

Title Analysis of force-deformation relationship with fruits
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Abstract

The objective of the work reported herein was to compare the character of the force-deformation relationships obtained by quasi-static compression test of different fruits. The force-deformation relationships obtained from compression tests were analyzed. Cause of the same yield and rupture point and that of the different yield and rupture point was determined. Different yield and rupture point was found when the fruit tissue was strong enough to resist the penetration of the probe and to develop a definite rupture force that is higher than the yield force. The influence of peeling generally decreased the rupture force and the deformation belonging to that force. The influence of the ripeness decreased the rupture force, but generally had no definite influence on the shape of the force-deformation curve. Further experiments and a more detailed analysis of the force-deformation relationships is proposed.