

**DEVELOPING CRITICAL PITTER
THRESHOLDS FOR CANNING
PEACHES USING THE
NONDESTRUCTIVE SINCLAIR
FIRMNESS SENSOR**

**Carlos H. Crisosto, Paul Metheney,
Constantino Valero,
and
Earl Bowerman**

The relationship between mechanical pitting damage using the Atlas pitter (Atlas Pacific Engineering Co., Inc., Pueblo, Colorado) over a range of nondestructive and destructive firmness measurements for 'Andross', 'Carson', and 'Ross' clingstone peaches was studied. During the two years of work, the percentage of 'Andross', 'Carson', and 'Ross' fruit with pitting damage increased sharply as nondestructive firmness sensor Sinclair firmness index values fell below 7.0 (SFI) and when destructive penetrometer readings fell below 3.8 pounds (17 N). Even though there was a low correlation between nondestructive and destructive firmness measurements, nondestructive measurements appear to be well related to the pitting damage. These preliminary results encourage that further research to improve the relationship between an automatic nondestructive system could give processors the option to segregate peaches susceptible to pitting prior to processing.

This information measured at the receiving area could be useful for subjective grading and/or predicting potential pitter problems during processing.