

NUTRITION

Malnutrition Faces Nations

With the world population increasing at the rate of some 100,000 births each day, there is a problem of providing the nations with enough of the right kind of food.

► THE WORLD population is galloping ahead at the rate of 100,000 births per day.

More than two-thirds of these daily newborns will suffer from severely damaging malnutrition. The majority of the malnourished will be born in countries that are already overpopulated as well as underdeveloped, Dr. James M. Hundley of the United Nations' Food and Agricultural Organization told 350 scientists and nutrition experts attending an International Nutrition Symposium in Pittsburgh.

The causes of this undernourishment problem center around the stark fact that there is not enough food available for many people.

From this shortage come protein malnutrition, anemia, vitamin and riboflavin deficiencies, and other diseases such as rickets. The fundamental causes of shortages of food in many countries, such as China, India, Latin America and Africa, are the result of poor agricultural techniques, the economic systems, climate, lack of refrigeration, inadequate transportation and nutritionally harmful religious beliefs.

Only when the agricultural production exceeds the population's rate growth will underdeveloped countries enjoy better economic systems, and capital goods in addition to healthy populations. Hardest hit by food and nutrition shortages in these countries are infants, pre-school children and pregnant women.

Paradoxically, in many of the countries exhibiting these ailing people, 20% to 30% of the food crops are wasted in the fields or in storage due to lack of facilities and education in the proper care of foodstuffs, Dr. Hundley said.

Nutritionists must begin to take an active part in the solution of this global problem by helping to formulate long-range agricultural, economic and educational plans, the United Nations representative told his colleagues.

"The tragedy of malnutrition is that it can be corrected," Dr. Hundley said. However, it must be corrected within the framework of the economic and social systems of the country involved.

Previous plans based upon attacking the symptoms of malnutrition proved to be superficial in that they offered only temporary benefits. Now nutritionists must join in the planning program.

Additional evidence of the world-wide effects of malnutrition problems were offered by Dr. Nevin S. Scrimshaw, regional adviser in nutrition, Pan American Sanitary Bureau.

More than 187 of every 1,000 children one year old in Guatemala alone will die before reaching five years of age. Dr. Scrimshaw said most of these deaths could be prevented by a nutrient mixture costing two cents per day.

The heavy tolls of deaths in this age

group is the result of a disease known as kwashiorkor in Africa. Children with this disease are undernourished, suffer from gross retardation and weight loss, lack of appetite and general apathy, and hair color change to blonde. A cheap, high-protein mixture containing corn, sorghum, yeast, vitamin A and soy beans is restoring the growth of many of these children already, Dr. Scrimshaw reported.

Science News Letter, October 25, 1958

AERONAUTICS

High Flying Airplane To Go 100 Miles Up

See Front Cover

► THE MANNED research airplane, the X-15, designed to fly above the earth's atmosphere, or approximately 100 miles up, will soon begin flight testing.

The X-15, designed by North American Aviation, Inc., is expected to fly at speeds up to 3,600 miles per hour. It is 50 feet long, 13 feet high and has a wing span of 22 feet. Hydrogen peroxide is used in the ballistic controls system and as fuel for auxiliary power units to supply electrical and hydraulic power.

The photograph on the cover of this week's SCIENCE NEWS LETTER shows the X-15 as it is rolled out of the hanger for the first time.

Science News Letter, October 25, 1958

ENGINEERING

Army Spotting Targets With 3-D Radar

► THE U. S. ARMY now has a three-dimensional radar that detects airborne targets and, for the first time, simultaneously computes distance, bearing and altitude.

Called Frescanar, the radar was developed by Hughes Aircraft Company, Fullerton, Calif. It uses a "new look" for radar systems, since the antenna rotates but does not move vertically, the scanning being done electronically.

Frescanar concentrates all available power in sharp pencil beams of energy flashing on and off in fan-shaped array to pinpoint targets at great distance with extreme accuracy. It is the eyes of "missile monitor," an Army air defense guided missile fire distribution system for mobile use with a field army.

Range, bearing and altitude information are transmitted electronically to missile battery processing centers, helping them to direct missiles to targets much more rapidly. The Army said the new radar has 20% to 50% better range and requires only a single operator. Similar radar was previously developed for use on warships.

By supplying a succession of frequencies to the special antenna, the Frescanar radar beam is, in effect, moved through a succession of vertical positions. The frequencies can be changed at electronic speeds, permitting the radar beam to be "moved" far more rapidly than possible by physical movement of the antenna.

Science News Letter, October 25, 1958



RADAR ANTENNA—A mobile radar system, developed and manufactured for the U. S. Army by the Hughes Aircraft Company, detects targets in three dimensions: height, bearing and distance. On the left is the radome housing the antenna which obtains the information and transmits it to radar van on its right. Other trailers contain diesel generators which supply power to the system in the field. One generator is on a standby basis.