tiny accumulations of condensate in AF didn't reduce shelf life, so it may be considered the most suitable packaging material for extending shelf life of celery stalks.