

Summary of Research Progress for 1990

Submitted To: SLVRC (Colorado Potato Administrative Committee)

Title: Potato Flavor Study

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Project Justification: Flavor is one of the key factors that governs food acceptability/choice and thus it is imperative to know the flavor composition of potatoes as influenced by factors such as cultivar, storage, processing and method of preparation.

Project Status: New for 1990--\$750 allocated

Significant Accomplishments for 1990: Thirteen lines (five named, eight experimental) of potatoes grown in the Valley were baked conventionally at 400°F for 60 minutes and the volatiles (aroma) extracted and separated on a gas chromatograph. The pyrazine (compounds that contribute the most to baked potato aroma) level was quantitated and compared to baked potato acceptability scores obtained on the same lines by a 20-member taste panel. Lines that were judged to be the best by the panel had greater than 25 ppm of pyrazines, while lines that scored the poorest had the lowest pyrazine levels (11-12 ppm). Therefore, this study clearly demonstrated that pyrazine level is correlated with sensory score. Thus potato lines should be encouraged that have high baked pyrazine levels.

Objectives to 1991: This study only covered conventional baking and thus it is proposed that future work involve evaluating/comparing other methods of preparation such as microwaving and boiling. Also to be evaluated are time and temperature of storage.

Funding Request: 1990 Allocation: \$750

1991 Request: \$1,000

Supplies/Reagents	\$ 900
Data Evaluation	<u>100</u>
Total	<u>\$1,000</u>