

NUTRITION

Fewer Vitamins in Bread

Dozens of problems will result from changing our basic flour to help feed Europe. It may be necessary to add calcium, and we will get fewer calories.

► IN CHANGING our basic flour to help feed starving Europe, dozens of problems are presented to millers, bakers, nutritionists and housewives of America.

Fewer vitamins from our daily bread as well as fewer calories may be one result. Our present enriched white bread made from 72% extraction flour supplies about twice as much thiamin, or vitamin B₁, and pellagra-preventing niacin and probably more of another vitamin, riboflavin, as the new 80% extraction flour will. The 80% flour of course could be enriched but that may bring fresh problems, both legal and technical.

The nation's nutrition authorities apparently were not consulted about this move as they were on food and nutrition problems during the war. Some are worried over whether we shall lose the benefits of the flour enrichment for which they fought long and hard. Nutritionists and home economics experts of the Department of Agriculture reviewing the nation's nutritional status just before the Truman order were pointing out that Americans do not yet eat enough of the foods that make for an adequate diet. A statement prepared a few days before and released to the press on the same morning as the President's order states:

"Families with very low incomes may run short on calories as well as on the important minerals and vitamins."

Besides concern over the vitamin content of the new flour, nutritionists wonder whether it will be necessary to add calcium to it. In Britain during the war this was done with the 85% flour. The reason was that the 85% flour, and possibly 80%, contains a certain amount of phytic acid. This chemical combines with calcium and has a decalcifying effect on the bones and teeth, especially in children. To avoid this danger, the British added calcium to their 85% wartime flour.

Another question is whether Americans will eat as much bread when made of 80% flour. If they do not, there may be more flour for starving Europe but

Americans will be getting less than the expected amount of calories.

Southerners who eat much of their bread in the form of biscuits and hot bread will find difficulty in baking these from 80% flour.

Digestive difficulties, though perhaps of a minor nature, may be experienced by some who eat bread from the new flour. This was the case in Britain during the war, though other features of the British wartime diet may have contributed.

One advantage of the 80% flour might be its slightly greater content of protein. The protein might also have a different biological value tending to make it more nutritious.

Saving in wheat without too drastic change in milling processes might be achieved, it has been suggested, by requiring distribution of an average 80% flour. This could be accomplished by requiring purchasers to take part of their flour in the present 72% extraction form and part of it in the form of darker flour or bran. Reducing the amount of flour allowed to consumers by rationing at least as far as the retailers is seen as another way of saving wheat without changing the flour.

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ELECTRONICS

Electron Microscope Developed in Russia

► SOVIET ELECTRON microscopes, one developed during the war and used in war work, and an ultraviolet microscope, both designed at the Soviet State Optical Institute, were described at a recent meeting of the Academy of Sciences in Moscow, at which special tribute was paid to 80-year-old Soviet agrochemist, Dmitri Prianishikov, and to 75-year-old Alexander Baikov, distinguished Soviet metallurgist.

The importance of physics, chemistry and technology, as distinguishing features of present scientific development, was emphasized in various papers presented at the meeting. The highlight, however, was Alexander Lebedev's paper



SAVES TIME—A new electronic computing device known as the *Antennalyzer*, developed at RCA Laboratories, solves the problems of locating and arranging new antennas in a matter of minutes compared to weeks of surveys and calculations heretofore necessary. Readings taken from the final dial settings tell engineers where to locate the antenna towers in order to direct maximum power in desired directions.

which reviewed the development of the electron microscope.

The staff of the Optical Institute, he said, designed and built an electron microscope in 1940 that magnified objects 10,000 times. An improved model built at the end of the war magnifies 25,000 times, and one twice as powerful will be ready for use in the near future.

The ultraviolet microscope was described by E. Brumberg, its designer. It is extremely sensitive, he said, and will detect the presence of infinitesimal quantities of many substances.

Another scientist discussed substances with high and superhigh dielectric conductance, and described what he called a new material, titanite of sodium, which, he said, possesses high insulating and magnetic properties.

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The *Alaska peninsula*, that stretches along the arc of the Aleutian islands, was once a series of islands but the channels between them silted up through the action of shorewise currents and ash from active volcanoes.