

Abstract:

Sweet corn (*Zea mays*) cv 'Tasty Gold' was harvested, husked and packed into sealed bags made out of different types of films. Packages were stored for 20 days at +5°C and as a simulation of shelf-life conditions for additional two days at +20°C. Kernels were analysed for carbohydrate composition by HPLC.

For every treatment there was a decrease in starch and sucrose content during the storage phase. During phase of shelf-life decrease in sucrose continued, whereas no change in starch content was found. There was an increase in glucose and fructose content during both phases. Changes of carbohydrate composition were influenced by the packaging material due to the permeability of the films. Kernels of sweet corn packed in films with low permeability for CO₂ and O₂ maintained their carbohydrate content during storage, but had a low sucrose content after shelf-life. Losses of sucrose during the shelf-life phase were lowest when the 20 µm LDPE film was used.