Food: Population Trends Move U.S. To Tie Aid to Self Help

There are signs that, barring nuclear disaster, 1984 may prove George Orwell less a prophet than Thomas Malthus.

Malthus, born in 1766, was, of course, the author of the *Essay on the Principle of Population*. He is remembered as the "gloomy parson" not for a melancholy disposition but for his postulation that "population, unchecked, increases in a geometrical ratio. Subsistence only increases in arithmetical ratio. A slight acquaintance with numbers will show the immensity of the first power in comparison with the second."

Since World War II, the rate of population growth in the less-developed countries has outstripped the rate of increase in their food production. The industrialized countries have managed to increase food production substantially in per capita terms. But the trend in the underdeveloped countries is so overwhelming that the near future appears to threaten conditions of feast in the industrialized countries and of literal and widespread famine elsewhere.

In the United States, the world's leading producer and exporter of food, this year has brought an unprecedented burst of activity among government officials, aimed at coming to terms with the threat of a Malthusian apocalypse.

A Revision of Policy

President Johnson early in the year proposed revisions of both foreign aid and domestic agricultural policy designed to counter the looming world food shortage.

The growing concern among American scientists about the problem was reflected by an opening-day symposium at the annual meeting of the National Academy of Sciences last week in Washington, a symposium devoted to discussion of "Prospects of the World Food Supply."

Nine papers delivered in the all-day session dealt not only with the scientific and technological aspects of the problem but with the political, social, and economic aspects as well. The impression left was that the efforts of the past decade, while not inconsiderable, amounted to a losing battle.

The consensus was that the corner could be turned only if radical measures were taken both to curb very high rates of population growth and to speed agricultural development in the underdeveloped countries.

Since the war, American policy toward underdeveloped countries with food deficits has combined the shipment of food under concessionary terms and technical assistance in agriculture. And American agricultural abundance has prevented large-scale famine in Western and neutralist nations in the postwar period.

Our efforts have been prompted by a mixture of humanitarian, economic and foreign-policy motives. The major instrument has been the so-called Food for Peace program. The program's legislative base is the Agricultural Trade Development and Assistance Act of 1954, the stated purpose of which was "to increase the consumption of United States agricultural commodities in foreign countries, to improve the foreign relations of the United States and for other purposes." Advocates of the legislation before Congress have put less stress on the altruistic aspects of the legislation and more on its potentialities for stopping communism and being good for business.

In the first 10 years of the life of Public Law 480 (known familiarly as PL 480), some $12.3 billion worth of agricultural products were shipped overseas, about 27 percent of all United States agricultural exports in the period.

Approximately $10 billion worth of these commodities have been paid for by foreign countries in their own currencies, not convertible to dollars and known as "blocked" currencies. About two-thirds of this amount has been set aside for economic development, and smaller amounts of PL-480 funds have been used by the U.S. government, in lieu of dollars, to pay its obligations and as capital for loans to American and local business firms.

The rationale of the program seems to have been that U.S. surpluses could be used to tide over underdeveloped countries during the period in which they were modernizing their agricultural economies. Save in a few cases, however—Taiwan, Israel, and Mexico are usually cited as the exceptions—most underdeveloped countries seem far from the agricultural "takeoff" point. And as the population trends harden, the situation promises to go from bad to worse.

Perhaps the most alarming storm signals have been coming from Latin America, where the food gap is becoming the most serious in the world. Population in Latin America has been increasing at an annual rate of 3 percent, the highest anywhere, while agricultural production has been rising at the rate of 2.5 percent. The magnitude of the problem is indicated by a comparison of the 11 million tons of grain the Latin American countries exported annually before the war with imports now, which have reached 25 million tons yearly and are rising rapidly.

A Depressing Bank Statement

A recent report of the Inter-American Development Bank, showing that the Latin American population boom was wiping out gains which could be ascribed to the Alliance for Progress, certainly contributed to the surge of concern in Washington about a demographic debacle.

The American response, in effect, has been to make it explicit that the United States cannot and will not compensate with free food for the kind of population growth which negates efforts at economic development. The U.S. will help with food, but only on condition that the recipient country is carrying out effective self-help measures to raise agricultural efficiency and production.

The new line has been to some extent foreshadowed in our recent relations with India, which, because of drought, faces a food shortage more serious than last year's. The U.S. has been shipping wheat to India at a rate of 500,000 tons a month, and the amounts are likely to grow larger. Frictions have been growing, however, because American officials feel that the Indians have not, in the past decade, invested in agriculture to the extent they should have and to the extent they would have if

food from America had not been available.

Last year the term of food contracts was changed by the U.S. from 4 years to 1 year, and more recently the contracts were put on a month-to-month basis. Washington feels that the pressure will encourage the Indians to give more serious attention to agricultural problems. Indians, on the other hand, feel that the new arrangements introduce an element of uncertainty which will hinder long-range planning, and they complain that this is another example of American diplomatic armtwisting meant to restrain India in its conflict with Pakistan.

In his message to Congress, President Johnson put the case for self-help as a quid pro quo this way.

"We know what would happen if increased aid were dispensed without regard to measures of self-help. Economic incentives for higher production would disappear. Local agriculture would decline as dependence on U.S. food increased.

"Such a course would lead to disaster.

"Disaster could be postponed for a decade or even two—but it could not be avoided. It could be postponed if the United States were to produce at full capacity and if we financed the massive shipments needed to fill an ever-growing deficit in the hungry nations."

The President went on to say, "candor requires that I warn you the time is not far off when all the combined production, on all the acres, of all the agriculturally productive nations, will not meet the food needs of the developing nations—unless present trends are changed."

U.S. Agriculture Changing

In his Food for Freedom message the President spoke of one of the relevant trends when he said, "Today—because of the world's needs, and because of the changing picture of U.S. agriculture—our food programs can no longer be governed by surpluses."

The fact is that our surpluses are disappearing. In the case of wheat and feed grains, which provided the big surpluses in the 1950's, the policy of tying price supports and land-diversion payments to farmers' agreements to comply with allotments and to divert certain acreages to conservation has cut deeply into the surpluses built up when the federal government essentially bought up surpluses at support prices. Wheat, for example, is down to the level of something over a year's supply. Despite record crops of soybeans, there is practically no surplus, partly because of booming demand for commercial exports of oil from soybeans.

In his message the President said he would ask for a 10-percent increase in acreage allotments of rice to fill demand caused by drought and war in Asia; seek an increase in soybean production; and order the purchase of limited amounts of milk and dairy products, in part to provide stocks for a new AID program aimed at providing more highly nutritive food for children in underdeveloped countries.

Over 60 million acres have been diverted to conservation in the United States, and the President referred to them as an "emergency reserve that could be readily called forth in the critical race between food and population. We will bring these acres back into production as needed—but not to produce unwanted surplus, and not to supplant the efforts of other countries to develop their own agricultural economies."

Because of the decline of the surpluses, implementation of federal food policy will increasingly resemble a balancing act. Expected from American agriculture is production sufficient to meet domestic needs and demands for commercial exports and to provide food aid to developing countries which demonstrate a determination to help themselves, as well as sufficient to maintain reserves adequate to meet emergencies and stabilize prices.

No commodity reserve policy has been necessary in the past because of the surpluses, but now the President says he will ask for establishment of the principle of an "ever normal granary" to protect the public from instability in supplies of food and from high prices in times of emergency.

The insistence on greater self-help efforts in the less-developed countries implies a willingness on our part to give them more and more effective technical assistance in agriculture.

In his Food for Freedom message the President pledged American efforts to strengthen the United Nations Food and Agricultural Organization (FAO), to contribute to the expansion of the multilateral lending agencies' activities in support of agricultural modernization, and to increase our participation in regional programs.

AID has been the chief agent of our unilateral assistance programs, and recently the word has gone out that the agency should give higher priority to three problems common to most developing countries—food supply, malnutrition, and population increase.

AID missions in every country with PL-480 sales programs were encouraged last summer to consult "appropriate government offices with a view to initiating (1) an analysis of the ten-year food supply prospect and (2) a program of country policies and country activities supplemented by necessary technical and capital assistance, aimed to lead supply into a more adequate relation to demand."

Self-help is not a new principle in American foreign aid programs. It is, in practice, a very difficult principle to implement. The Alliance for Progress, in fact, was initiated with heavy emphasis on self-help. The record of achievement through self-help in Latin America has not, however, been brilliant. And the new AID policy of tying PL-480 agreements to self-help actions may or may not bring desired results.

New Avenues for AID

In the area of population control, AID has acquired somewhat more room to maneuver in recent years as a result of changes in government policy caused by the beginnings of a thaw in birth-control politics. AID now is more willing to assist underdeveloped countries not only to gain a statistical understanding of their own population trends but also to establish and expand voluntary programs of family planning.

The concern over nutrition arises out of an awareness, sharpened by research results in recent years, that malnutrition—particularly protein and vitamin deficiency in young children—can cause irreversible physical and mental retardation and higher susceptibility to disease.

The reigning U.S. view is that Food for Peace alone cannot solve this problem and that the only recourse lies in greater use of protein already produced, such as ground nuts, and greater production of high-protein crops such as soybeans.

In his food message the President sought to enlist scientists in the cause when he said,

"The wonders of modern science must also be directed to the fight against malnutrition. I have today directed the President's Science Advisory

Committee to work with the very best talent in this Nation to search out new ways to develop inexpensive, high-quality synthetic foods as dietary supplements. A promising start has already been made in isolating protein sources from fish [see page 738], which are in plentiful supply throughout the world; improve the quality and the nutritional content of food crops; apply all of the resources of technology to increasing food production."

Scientists have taken the lead in calling attention to the implications of what is happening to the food and population variables. They are also providing a sobering estimate of what is possible in the way of countermeasures, both scientific and political. The prospects will be discussed in another article in this space.—JOHN WALSH

Nonprofits: Air Force Says We Can't Do Without Them

Los Angeles. Directors and employees of this country's major nonprofit corporations are resting more easily these days, following publication of a special Air Force report certifying that the nonprofits are doing pretty much what they ought to be doing in pretty much the ways they ought to be doing it. The Air Force report, released last month, certified something else as well —that the time-honored tactic of "appointing a committee" when the going gets rough has lost none of its utility. When the Air Force committee was created last autumn,* the nonprofits were operating in a rather unstable environment. A study of the Aerospace Corporation by the House Armed Services Committee had given massive publicity to charges that the company was too opulent in dealing with its employees and too willful in dealing with the Air Force (*Science*, 3 Sept. 1965), and the questions raised by the Aerospace case were provoking broad interest, in Washington, in the role and conduct of the nonprofits as a whole. The Armed Services Committee was planning a comprehensive study, and other congressional units were also developing material for their investigative mills. Now those plans have been laid aside: the Word is that all is well, or can be made well by only minor tinkering.

This sanguine conclusion rests primarily on need. The nonprofits studied by the committee, particularly Aerospace and MITRE, come very close to being extensions of the Air Force itself. They help plan, develop, and operate some of this country's major military operations in the missile and space field. In the case of Aerospace these include Titan II, Minuteman III, the Manned Orbiting Laboratory, the military communications satellite program, and Vela Hotel (a program for detection of atomic explosions in space), to name only a few. MITRE has been heavily engaged in work on early-warning systems for missile attack, in operational command and control systems, and in other phases of military defense and communications.

What the companies do, among other things, is known in the trade as "general systems engineering/technical direction" (GSE/TD). It involves the monitoring and integrating of a number of activities and components performed or produced by independent commercial contractors contributing to a given system. Aerospace in particular is a kind of technical umpire, or—as business sometimes complains—a kind of cop. The companies were set up because neither traditional private enterprise nor traditional government organizations seemed able to perform the function effectively, and if the result is a curious form of enterprise, nonetheless Air Force reliance on the companies is too great to encourage tampering for the sake of satisfying any textbook abstractions about "government." These are practical institutions, invented and run by practical men out of military necessity. Yet it is worth noting that in a paradoxical way these pillars of defense are implicitly subversive of American capitalism's marketplace ideology. And they are a standing rebuke to the comforting idea that the government can run on *noblesse oblige* alone; the government has been unable to make the internal adaptations necessary to motivate highly trained men to take on the demanding jobs.

Aerospace was created in 1959 in response to Air Force need to gather high-level technical, scientific, and managerial manpower to supervise its burgeoning space and missile operations. An earlier arrangement under which the systems engineering function for the ICBM program was performed by private industry had proved unsuccessful, not because the industry staff was incompetent but because industry was reluctant to give up the opportunities for producing components which the role of objective overseer requires. A related difficulty was that associated contractors were reluctant to make certain kinds of disclosures to fellow-businesses with which they were essentially in competition. The idea of the nonprofit, enjoined from producing hardware, committed to nothing but the "national interest," getting the job done, was a direct response to these tensions. And, according to the Air Force report, it continues to be appropriate. The committee found that "the innovation, begun by the Air Force about a decade ago, of augmenting its professional resources with an independently managed technical organization that is distinct from the necessarily partisan commitment of a particular hardware contractor, continues to be an indispensable

* The Air Force report was prepared by an *ad hoc* group of the Air Force Systems Command Board of Visitors. Cochairmen of the committee were Howard Johnson, president-elect of M.I.T., and Major General John W. O'Neill, commander of the Electronics Systems Division of the Air Force Systems Command. Other members were Charles A. Anderson, president, Walker Manufacturing Company; William O. Baker, vice president (research), Bell Telephone Laboratories; Lyle Garlock, vice-president, Eastern Airlines; Thomas Jones, president, Northrop Corporation; James Kerr, president, AVCO Corporation; and General Nathan Twining, USAF (retired). The committee did not consider nonprofits as a whole but concentrated on two special Air Force–sponsored organizations, Aerospace and the MITRE Corporation. It also reviewed the role of the System Development Corporation, an information-system, computer-technology firm associated with the Air Force on a somewhat different basis.