

# FOOD RESOURCES AND HUMAN NEEDS

P. LAMARTINE YATES†

## RESOURCES

"WHEN one sits down to a delicious meal, he eats a mixture of what was once rain, rocks, air, and rays of sunshine. If the housewife served bowls of rainwater and rocks, the family would probably turn up their noses."<sup>1</sup> Yet when rocks are broken up into small particles they become soil, and out of soil, given suitable quantities of water, air, and sunshine, come the plants which we eat and which animals eat. Hitherto human beings have found it possible to grow food only where soil and climate are both favorable. Today only five to seven percent of the land surface of the world is used for food production. In a few countries existing knowledge and equipment would enable more land to be cultivated quite easily; but it is not necessary—the people of these countries have enough food. In many lands food is very short and the people are cultivating as much land as they know how, although their know-how is not up to that of the advanced countries. Indeed, the pressure of increasing population provides a continuing urge to increase the area under cultivation.

It takes between two and three acres to produce food for one man for one year. That, at least, is the sort of figure for the varied diet of the richer countries; the poorer peoples live on less adequate diets and manage on the produce of a much smaller area. In the United States there are four acres of crop land to every citizen, so that even at the rather low prevailing level of yield there is some export surplus. In China and Japan there is only half an acre of crop land per citizen. The yield per acre is somewhat better than in the United States, but even so the food supply is totally inadequate for diets at any health standard. This maldistribution of population and food-producing resources constitutes the basic food problem. "Resources" is a relative term which reflects the ability of a people or an age to harness the physical world to man's use.

There is no doubt that modern engineering and agricultural techniques could substantially increase food production if vigorously applied to the less developed regions of the world. It is equally certain that present technology, even if fully applied, cannot provide enough food for all these peoples to have adequate diets. The undernourished world challenges science to develop ways and means of cultivating

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† Member, Food and Agriculture Organization of the United Nations. Author of *Commodity Control*, 1943; *Food Production in Western Europe*, 1940; co-author of *Food and Farming in Post-War Europe*, 1942; *British Agriculture*, 1933.

1. PEARSON AND HARPER, *THE WORLD'S HUNGER* (1945) 20.

more land at a reasonable cost and getting better yields from land now being used.

### HUNGER

The present famine situation which afflicts so many countries rather obscures the fact that even in more normal times many hundreds of millions of people are hungry. A survey just made by the Food and Agriculture Organization<sup>2</sup> has analyzed the prewar diets of some 90 percent of the world's population. Just over one-half of the people of the world normally live on a diet of less than 2,250 calories. This includes not only China, India, Japan, and almost all the countries of the Far East, but also much of Africa and the Middle East and a number of Latin American countries as well. When a national average diet is evaluated at 2,250 calories, it is fairly certain that large sections of the population will be eating less than 2,000 calories—in other words, will be chronically undernourished.

In some of these countries the climate and the size and weight of the people are such that less calories would be required than in a Western country. But the difference on these grounds would not amount to more than 100 to 150 calories, whereas the observed difference is of the order of 1,000 calories.

The diets of the poorer and hungry peoples are almost always badly balanced. The proportion of cereals is too high; the amount of animal protein too low; the supply of several essential vitamins and minerals insufficient. There is close correlation between bad diets and bad health. The general death rate, the infant mortality rate, the incidence of tuberculosis, the level of mental alertness and the capacity for hard physical work—all are very much worse in the malnourished countries than in the well nourished ones. Before the war the death rate in India was 24.3 per thousand compared with 8.5 per thousand in The Netherlands. The infant mortality rate in Chile was 236 per thousand live births compared with 32 per thousand in New Zealand. Food is not the sole cause of these discrepancies, but it is unquestionably the major cause. A wealth of impressive evidence indicates that when selected groups from the under-privileged countries are fed with adequate diets, they gain rapidly in stature, weight, health, and mental capacity.

### SURPLUSES

The countries which have plenty of land to spare are, generally speaking, the food-exporting countries of the world. They sell their food to countries which have a less adequate supply of land per head of population but which have a high level of purchasing power. This

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2. This will be published as a Report by the Director-General to the Copenhagen Conference of FAO.

has meant that by and large food is moved from countries of the New World into Europe.

In the New World countries the application of modern techniques to the wide-open spaces has enabled food production to expand rapidly, and indeed more rapidly than the home and export markets could absorb. It is true that those markets could and should have absorbed somewhat more than they actually did. There were many persons in low income brackets who were badly fed, and there were certain countries which should have imported food but which for financial or security reasons felt obliged to stimulate less economic food production within their own borders. Yet even had these matters been put right, it is still likely that food output would have outstripped demand.

There was in the 1930's a problem of surpluses arising out of the economic tangles into which the Western World had gotten itself. But the chances are that even if the Western World avoids those tangles in the future, there will still be more food than the Western World can consume. The distribution of food-producing resources is just so favorable, and production is so easy that there is likely to be too much of it.

#### AN INTERNATIONAL PROBLEM

There was a phrase current in the 1930's referring to "poverty in the midst of plenty." If we are prepared to regard the world as one world, that phrase will continue to stand. Even after the present food crisis is past, there will still be hunger in parts of the earth concurrent with surpluses in other parts.

A little more than ten years ago a small group of people began to say that the problem of surpluses could not be solved negatively, that is, by subsidizing farmers to produce less and less. They saw hope for a constructive solution if policy were to be focused on health and the food needs for health. They urged that a start should be made with the low income groups of each country and with groups such as young children and pregnant mothers having particular nutritional requirements. In 1935 the League of Nations established a Mixed Committee on Nutrition which surveyed all these questions and recommended nutrition policies for adoption by governments. The Committee pointed out that such policies, if vigorously pursued, could contribute to the alleviation of the food surpluses which were embarrassing the world.

Today it is possible to go further and to assert that the problems cannot be resolved within the frontiers of the Western World. The potential markets for food within that area cannot match the potential production. Putting the matter another way, the maldistribution of agricultural resources over the world is such that there needs to be movement of food from the countries of plenty to the countries of

need, while at the same time the greatest possible efforts are being made to expand the food production of the densely populated countries.

#### INTERNATIONAL ACTION

In his message to Congress in January 1941, President Roosevelt said, in referring to the four essential human freedoms, "The third is freedom from want, which, translated into world terms, means economic understandings which will secure to every nation a healthy peacetime life for its inhabitants—everywhere in the world." This idea was carried further in the Atlantic Charter where the fifth of the common principles outlined by Mr. Roosevelt and Mr. Churchill reads, "They desire to bring about the fullest collaboration between all nations in the economic field with the object of securing, for all, improved labor standards, economic adjustment, and social security."

Less than two years later Mr. Roosevelt called the United Nations to a Conference at Hot Springs, Virginia, "to consider the goal of freedom from want in relation to food and agriculture." This Conference surveyed the whole field of nutrition and agricultural production. It outlined the principles on which policy should be based to improve the diets of peoples and to re-shape agricultural policy to meet nutritional needs. Its major decision was to establish a permanent international organization in the field of food and agriculture, and it accordingly set up an Interim Commission to prepare for the new agency.

The Interim Commission, working in Washington between July 1943 and October 1945, drafted a Constitution for the new permanent body and sent reports to governments outlining the functions which the new Organization might perform. When the draft Constitution had been accepted by twenty governments, the Interim Commission convened a United Nations Conference which met at Quebec in October 1945.

At Quebec the Food and Agriculture Organization of the United Nations formally came into existence with the signing of its Constitution. Membership at the close of the Session consisted of forty-two countries. The Conference proceeded to elect a Director-General, Sir John Boyd Orr, widely known internationally for his work in agriculture and nutrition. It elected an Executive Committee of fifteen members and established the temporary seat of the Organization in Washington, D. C. The Conference considered the reports submitted by the Interim Commission, and it drew up an extensive program of work for FAO. As the Chairman of the Conference, Ambassador L. B. Pearson, wrote in his introduction to the Report of the Quebec meeting,

"There are few precedents for FAO to follow; it is something new in international history. There have been functional international agencies with more circumscribed objectives and tasks, but FAO is

the first which sets out with so bold an aim as that of helping nations to achieve freedom from want. Never before have the nations got together for such a purpose.

"FAO will bring the findings of science to the workers in food and agriculture, forestry and fisheries, everywhere; and it will bring the practical problems of these workers everywhere to the attention of the scientists. It will assemble, digest, and interpret information to serve as a basis for the formulation of policy, national and international. It can suggest action, but only through the activities of governments themselves can the objectives be finally won.

"Behind governments stand the people—those who produce and those who use the products of the soil and the sea. FAO must know what they are enduring, needing, and hoping. Likewise FAO must explain to them the new conceptions it stands for and what these mean in terms of practical policies. It must speak in language that all can understand."

#### CONSTITUTION OF FAO

The Food and Agriculture Organization is an inter-governmental agency. Its present membership consists of forty-two countries,<sup>3</sup> and it will form one of the group of what are coming to be known as the "specialized agencies." Each of these has responsibility for a particular field and a general relationship to the Economic and Social Council of the United Nations.

The purposes of the Food and Agriculture Organization are summarized in the Preamble to its Constitution and read as follows:

"The Nations accepting this Constitution, being determined to promote the common welfare by furthering separate and collective action on their part for the purposes of

raising levels of nutrition and standards of living of the peoples under their respective jurisdictions,

securing improvements in the efficiency of the production and distribution of all food and agricultural products,

bettering the condition of rural populations, and thus contributing toward an expanding world economy,

hereby establish the Food and Agriculture Organization of the United Nations, hereinafter referred to as the 'Organization,' through which the Members will report to one another on the measures taken and the progress achieved in the fields of action set forth above."

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3. Australia, Belgium, Bolivia, Brazil, Canada, Chile, China, Colombia, Cuba, Czechoslovakia, Denmark, Dominican Republic, Ecuador, Egypt, France, Greece, Guatemala, Haiti, Honduras, Iceland, India, Iraq, Lebanon, Liberia, Luxembourg, Mexico, The Netherlands, New Zealand, Nicaragua, Norway, Panama, Paraguay, Peru, Philippine Islands, Poland, Syria, Union of South Africa, United Kingdom, United States, Uruguay, Venezuela, Yugoslavia.

The Organization consists of a Conference in which each member nation is represented by one delegate with only one vote. The Conference, which must meet at least once every year, appoints an Executive Committee consisting of persons "who are qualified by administrative experience or other special qualifications to contribute to the attainment of the purpose of the Organization." It is laid down that the members of the Executive Committee "shall exercise the powers delegated to them by the Conference on behalf of the whole Conference and not as representatives of their respective governments."

In addition to food and agriculture, the Constitution specifically states that the Organization shall cover fisheries, forestry, and primary forest products.

The budget of the new Organization for a first partial year (ending June 30, 1946) was fixed at \$2,500,000 and it was agreed at Quebec that for the first full year the sum should be \$5,000,000. A scale of contributions from member governments was agreed upon, calculated in approximate relation to the national income of the member countries, but with the limitation that no nation should contribute more than 25 percent or less than .05 percent of the annual budget.

A provision was made in the Constitution for an eventual relationship with the United Nations central organization. In fulfillment of this intention, a draft agreement was prepared in June 1946. It provides for reciprocal representation at meetings of committees of FAO and UN, for the exchange of information and documents, for the right of each to place items on the agenda of meetings of the other organization, and for certain common services in the administrative and technical field. It was agreed that the permanent headquarters should be at the permanent seat of the United Nations, provided that that seat was a place where FAO could "effectively and economically discharge its duties and maintain effective liaison with those specialized agencies with which it is particularly concerned."

#### THE CURRENT FOOD CRISIS

Soon after the Director-General had returned to Washington and had assembled a nucleus staff, the world became faced with a food crisis more critical than at any period during the war. This crisis was the result of cumulative effects of wartime damage to and dislocation of agriculture, together with the serious droughts which many large food-producing regions suffered in 1945. Following a resolution on February 11, 1946, by the General Assembly of the United Nations, the Director-General of FAO agreed to bring his new-born Organization to the assistance of the nations in the crisis, although FAO had been designed as a long-term advisory agency and did not have under its Constitution any executive powers for dealing with short-run problems. In May a Special Meeting on Urgent Food Problems was at-

tended by representatives of the international agencies concerned with food and by the delegates of twenty-two countries.

The meeting had before it an Appraisal of the World Food Situation which attempted to forecast the situation in 1946-47. The Appraisal indicated that the crisis would continue at least until the 1947 harvest and possibly beyond. In 1946-47 the food deficit countries would have an import need of grain (in addition to certain quantities of sugar, fats, and meat) totaling some 30,000,000 tons of wheat equivalent. This "need" was based on certain minimum nutritional requirements.<sup>4</sup> On the supply side the prospects were for exports of some 20,000,000 tons of grain, leaving a gap of 10,000,000 tons, equivalent to the needs of 70,000,000 people for one year. The Meeting agreed on an impressive body of recommendations to governments regarding ways in which this gap might be closed. It also laid down a number of principles regarding the allocation of foods in short supply. It asked FAO to develop a food-reporting service to keep nations continuously informed of changes in the world food situation. Finally, it recommended the establishment of an International Emergency Food Council to take the place of the Combined Food Board. The new Council, which formally took over on July 1, 1946, has nineteen member nations and will work as did the CFB through a series of commodity committees. It will be responsible for allocating all scarce foodstuffs and also feedstuffs and fertilizers.

The position has therefore been reached in which the principal food-exporting and -importing countries agree to take joint responsibility for the equitable distribution of available supplies. This represents a new departure in international cooperation, as it recognizes the advantages of proceeding by discussion rather than by the use of economic force. It sets a precedent which may well prove of value if at any time some other form of economic crisis should afflict the nations.

#### LONGER TERM PROBLEMS

Meanwhile, FAO has been steadily continuing its survey of the world's food problem and the functions which an international agency might properly perform. The Organization was handed a list of some 250 recommendations by the Quebec Conference, so certain priorities had to be established. Sir John Orr decided that the most important single thing was to prepare a picture of food, agriculture, forestry, and fisheries as they were before the war, along with an inventory of production and consumption in these fields. With the advice of a special committee of nutrition experts, he set up a series of food consumption

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4. For fuller explanation of the calculations, see Food and Agriculture Organization of the United Nations, *REPORT OF THE SPECIAL MEETING ON URGENT FOOD PROBLEMS* (June 6, 1946).

targets, not optimum but practical in character, which would assure something approaching a health standard of diet to all peoples. He is publishing a report outlining the prewar picture, setting forth the targets, and examining the problems involved.<sup>5</sup> As already mentioned, the picture shows that before the war half the world's population lived on less than 2,250 calories, one-third on more than 2,750, and the remainder on something between. The target diets which would bring nutrition up to at least two-thirds of the National Research Council optimum level involve an increase of 15 to 25 percent in food supply, or, more accurately, 20 to 40 percent according to country when allowance is made for the extra feed grain needed to expand livestock production.

It emerges clearly that there are two central problems in which an international agency can be of service. The first is to help nations improve their agricultural production. It is not too much to say that the less developed countries with increasing populations ought to try to double their food supply during the next thirty years. Present scientific techniques, if mobilized with the aid of an international agency like FAO, can be put at the service of peoples and help them in their agricultural development. Yields per acre could be substantially increased by the use of better seeds, more fertilizer, and more pesticides. More livestock of higher productive quality could be developed. Not least, though probably only at considerable cost, much more land could be brought into cultivation. There are likely to be some large-scale projects which will require considerable capital investment. In such cases FAO might properly enlist the services of the International Bank.

The other problem which emerges from this survey is one concerning the international distribution of agricultural products and the fear of surpluses in many countries of the New World. There is no doubt that fear of surpluses is very present in the minds of many farmers. They do not believe that the pledges of their governments to support prices could be maintained in the event of a serious economic depression or of worldwide over-production of staple foodstuffs. They fear the negative solution of restrictions.

Some progress can and must be made by gradual reduction of trade barriers. The International Trade Organization recently proposed by the United States Government should play an important rôle in encouraging governments to negotiate more moderate tariff schedules. But there is also need for an agency to take positive action in respect to certain staple commodities. Such an agency should be one through which governments can cooperate to secure stability in international

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5. At the time of writing, this survey was scheduled to be published in August as a document for the Copenhagen Conference.

prices, thereby correcting tendencies toward agricultural depressions. It would have to be an executive agency with powers to hold stocks of basic agricultural products both for the purpose of regulating prices and for reasons of security against sudden emergencies. It would administer international commodity agreements. Finally, and perhaps most important of all, the agency would be instructed to find means of converting the nutritional needs of the under-privileged into new world markets. It would develop ways of using so-called surpluses to alleviate the shortages in parts of the world where as yet there is no effective purchasing power.

These are intricate problems on which there has been little international discussion as yet, but Sir John Orr has been asked by the Meeting on Urgent Food Problems to make a report on these questions to the Copenhagen Conference of FAO. They present particularly formidable difficulties in their financial aspects. But more difficult problems of financing were successfully tackled by governments which mobilized nations for war.

The world is faced with an acute problem in this sphere of food needs and food resources. The potential resources of the world will have to be developed far more before there is enough food for everybody. It is not at all certain yet how soon that could be accomplished. It is not certain how much it would cost. It is clear that the job will prove hardest, initially at least, in those less developed areas where the need for increased supplies is greatest. The advanced nations can best help themselves by helping others, since nothing is better calculated to maintain their own economies at a high level of activity and prosperity.

In all this the Food and Agriculture Organization has a great opportunity to help nations harness the knowledge of sciences in these fields to serve the needs of men. It has a large program ahead of it in investigating further the practical scope in different regions of the world for increasing food production and for determining what equipment will be needed. Possibly the Constitution of FAO is not drawn widely enough to enable it to undertake all the services which nations will come to require. There may be need for giving some international agency executive powers in the field of international distribution. There is certainly need for close collaboration between the various specialized agencies in developing projects which embrace agriculture, industry, and indeed all the resources of a given territory.

The pace at which international thinking about economic problems has moved during the last few years provides convincing proof that men are willing to analyze their needs and then mobilize physical resources. It may be a long time before the last vestige of hunger is banished from the world. But the job can be done. The most hazardous obstacles are not technological.