

PUBLIC HEALTH

Russians Have "Hot" Food

While it will be an estimated two years before American grocery stores carry irradiated foods, the Russian housewife is said to be buying irradiated food now.

► THE RUSSIAN housewife can purchase potatoes that have been preserved by irradiation. American housewives cannot.

The Russians are first on the market with irradiated food, the U. S. Public Health Service reports in its *Public Health Reports* (March).

Yet, the United States is miles ahead of Russia in the field of research with various types of irradiated food, said Dr. R. G. H. Siu, technical director of research and engineering, U. S. Army Quartermaster Corps.

Researchers in the U. S. are feeding irradiated foods to several generations of several species of animals to observe what effects, if any, are due to this method of preservation, he explained.

The researcher predicted it will be at least two years before irradiated foods find their place on grocery shelves. The Food and Drug Administration stamps final approval on all foodstuffs. Until scientists can prove to FDA and themselves that there is no slightest possible harmful effect from the process, irradiated food will remain a novelty.

The U. S. has irradiated potatoes (inhibiting their sprouting ability), meats, veg-

etables and milk. Potatoes require a low dosage of treatment, 10,000 rads. A rad is the amount of energy required per gram of foodstuff, Dr. Siu explained.

On the other hand, meats, such as roasts of pork and beef, require between 2,000,000 and 4,000,000 rads. The day may come when the housewife can pick a cellophane-wrapped, irradiated roast from the grocery shelf, not refrigerator, pop it into the oven to warm up, and serve just as she now prepares the "brown and serve" rolls.

This research is not directed only at solving some of the housewife's needs, Dr. Siu said. The men who will eventually fly in space capsules will need food supplies. It is not inconceivable that they will carry irradiated Southern fried chicken on interplanetary journeys. And it will taste like Southern fried chicken, Dr. Siu promised.

Irradiation protects food from harmful bacteria by killing the organisms. Some of the nutritive value of some foods is destroyed in this process. This amounts to no more, and in some cases, less than that lost by conventional canning methods now used, he said.

Science News Letter, March 28, 1959

GENERAL SCIENCE

Atomic Ships Safe

Radioactive wastes from atom-powered surface ships can be disposed of safely, without harm to crew or marine life, according to results of experiments with models.

► EXPERIMENTS with models have led investigators to believe that radioactive wastes of atom-powered surface ships can be disposed of safely at sea.

Richard H. Snow and Jan Rosinski, Armour Research Foundation, Chicago, told the American Institute of Chemical Engineers meeting in Atlantic City, N. J., that dispersion of radioactive fission products may be "accomplished largely by the mixing of the propeller." Further natural turbulence of the sea, they said, would diffuse the waste even more.

The "hot" wastes would come from the ship's reactor, and will consist of "bulky fractions of fission products which are not economically reprocessible."

The men said fish probably would not be dangerously contaminated. The "likelihood that individuals will eat only fish which have lived much of their lives in the wake of nuclear-powered ships is extremely remote.

"Microscopic organisms which serve as food for fish may rapidly become contaminated in local regions of the sea," they said, "but they will be dispersed by the natural turbulence of the water about as fast as the waste itself is dispersed." Thus, they concluded, "it is unlikely that fish will eat mainly contaminated microorganisms and thereby become contaminated."

Fuels for supersonic airplanes and missiles are expected to cost more than the present price of jet fuel. These hydrocarbon fuels may cost five to ten times as much, the Institute was told by Ernest E. Donath and Martin Hess, Koppers Company, Pittsburgh, Pa.

In the field of management, the Institute was told that any business that neglects technology is courting government ownership. Kenneth M. Watson of Illinois Institute of Technology, Chicago, said a ten-year study of the technological performances of 40 large oil and chemical companies shows

"the free enterprise system is fighting for its life in a world-wide competition which is basically technological in character."

"Business," he continued, "is now paying for its shortsighted abuse of labor a few generations ago. Sustained abuse of technologists could lead to the destruction of business and the free-enterprise system."

He recommended that technologists should try to learn business principles. Non-technical managements "whose success record is not good" should try to understand the technological point of view, he added, and "assimilate it rather than exclude it."

Moorehead Wright, General Electric Company, Ossining, N.Y., warned against the "crown prince" theory of developing only "bright young men" in business. Opportunities for development must be universal throughout a company, he said, and there should be no dividing line between "promising men" and "unpromising men."

He cited an instance where only 37% of 143 "promising young men" of ten years ago turned out to have achieved the success predicted for them, and reminded the Institute that Abe Lincoln was a "consistent failure in his early life."

Science News Letter, March 28, 1959

MEDICINE

Dizzy Trumpet Players Due to Pressure Drop

► DIZZINESS is an occupational hazard faced by musicians who choose the trumpet.

Trumpet playing affects blood circulation to the brain in much the same manner as does closing the mouth and nose and forcibly exhaling, two professors, one of music, the other of medicine, report in the *British Medical Journal* (March 14).

While a high note was played for 17 seconds on the trumpet, the pressure in the artery of the musician's free arm was measured. In addition, the pressure on the subject's mouth and esophagus were measured at the same time, Dr. M. Faulkner, University of California, Santa Barbara, and E. P. Sharpey-Schafer, St. Thomas's Hospital, London, explain.

The pressure in the artery being measured dropped enough to cause an inadequate flow of blood to the brain. Dizziness and blackout can result from these fluctuations, the professors say.

Measurements of the pressures on the mouth and artery were recorded while the oboe and French horn were played. The lower results, when compared with those of the trumpet player, suggest that trumpet playing requires more "blow-how."

Nonetheless, although trumpet playing produces high pressures in the chest compared with other instruments and normal straining, it still does not approach the pressure levels that result from coughing. Apart from the discomfort of occasional dizziness, trumpet players are not likely to be harmed, the doctors reassure.

They do suggest, however, that it would be better for the trumpeter to sit than stand while playing. The ideal position, although impractical for a concert, would be a lying down one.

Science News Letter, March 28, 1959