

Abstract:

The purpose of this investigation was to compare the effect of tissue selection on the determination of DM and sugars content in potato cultivars, to find how these values differ in the selected potato tissues, and determine the effect of storage.

Five potato cultivars were planted at Jadwisin Research Station on sandy soil. Analyses were made after harvest and during storage at 4 and 8°C. Four parts of the tuber were used for compositional studies (apical-end, stem-end, vascular ring and core tissue).

The percent of DM in all cultivars was highest in stem-end, lower in vascular ring and the lowest in core tissue at harvest and storage period. Cultivars differed significantly in their content of reducing and total sugar and changed in concentration due to storage temperature. In three cultivars stem-end tissue had significantly more sugar than bud-end tissue. Quality characteristics of potato processed into french fries and chips are largely depended on the DM and sugar content in different parts of tubers.