

GEORGIA TECH RESEARCH

News Release

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RESEARCHERS IRRADIATE SWEET

For Immediate Release

POTATOES TO PRESERVE THEM

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Expose a sweet potato to nuclear radiation and what do you get? Tuskegee professor Phil Loretan claims that the answer is a potato which is not only safe to eat but longer-lasting and possibly sweeter-tasting.

To prove this claim, Loretan recently loaded five bushels of sweet potatoes into a U-Haul truck, drove to Georgia Tech's Nuclear Research Center, and treated the potatoes with controlled doses of radiation. Under a 10-month, \$195,000 research project funded by the Department of Energy, Loretan and his associates will evaluate the use of radiation as a means of preserving sweet potatoes and keeping them free from insects.

The Tuskegee Institute project comes at a time when enthusiasm for irradiation as a means of food preservation is running high. In February of this year, the Food and Drug Administration proposed a rule allowing food to be irradiated up to a level of 100 kilorads (a relatively low dose). The FDA's proposal, if

enacted, would loosen the regulatory barriers that have for decades blocked commercial use of irradiation technology.

But Loretan and his associates are also investigating a quality unique to research in food irradiation: sweetness. Proponents of irradiation generally favor the process as a safe and effective method of food preservation which does not adversely affect taste; they do not go so far as to claim that irradiated food tastes better. Now the Japanese, who routinely use the process to inhibit sprouting, are reporting that an irradiated potato is a sweeter potato. Tuskegee researchers are anxious to find out if this is really true.

Sweetness aside, however, is food irradiation safe? Loretan notes that many people are terrified by the very word, "radiation." Nonetheless, he goes on, the bulk of research in the U.S. over the last 30 years has failed to show any significant harmful effects of food irradiation. Moreover, 28 countries currently employ the method as a means of preserving a wide variety of foods, including fruit, vegetables, fish, and meat.

As for the common fear that irradiated food will somehow become "radioactive," Loretan says: "This process can no more make food radioactive than can microwaves or the light in this room. All three are different forms of the same thing -- electromagnetic waves."

The benefits of food irradiation, on the other hand, are compelling. Irradiation can more than double the shelf life of many foods. In famine-ridden countries where refrigeration is not commonly available, this increase can literally mean the difference between life and death.

Even in the U.S., food irradiation could mean more than just an added convenience to the American consumer. With the number of safe and effective chemical preservatives and fumigants progressively shrinking, irradiation holds out the potential of performing a vital function.

The sweet potato is a case in point. Sweet potatoes grown in areas where "the sweet potato weevil" lives must be treated with the fumigant, methylene bromide (chemically related to the suspected carcinogen, ethylene dibromide or EDB). Unconfirmed reports indicate that methylene bromide may be taken off the market within two years. Preliminary studies suggest that irradiation is a good potential alternative to the fumigant.

Though it is still too early to say what will be the ultimate fate of food irradiation, it is clear that the position of the U.S. government on the issue is now undergoing change. Future regulation will depend in large part on the results of studies such as the one now being conducted at Tuskegee Institute.