

## NUTRITION

# Cuba Enriches Flour

**Similar enrichment of rice is expected to be provided at next meeting of legislative council. Enrichment expected to help prevent dietary diseases.**

► CUBA IS joining the United States in providing that its people eat vitamin-enriched flour to prevent dietary diseases.

Cuba's legislative executive council has just provided that wheat flour sold in that nation shall have thiamin, riboflavin, niacin and iron added to it. This enrichment will help prevent beri-beri, pellagra, and nutritional anemia and build up human vigor generally.

Cuba's Foundation for Medical Investigations has notified the Williams-Waterman Foundation in New York of this action. At the next Cuban legislative council meeting Nov. 15 it is expected similar enrichment of rice will be provided.

Enriched flour has been used in the United States since the days of World War II. Enriched rice is a newer development worked out under the research fund set up from the income received by Dr. R. R. Williams, head of the fund, for his synthesis of vitamin B-1, or thiamin. Dr. Williams is also assistant to the president of the Research Corporation.

In experiments in the Philippines it was shown by Dr. Williams and associates that the desired vitamins can be added to make highly fortified rice grains and then a pound of these grains can be mixed in each 200 pounds of rice to give the nutritionally desirable food.

Both Puerto Rico and the Philippines are

taking legal steps to provide enriched rice to the population. Because all rice used in Puerto Rico is imported, it can be enriched at central locations. In the Philippines, which grows much of its own rice, the enrichment must be done at 5,000 local rice mills and the law is being applied gradually province by province.

Progress is being made in providing vitamin-rich grain products in Latin America. Guatemala, Costa Rica, El Salvador, Honduras and Panama are applying regulations to imported wheat flour, and about half of Chile's flour is now so treated.

Locally grown corn is difficult to enrich because it is milled locally. In the United States about three-quarters of the corn meal in the South is enriched.

One problem in rice enrichment is being encountered. The riboflavin colors the highly fortified grains yellow. Meticulous cooks were found to take out the yellow grains, mixed one in 200 grains, believing them defective. The riboflavin is therefore omitted from rice enrichment now, but ways of masking the yellowing effect are being developed.

The amount of enrichment of wheat flour in the United States, which is generally followed for other grains and localities, in milligrams per pound is: thiamin, 2; riboflavin, 1.2; niacin, 16; and iron, 13.

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Dr. Chapman said rockets have proved useful tools in the study of the earth's magnetic force. During the next geophysical year, which will begin in the summer of 1957 and run through 1958, rockets probably will be shot through curtains of the Northern Lights.

They likely will carry instruments to detect the intensity and direction of electric current flowing in these sheets of light. Data obtained would help scientists figure, among other things, how thick the curtains are.

Dr. Chapman is chairman of a special committee for the International Geophysical Year, an organization set up by international science groups for world-wide, simultaneous studies in geophysics.

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## GEOPHYSICS

# Earth May Wear Girdle

**Research indicates that invisible band of electricity may circle equatorial area and exert an influence on the earth's magnetic field.**

► AN INVISIBLE band of electricity may circle the earth's equatorial area 12,000 to 16,000 miles in space.

Dr. Sydney Chapman, president of Geodesy and Geophysics in Great Britain, told the National Science Foundation that his studies point to some extra-terrestrial force that is exerting its influence on the earth's restless magnetic field.

This force might be a ring of electricity girdling the earth like visible rings surround Saturn. It may have been built up over the ages by magnetic storms. It may be the force that keeps the earth's magnetic field from returning to "normal" for several days or a week after a magnetic storm.

Rockets some day may reveal the presence or absence of this ring, Dr. Chapman said.

But the ring may lie beyond the range of present-day rockets.

Radar might be used to detect the ring, he added, but it is not likely. Radar waves that could detect the ring would be unable, because of their size, to get to it through the earth's ionosphere. Waves which could pierce the ionosphere might be unable to detect the ring.

However, radar carried in high-shooting rockets may be able to spot the ring. The rockets would carry the radar above the ionosphere.

The ring might also be found if radio waves can be rolled out into space on the earth's invisible lines of magnetic force. Some scientists are said to believe this is possible.