

# IMPACT



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## Taste Testing of Potatoes Benefits Idaho Potato Growers

### *The Situation*

The Idaho potato industry has built a worldwide reputation around the ability to produce potatoes and potato products with excellent culinary quality. Many factors, including variety, can influence the acceptance of potatoes by the consumer. In part, Idaho owes the success of its industry to the Russet Burbank, which is recognized for its consistent quality.

Breeding programs throughout the United States and Canada are continually releasing new varieties to the potato industry. Some of these varieties may have greater production efficiency; some may have resistance to one or more diseases and some may have improved quality. These qualities are attractive to Idaho potato growers because they offer monetary advantages over the Russet Burbank. However, the reputation of the Idaho potato must be protected from varieties that have inferior qualities, which could prove detrimental to the Idaho potato industry.

In the spring of 1988, many retailers were disappointed in the Idaho Potatoes shipped to them and notified the Aberdeen Research and Extension Center, the Idaho Potato Commission and others in the industry regarding the culinary quality of potatoes shipped from Idaho. Research found that some new varieties developed an unpleasant taste and odor after a few months of storage.

### *Our Response*

Taste Testing was not part of the Idaho potato variety development program prior to 1988. In response to retailer complaints Extension Educators, Potato Specialists and a Variety Development Specialist from Aberdeen set up a taste test panel.

In the fall of 1988 the first panel was organized. Men, women and youth volunteered to become tasters. The panel has been in continuous existence since that time. The panelists are carefully trained to determine differences in color, texture and flavor of baked potatoes.

The Aberdeen R & E Center provides the potatoes. Most of these potatoes are numbered varieties that have not yet been released from the Tri-State breeding project. The Idaho Potato Commission provides a commercial oven and pays the panelists an honorarium. Three Extension Educators provide the labor and expertise.

Fourteen panelists taste at least five varieties twice a year—right after harvest and again after 5 months of storage. They come to eight different sessions per season. This gives 70-100 replications per variety in each testing session.

Researchers and panelists are looking for varieties that have good culinary qualities at harvest and retain those qualities after storage. The panel uses a

Russet Burbank as a reference in these tests. The Russet Burbank is the standard in the industry for baked potatoes. The Russet sample is tasted and a score is determined. The other samples are judged as better or worse than the Russet Burbank and rated on a 9-point scale. All results from the taste test panel are returned to the Aberdeen R & E Center for statistical analysis and research use.

## ***Program Outcomes***

Through this on-going research, the taste panelists determine the culinary quality and consumer acceptance of the potatoes. Culinary qualities may be affected by weather or other factors beyond the grower's control so most potatoes are in the taste test for two to three years. After this time the potato is approved or eliminated. If approved, the potato is named and released to growers. If disapproved, the potato is eliminated from further consideration. Several breeding selections from the program have not had suitable culinary qualities so have not been released.

Since the establishment of a taste panel system, eleven varieties have been released. The varieties are: Gemchip, Frontier Russet, Ranger Russet, Bannock Russet, Gem Russet, Ivory Crisp, Alturas, Summit Russet, Western Russet, Gemstar Russet and Defender. Ranger Russet is now the second ranked variety in the northwest and second in the nation.

## ***For More Information***

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