FINAL REPORT **DURATION: 00-01**

WTFRC Project #_____ Battelle Project # 28836

Project Title: Development of an On-Line Fruit Firmness Sensor

PI: Jeff Griffin

Organization: Battelle Northwest, Richland, WA

Co-PIs and affiliations: Dick Pappas and Gerry Posakony (Battelle); Greg Speer and William Osborn (WSU); Daphane Reynolds (Chatham College).

Cooperators: Rich Ozanich and Scott Woltari, Berkeley Instruments, Richland, WA; Mike Young,Stemilt Growers, Wenatchee, WA

Objectives: Demonstrate a new concept for a non-contact, on-line fruit firmness sensor. Collaborate with Rich Ozanich at Berkeley Instruments, Richland, WA to commercialize an on-line fruit firmness measurement system.

Significant findings: This project received funding in April, 2001. Efforts to date have included: 1) a kickoff meeting with staff at Berkeley Instruments; 2) collaborations with Mike Young, Stemilt Growers to assess the technology embodied in the Aweta firmness sensor and; 3) an updated literature/patent search to confirm the uniqueness of the Battelle non-contact firmness measurement concept.

Methods: Laboratory experiments were initiated in June, 2001 with support from an undergraduate student (Daphane Reynolds). Efforts will focus on conducting a laboratory demonstration of the non-contact firmness measurement method. Collaborations with Berkeley Instruments will focus on combining this new measurement technology with Berkeley's existing infrared measurement technology to enhance the quality of on-line fruit quality measurements.

Results and discussion: Initial laboratory results are anticipated by the end of August 2001.

Budget: Budget for 2000 was $50K. Berkeley Instruments has been provided $10K with the balance ($40K) granted to Battelle.

Project duration: One year.

Current year breakdown:
Equipment and supplies: $5K
Student stipend: $5K
Battelle staff labor: $30K
Berkeley Instruments staff labor: $10K