

## **Abstract**

Sweetpotatoes have a tendency to experience epidermal loss during harvest and postharvest handling. Epidermal detachment from underlying periderm (skin loss) causes weight loss, shriveling of the root surface, increased susceptibility to pathogen attack and inferior appearance. 'Beauregard' is very prone to skin loss, while 'Jewel' is thought to have stronger skin. Our objective was to determine the variation in skin strength in relation to cell wall enzyme activity and to determine possible correlations among these variables that could explain skin loss on the basis of enzyme activity during storage of the roots. Skin adhesion, polygalacturonase (PG) and pectinmethylesterase (PME) activity were measured during storage of 'Beauregard' and 'Jewel' roots in 1999 and again in 2000. Skin adhesion varied among years and cultivars. Overall, roots of 'Beauregard' were more susceptible than 'Jewel' to skin loss after several weeks of storage. Roots of 'Jewel' had lower skin adhesion at harvest, which increased after several weeks of storage and decreased again at the end of the storage period. Enzyme activity exhibited a random pattern during the storage period, and skin adhesion did not correlate with PG or PME activity.