

Laboratory Being Erected To Create First Worldwide Nutrition Explosion

(First of two articles)
 WASHINGTON—Government scientists are building an explosion-proof laboratory on the University of Maryland campus as the arena for a new United States effort to create a nutrition explosion throughout the world.

This College Park, Md., lab is the center of what promises to be a multi-million dollar project, promoted by the Kennedy administration and quietly approved by Congress, for the purpose of producing the world's cheapest and most plentiful source of animal protein.

Partly altruistically humanitarian and partly a calculated gamble of the cold war, the project's objective is to develop a highly refined product called fish protein concentrate.

Fulbright Plugs For Aid Program

WASHINGTON (UPI) — Sen. William J. Fulbright, D-Ark., called for passage of the full \$4.2 billion foreign aid program today because deep cuts would "pose unacceptable risks" in foreign policy.

While urging the administration to overhaul the program, Fulbright, chairman of the Senate Foreign Relations Committee, said "we cannot tear up the blueprints before us and create a new structure on the floor of the Senate."

The Arkansas Democrat was the first speaker as the Senate prepared to begin debate on the long-delayed measure to authorize another year of the aid program. Senate leaders hoped for final action by the weekend.

Former Texas Senator Dies

WASHINGTON (UPI) — Former Sen. Tom Connally of Texas died early today at his home here of pneumonia. He was 85.

Connally's family said he had been ill for some time.

He had been living in retirement here since he left the Senate in 1953 after serving 36 years.

The silver-haired Texas Democrat was a former chairman of the Senate Foreign Relations Committee.

Massachusetts Institute of Technology to head the project.

If this gives the project domestic appeal, its whole emphasis however is to produce fish protein concentrate at a fantastically low cost to put it within reach of most of the world's people, especially those in underdeveloped lands who need it most. The supposition is that the country that can accomplish this aim will gain great prestige in the eyes of these peoples. At an African conservation last summer, a Ghana official asked Interior Secretary Stewart Udall: "When are we going to get this fish protein concentrate?"

Soviet Russia and 35 other countries are working on such a product. The United Nations Food and Agriculture Organization has done preliminary research, spurred by the hope that malnutrition might be eradicated in even most primitive lands. A Swedish firm is producing such a product, but at relatively high cost, which is added to bread to give it protein enrichment.

A form of fish protein concentrate is at least as old as ancient times. By a primitive method of salting whole fish to halt the fermenting action of the enzymes, the Romans produced what they called liquamen, a liquid concentrate, and sold it all over the Mediterranean world. Ancient Roman recipes include liquamen as a seasoning.

A similar product has been made for years in several Asian countries but it is too expensive for mass consumption and too salty for babies or pregnant women.

In recent years it has been produced in several other forms—as a brownish powder, which looks like instant coffee and has a meaty taste; as a brown paste; and as a tasteless white powder. An important virtue of the powder or paste forms is that they don't require refrigeration, and still retain their nutritional value for long periods in either moderate or tropical climates.

Like Beef Concentrate Dr. Pariser took from a laboratory shelf a jar of Swedish-made paste and asked me to taste it. It looked and tasted like a beef bouillon concentrate, with not trace of its fishy origin. He said it was 20 months old and so concentrated that molds couldn't survive on it. The paste makes an excellent soup, Dr. Pariser said, and the powdered forms can be added to all sorts of foods—from mashed baby foods to baked goods and vegetables.

An estimated 2 billion persons in the world lack adequate animal protein in their diets, com-

pared with 600 million who fare pretty well in this nutritional need. Common sources of animal protein—meats, poultry, eggs, milk and cheese—are scarce or relatively high in cost in many areas of the world. Fish is cheap and plentiful along many seacoasts, but it is unavailable to inland populations of primitive lands which lack refrigeration facilities to preserve it in warm climates.

In Liberia, for example, the average total animal protein intake is 3 grams per person compared to 66 grams in the United States.

Objectives of the new U. S. project, being carried out by the Interior Department's Bureau of Commercial Fisheries, are to develop production methods which would require small investment, are economical to operate, flexible to utilize for small or large operations; and to produce fish concentrate in forms acceptable to local taste preferences, cultures or taboos, fully satisfactory to nutrition experts, and in forms that permit cheap shipment, long storage and low prices for consumers.

In short, the idea is to make it possible to produce it wherever fish are abundant, for sale wherever protein is scarce.

Dr. Pariser's goal is 10 to 13 cents per pound for concentrate with 80 per cent protein content. At this price, he estimates the

individual's protein requirements could be met for less than half a cent per day.

Cost Breakthrough
 In 1959 a UN report stated that fish concentrate should not cost the consumer in underdeveloped countries much more than he would pay for dry skim milk in the same area. An American firm at that time reported it could produce a partially deodorized fish flour for about 18 cents per pound. The UN report said 10 to 19 cents per pound was considered "realistic."

In seeking a cost breakthrough, American scientists in

their new lab plan three approaches:

1. Chemical—various solvents, many highly volatile (hence the explosion-proof lab), are used to extract the lipids or fats from the fish to produce a tasteless, odorless powder. This method has been used in Chile, Morocco, Canada, England and the United States. The search is on for a cheap, plentiful solvent.

2. Biological—Enzymatic processes have been used in Uruguay, where chopped fish were inoculated with a special yeast to which molasses had been added, resulting in a liquid paste

within 2 to 3 days. Bones, scales and fins disappear in this process along with the characteristic fishy odor. The Danes used another enzymatic process to produce a fine, fluffy powder of pronounced but excellent taste.

3. Physical—a German method of passing high voltage currents through macerated fish, producing a highly nutritive product, will be pursued.

If one or more of these approaches leads to the project's objective, it will be an unprecedented achievement of benefit to countless millions of the world's people. It would lead to

fuller utilization of the ocean's vast marine resources, which in turn would give commercial fishing the world around a hefty boost.

"Our consumption of fish in the oceans is less than one per cent today," Dr. Pariser noted. "We hope to hasten the day of harvesting good from the sea on a large scale."

Congress has backed this effort with initial appropriations of nearly a million dollars.

While confidence is high among the scientists, there is an unscientific obstacle to such an achievement. Another federal agency, the Food and Drug Ad-

ministration, regards fish protein concentrate with outright hostility if made from the whole fish. The Interior Department claims the project hasn't a chance of success if only fish fillets can be utilized, for this would be uneconomical.

With one agency holding the power to block use of food products in the American market and another pressing ahead to develop such a product, a bureaucratic tug-of-war of mounting intensity has been abuilding with cold war implications.

(NEXT — When is a cleaned fish clean?)

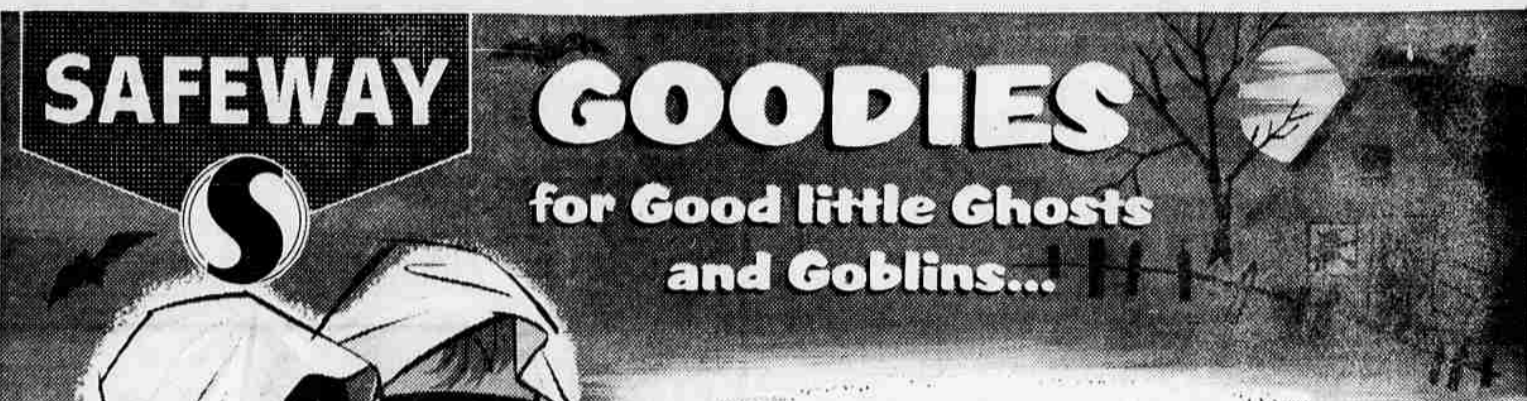
Queen Elizabeth's Physician Dies

LONDON (UPI) — Lord Evans, 60, personal physician to Queen Elizabeth II and doctor to the Royal Family for 17 years, died in his sleep Saturday morning at London's King Edward VII hospital.

Evans, a tall Welshman who was probably the most celebrated medical adviser in Britain, had been admitted to the hospital last month suffering from an undisclosed complaint.

SHOT BY ROYALTY

KING'S LYNN, Eng. (UPI)—A local shop today put on sale pheasants shot by Prince Philip at a nearby royal estate for 30 shillings a pair, or \$4.20.



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