Abstract

Yellowing in leafy vegetables, when not influenced by external ethylene concentrations, is primarily a process of starvation. After harvest, active green tissue consumes readily available carbohydrate sources. As carbohydrate reserves are consumed, the process moves onto catabolism of proteins and other nitrogenous compounds such as chlorophyll to provide carbon skeletons required to maintain respiratory activity. This leads to loss of chlorophyll and hence results in yellowing. Yellowing can also be induced with postharvest exposure to exogenous ethylene. This paper discusses many possible approaches to controlling or slowing yellowing in leafy vegetables. Approaches using breeding, temperature control, segregation from ethylene, increasing tolerance to abusive handling temperatures and control of ethylene response are examined in detail.