ATOM-RADIATED POTATOES—These potatoes from the same 1953 crop show the preservative value of doses of atomic radiation. Those on the left were not treated, while the one on the right was exposed briefly to powerful radiation last May at the University of Michigan. This is how it looked in September.

ENGINEERING

Preserving Potatoes

➤ WITHIN A year, you may be eating potatoes, onions, hamburgers and pork chops that have been exposed to atomic radiation. They last longer, research at the University of Michigan has shown.

Potatoes, for instance, which usually sprout or rot after six months, can be preserved at 48 degrees Fahrenheit for a year.

Spuds irradiated in the university laboratory were compared by a test panel with non-irradiated potatoes. A slightly different taste was reported, but it was preferred by some panel members.

The University of Michigan engineers who have designed an irradiating plant, the first of its kind, say there is no reason why a fully operative plant could not be constructed in the next year.

The plant could irradiate up to 250 bushels of potatoes in an hour at an estimated cost of six cents a bushel. Construction would cost about $50,000 and operating costs would be $40,000 a year, the engineers estimated. The potatoes would enter the rectangular radiation chamber directly from the truck by conveyor belts.

The source of the radiation could possibly be waste products from nuclear reactors. These substances could be purchased from the Government.

The scientists have also irradiated onions, cabbage, pork and beef, and although results are not conclusive yet, the process may be used on these and other produce.

The results of the tests were reported by L. E. Brownell, L. L. Kempe, R. C. Dennis and J. T. Graikoski at a meeting of the American Society of Refrigerating Engineers in Philadelphia.

Science News Letter, December 11, 1954

GERIATRICS

Aged Need Amino Acid Enriched Bread or Cereal

➤ A SPECIAL kind of enriched bread or ready-to-eat cereal should be produced at a low price for the oldsters in our population, Dr. Frederick J. Stare, professor of nutrition at Harvard School of Public Health, Boston, declared in a symposium on medicine for old folks held in New York under the sponsorship of the American Geriatrics Society.

The special enrichment in this bread or cereal for grandma and grandpa would consist of certain key amino acids such as lysine. This protein building block is particularly low in the cereal grains, but protein is especially needed by oldsters.

Since many of them cannot afford meat, milk and eggs, or amino acid pills, Dr. Stare thinks the cereal products should have their protein increased in both quantity and quality.

Such a product, he stated, "would find a useful role in the nutritional problems of the aged and in the prevention of such problems.

Science News Letter, December 11, 1954

CYTOLOGY

Life-Stuff Challenged As Pattern for Tissues

➤ EGGS OF sea animals, which must be self-sufficient for the task of carrying on the life of the species, are being used at the Marine Biological Laboratory, Woods Hole, Mass., to test theories about chemical reactions common to the beginnings of all life.

The results of the egg study challenge the widely held theory that deoxyribonucleic acid, known to be primary life-stuff, must be present all the time that new tissues are being formed, supplying the framework upon which new chemical compounds are laid down.

Eggs of sea urchins, of several species, and of star fish have been analyzed by Dr. Alfred Marshak and Celia Marshak, research team working in the Woods Hole laboratory and in the Lerner Marine Laboratory at Bimini in the Bahamas.

By adding the amino acid, thymine, made radioactive with carbon 14, the two scientists investigated the fate of the compound thymine makes with deoxyribonucleic acid. They do not find the expected compound in the mature eggs cast adrift in the ocean, although they find this substance in the reproductive cells of the parent animals.

They offer, in *Nature* (Nov. 13), a new theory of the chemical transformations in the early stages of cell division, involving better understanding of the reactions between successive forms of the life chemicals.

Science News Letter, December 11, 1954

BIOLOGY

Unconquered Wild Dog Kills Australian Sheep

➤ ALL NATIVE wild life of Australia has been brought under control, except the dingo, a medium-sized wild dog native to Australia and responsible for killing at least 600,000 sheep in one section of the continent alone in the past 10 years.

In an effort to protect 17,000,000 sheep, the Queensland Government is erecting a 550-mile dingo-proof fence from the New South Wales border to a point in North Queensland.

The fence, which will cost $900,000 to build, is another attempt to stem the dingo tide that has rolled across Queensland from the unfenced cattle country of the Northern Territory and South Australia.

Shot at, trapped and poisoned for more than a century, the dingo has not only remained unconquered, but has become a serious national menace to the sheepmen of North Australia. One station in the Flinders Shire lost 2,500 sheep alone last year despite all efforts to cope with the pest.

Dingos vary in color from yellowish-red to gray. The origin of the animal is uncertain, with some evidence showing that it is a native wild dog and other evidence to indicate that it is a tame dog introduced into Australia years ago that now runs wild.

Science News Letter, December 11, 1954