

Abstract:

Bruise threshold is the drop height at which bruising just begins to occur for a given specimen and impact surface. This article reports on the detection of bruise threshold in fruits and vegetables by comparing force-time profiles for impacts from successively-increasing drop heights onto the same spot on the whole fruit or vegetable specimen. It also discusses the relationship between bruise threshold and tissue failure properties, as well as temperature and turgor conditioning to improve bruise threshold as a demonstration of the value of such measurements.