

V. HOW TO BALANCE THE WORLD'S FOOD BUDGET

From the standpoint of world politics as well as humanitarian considerations, it would be most unfortunate if in the next 2, 3, or 4 years we make no more progress in meeting the world's nutritional deficits than we have done in the past few years. Yet, this is the prospect if we wait on the essential but slow-moving economic development programs to increase living standards enough to do away with malnutrition. We have already noted that creating job opportunities, raising industrial and agricultural productivity, and promoting trade must, of course, be the great preoccupation. But there must also be a concurrent preoccupation with the masses of underfed people who, for a long while, will not achieve adequate economic or nutritional benefits from the inevitably slow-spreading processes and progress that flow from economic development programs.

Reviewing the plant protein sources of the world, one must come to the oilseeds for help in closing the protein gap. The great food staples, wheat, rice, and corn, contain only 7.5 to 13 percent of protein; legumes, 26 percent; cottonseed and sunflower seed, 20 percent; peanuts and sesame, 25 percent; but soybeans, 38 percent.

Soybeans dominate the world supply of protein from oil seeds. Excluding the U.S.S.R., soybean production provides twice as much protein as peanuts, cottonseed, sesame, and sunflower seed combined. Two additional facts are important here. One is that the United States accounts for more than half of the world's soybean production. The other is that in the United States soy protein is used predominantly in livestock feeding, whereas in the Orient it is used in many ways as human food. Cottonseed, both in the United States and elsewhere, is also used chiefly as livestock feed.

In the United States, soybeans hold an even more dominant position among the oilseeds. The 1961 production of peanuts and cottonseed together represent less than 1 metric ton of protein, whereas the 700 million bushel soybean crop represents about 7 million metric tons. Our soybean crop now exceeds probable uses in 1961-62, and a continued rise in production will make it possible to supply additional quantities of soybean oil and soy flour for humans as well as meal for livestock in the Food for Peace Program. Thus, soybeans dominate the following review of current developments in new protein foods and processes, since they present the great potential means for balancing the world's food budget.

New protein foods

What are these new food products and food processes that promise so much?

Let us turn to a most timely and authoritative report just off the USDA press entitled, "Proceedings of Conference on Soybean Products for Protein in Human Foods."¹ The sponsors of this conference were

¹ Op. cit.