The world situation with respect to hunger and malnutrition is reviewed. The many complex and diverse problems involved in the total picture are discussed, among them economic development, family planning and the green revolution. The long-term nature of the task is stressed as well as the need for international and national collaboration.

**WHERE ARE WE IN THE RACE AGAINST STARVATION?**

Grace A Goldsmith, M.D.

Where are we in the race against starvation? The prophets of doom continue to predict famine before the end of this century. The scientist and novelist, C. P. Snow stated that barring major agricultural reform and worldwide population control “we in the rich countries shall be surrounded by a sea of famine involving hundreds of millions of human beings.” Fortunately, this dim view is not shared by the majority of scientists. Many believe that the outlook for expanded world food production is excellent and that the “green revolution” will save the day.

A guarded optimism prevailed at the Third International Congress on Food Science and Technology which was held in Washington in August, 1970. The broad theme of this Congress was the Science of Survival. The brief symbol SOS-70 expressed the urgency with which the Congress faced its role. Reports indicated that there is enough food to meet the world’s needs, but distributing it to the hungry is extremely difficult. The problem was defined as twofold: feeding the hungry now and developing food production for the future when the human population outstrips the food supply. It was empha-

sized that the very survival of the human race demands a vast expansion of the supply of conventional foods, a vigorous and successful effort in the creation of new foods, both from raw materials traditionally used and from new sources, and a broad application of technology to deliver acceptable foods that are enriched with essential amino acids, vitamins and minerals. It was pointed out that most of the food will have to be produced in the underdeveloped nations as there will be little foreign exchange available to pay for imports from other countries.

The world population in 1970 is estimated to be 3.6 billion, and to be increasing by about 1.4 million a week. During the current year, 72.6 million more people will be added. The developing countries, which include nations of Africa, Latin America, the Middle East and Asia, account for more than 85 per cent of the population increase over the past 5 years. These countries have a total population of about 2.6 billion and are growing by between 2.3 and 2.9 per cent a year. Latin America leads all other major regions with an annual 2.9 per cent population increase. Within this area is the fastest
Table 1—World population increase

<table>
<thead>
<tr>
<th></th>
<th>Rate of natural increase 1960</th>
<th>Rate of natural increase 1966</th>
<th>Estimated annual rate of natural increase 1970-80</th>
<th>Estimated population 1970 (billions)</th>
<th>Estimated population 1985 (billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed regions</td>
<td>1.2%</td>
<td>.9%</td>
<td>1%</td>
<td>1.1</td>
<td>1.3</td>
</tr>
<tr>
<td>Less developed regions</td>
<td>2.1%</td>
<td>2.4%</td>
<td>2.5%</td>
<td>2.5</td>
<td>3.7</td>
</tr>
</tbody>
</table>

Source: UN Population Commission

growing subregion, Mexico and the six Central American countries, with a yearly increase of 3.4 per cent. Table 1 illustrates rates of increase and estimated population for developed and underdeveloped countries from 1960 to 1985.

If the total world population continues its present 2 per cent yearly rate of increase, it will reach 4 billion in 1975; 5 billion in 1986; and 6 billion in 1995. These intervals represent a marked shortening of the elapsed time needed to gain an additional billion people. It took all of man's history, perhaps a million years, for the human population to reach its first billion shortly before 1850.

Population research and worldwide family-planning programs have received increasing support in recent years but much remains to be done. Figure 1 shows the underdeveloped countries which have adopted national population policies, or have initiated family-planning programs. The developed countries offering foreign aid assistance for population and family-planning activities are also indicated.

Frank Notestein, in a symposium on

Figure 1—Underdeveloped countries which have adopted national population policies or have initiated family-planning programs are shown in black. Developed countries offering foreign aid assistance for population and family-planning activities are cross hatched

Overcoming World Hunger, expressed the belief that the underlying socioeconomic situation in most of the less developed regions has changed in ways that have enhanced interest in the limitation of childbearing. He believes that a considerable reduction of birth rate can be achieved through the spread of voluntary family-planning on a scale that matters. Death rates have been reduced in the developing regions, even though they are much higher than in the more developed areas. Populations are aware that children now survive. Families, in the sense of surviving members, have become drastically larger. Surveys in more than a score of countries show that, except among nomadic peoples, a substantial majority of women want to limit their childbearing. This does not mean that they want only two children, but it does mean that they are interested in birth control. Evidence of public interest is the fact that when reasonably good services are organized, women come for help in large numbers.

Encouraging accomplishments have resulted in some parts of the world that have active birth control programs. Birth rates have been rapidly reduced in South Korea, Taiwan, Hong Kong and Singapore. In Taiwan, the birth rate was well over 50 per 1,000 population in 1955, and it is now well under 30. In India in 1968–69, the family-planning program reported a total of IUD insertions of 0.9 per thousand population and a total of sterilizations of 3.0 per thousand making a combined total of 3.9 per thousand.

Critics have stated that use of either the IUD or the Pill is discontinued by half of the patients within two years, which is a small proportion of the childbearing period. Although this is true, it is also true that most of those discontinuing such use do not return to an unprotected state. They shift to other methods of contraception. It is not the shortcomings, but the accomplishments that are surprising. Finally, there is a clear reduction of the ideological and religious controversies.

Notestein summarized his opinion by stating that the world's extremely dangerous problem of rapid population growth can be greatly reduced in the coming decades. Although the solution is not at hand, we have the prerequisites for the solution in terms of policy, program, methods, public interest, and demonstrated results. If population growth is unconstrained by war or famine, there may be as many as 6.7 billion people in the world by the end of the century. If birth control practices are energetically fostered by governments and international agencies, particularly in the less-developed regions; population growth may be held to 6 billion or a little lower. It seems improbable that it can be held to less than 5.5 billion.

The Pearson report of the Commission on International Development appointed by the International Bank for Reconstruction and Development, stated that no other phenomenon casts a darker shadow over the prospects for international development than the staggering growth of population. It is clear that there can be no serious social and economic planning unless the ominous implications of uncontrolled population growth are understood and acted upon. This Commission recommended that developed countries initiate or strengthen their own facilities for population studies, that international organizations extend their training of population and family-planning specialists in all relevant categories, and that more effective and better coordinated population activities with the UN Agencies should be furthered by the appointment of a Commissioner for Population in the United Nations. A broad international program for the direction, coordination
and financing of research in the field of human reproduction and fertility control is urgently needed.

In 1960, when the world population was 3 billion, diets were inadequate in many areas. In the year 2000, twice as many people must be fed. It will require heroic measures to absorb such an increase while improving the level of nutrition. The true incidence of malnutrition throughout the world is not known. In 1963, the Third World Food Survey of the Food and Agricultural Organization estimated that at least 20 per cent of the population of less-developed countries was undernourished and that 60 per cent received diets inadequate in nutritional quality. The diet-deficient countries are shown in Figure 2.

In 1967, the Panel on World Food Supply of the President’s Scientific Advisory Committee reported that findings suggested that moderate protein-calorie malnutrition affects at least 50 per cent of the children in developing areas and that other deficiency diseases are present in significant numbers. We do not know whether this situation has improved or deteriorated, but evidence suggests the latter. The estimated incidence of malnutrition in children in the free world is shown in Table 2. At present, it seems likely that more than 300 million children receive diets insufficient in protein and calories, and are seriously retarded in physical growth. Recent studies strongly suggest that malnutrition in early infancy and childhood damages mental, as well as physical development.

The Times of India reported in an

<table>
<thead>
<tr>
<th>Year</th>
<th>Total No. children age 14 in free world</th>
<th>Estimated No. malnourished children</th>
</tr>
</thead>
<tbody>
<tr>
<td>1966-67</td>
<td>667 million</td>
<td>269 million</td>
</tr>
<tr>
<td>1975</td>
<td>915 million</td>
<td>329 million</td>
</tr>
</tbody>
</table>
editorial in August, 1970 that more than 80 million children in the age group 1 to 12 in that country suffer from malnutrition and almost 14,000 go blind every year because of vitamin A deficiency. It was pointed out that a national nutrition program to meet the needs of all these children will cost more than can be made available.

Many factors are responsible for malnutrition in developing countries among the most important of which are poverty, lack of education, cultural patterns and beliefs, technical backwardness, uneven distribution of food, defective environmental sanitation and inadequate medical facilities.

According to UNICEF, the approach to the problem of childhood malnutrition in developing countries has undergone a major evolution in the last 15 to 20 years. At first, action was limited largely to the distribution of skim milk powder. Ten years ago, the approach was broadened by the introduction of applied nutrition programs in rural areas. More recently, attention has been turned to developing food mixtures of high protein content which can be manufactured and marketed in the developing countries for supplementary feeding of young children.

The complex problem of malnutrition in childhood must be approached from a broad base. Governments must establish a national food and nutrition policy, and evolve a coordinated plan of action in which the ministries of Agriculture, Health and Education should participate. The particular nutritional deficiencies in a country must be identified and the available resources and potential means of overcoming these deficiencies must be determined.

Clifford Hardin, Secretary of Agriculture, has suggested that there are three essential elements of a policy to solve the food-population problem: 1) family, national and international policies for effective population control; 2) agricultural development to increase food production in the hungry nations with interim food aid from advanced countries and 3) economic, political and social changes in developing countries designed to promote total economic development.

The President’s Panel on the World Food Supply, in 1967, reported four basic conclusions in regard to the deteriorating condition of two-thirds of the world’s people. They stated: “1) the scale, severity and duration of the world food problem are so great that a massive, long-range innovative effort unprecedented in human history will be required to master it. 2) the solution of the problem that will exist after about 1985 demands that programs of population control be initiated now. For the immediate future, the food supply is critical. 3) food supply is directly related to agricultural development and, in turn, agricultural development and overall economic development are critically interdependent in the hungry countries. 4) the strategy for attacking the world food problem will of necessity encompass the entire foreign economic assistance effort of the United States, in concert with other developed countries, voluntary institutions and international organizations.” Since the above report, many international organizations and countries have devoted a great deal of attention to the food-population problem. Some of the accomplishments, as well as current and future needs and plans, will be discussed.

During the past 15 years, Food for Peace shipments have accounted for almost one-quarter of U.S. agricultural exports and almost one-third of U.S. foreign economic assistance to developing nations. Public Law 480, popularly known as Food for Peace, has two major sections, a concessional sales program (Title I) and a foreign donations program (Title II). Under the Title II donations program, administered pri-
that any climate of confidence in the world's agricultural production capabilities rests on the basis of limited successes in the use of some new strains of cereal grains obtained by plant breeding. This technical breakthrough has created worldwide confidence in the possibility of improved production, but its present fragile basis must be greatly strengthened if a real green revolution is to be achieved. The rich nations were urged not to be misled into feeling that there is no longer a serious food problem in the developing world. Among the food supply questions remaining to be resolved are those of 1) land reform; 2) availability of credit and capital to obtain fertilizers, irrigation capability, pesticides, marketing and storage facilities etc.; 3) incentive price and credit policies and a "just" income distribution and 4) creation of markets for the export sale of surplus foodstuffs, especially assuring developing countries of access to the markets of wealthy nations.

The new high-yielding varieties of cereal hold vast promises for the hungry people of the poor nations and could wipe out hunger and malnutrition in this decade. However, a true green revolution will be possible only with the widest public understanding of the measures necessary to realize it and the widest public support of programs designed for that purpose.

It was made clear that world hunger is not entirely nor necessarily due to inadequate quantities of foodstuffs. The shortage is not actually a shortage of food, whether derived from agriculture or from fishing, nor is it one of food-producing potential. It is rather a shortage of purchasing power on the part of developing countries. If hunger and malnutrition are to be eliminated, the effort must move beyond charitable acts of disaster relief, calling for no less than the elimination of the root causes of world poverty.

The importance of international trad-
ing patterns was emphasized. Recommendations stated that it is imperative to liberalize the protectionist trade policies of the advanced industrial countries which discriminate against the exports of the developing countries.

The problems of population control and family planning, being most sensitive ones, inspired conflicting reactions. Some self-proclaimed revolutionaries were antagonistic to population control, considering it a scheme designed by rich capitalists to prevent the birth of reformers who could eventually change the established world order. Others saw overpopulation as the single most important menace to progress in the developing nations and population control as a panacea. Some perceived the population explosion as the root cause of poverty, others as symptomatic of other more insidious processes. On the whole, delegates to the Congress realized that overpopulation was only one among many components that retard progress in the developing nations. Other deterrents include unemployment, malnutrition, illiteracy and other manifestations of poor national economies. It was generally recognized that the development problem is a multifaceted, multidimensional system of complex economic, social, and political equations—not just the food problem, the population problem, or the unemployment problem.

The Indicative World Plan of FAO which was discussed at the World Food Congress indicated five areas that had been selected for concentrated action: 1) encouraging high-yielding cereal varieties; 2) narrowing the world protein gap; 3) waging a campaign against waste; 4) improving the mobilization of human resources for rural development and 5) promoting of foreign exchange earnings and savings.

In order to achieve a much faster increase in cereal production it was estimated that by 1985, one-third of the cereal acreage in developing countries will need to be planted in new high-yielding varieties. This compares with a 5 per cent figure for 1968. The plan calls for integrated short- and long-term programs to diversify diets, placing emphasis on animal proteins from rapid turnover species, such as poultry and hogs. More comprehensive commodity policies are recommended in addition to improved marketing structures that will enable developing countries to earn and save foreign exchange. The plan stresses the need for providing additional employment in the agricultural sector and for the creation of new job opportunities in agriculture-allied industries. There must be intensification of land use both to increase production and to help in solving the employment problem.

In terms of actual food production, the proposals amount to an increase of about 4 per cent per year retained for domestic consumption over the base year of 1962 through the target year of 1985. This will require major capital investments in agricultural development and an acceleration in the use of cash inputs. The identified capital investments required over the 23-year period would exceed $110 billion with 42 per cent earmarked for land improvement and development, 35 per cent for equipment and machines, 16 per cent for livestock inventory and buildings, 4 per cent for fisheries and fishing vessels and 3 per cent for forestry. On a regional basis, more than half of the total investment would be directed toward Asia and the Far East and more than a quarter to South America.

The potential scope of the war on waste is enormous. Accurate figures are not available for most countries, but it is estimated that almost 50 per cent of the harvest goes to waste in some parts of the world. Losses of meat, fish, milk and other perishable foods may be even higher.

In mobilizing human resources for
rural development the quality of rural life must be improved through agrarian reform, extension services, and establishment of cooperatives and credit institutions. Farming must become a satisfying and financially worthwhile occupation if we are to avoid increased migration to the city slums. The Indicative World Plan of FAO provides comprehensive statistical information on the food supply in developing countries. The average supply per capita in the developing world as a whole falls short of physiological requirements by at least 6 per cent for calories and 7 per cent for protein. The projections for the next 15 years indicate that the gap between demand and supply will be particularly evident for protein of good quality. The Protein Advisory Group for the United Nations presented a fourteen-point proposal for attacking the protein problem: (1) Support increased production of conventional animal and plant sources of protein; (2) Encourage the development of fisheries with particular reference to the creation of demand for fish and fish products; (3) Reduce waste of foods; (4) Develop and introduce plants of genetically improved protein value; (5) Expand the use of oil-seeds for human food; (6) Encourage the development of safe and acceptable fish protein concentrates; (7) Promote work on the nutritional value and safety of single-cell protein, including algae; (8) Support the use of protein concentrates and improve the nutritive value of plant proteins including the use of synthetic amino acids for this purpose when feasible; (9) Support distribution and promotion of suitable protein foods in developing countries; (10) Support national and regional centers for research, development and training in agro-technology including nutrition, food science and food technology; (11) Assist centers for animal and clinical testing of new protein foods for developing countries; (12) Support training of personnel in the fields of marketing, market research and systems analysis; (13) Expand the number of fellowships for training in nutrition, food science and food technology; (14) Sponsor appropriate legislation or modification of administrative policies. Lester Brown has written a book entitled “Seeds of Change” which deals with the green revolution, a revolution which may prove to be one of the most significant international economic phenomena in history. The author points out that the spectacular spread of the miracle seeds developed by research undertaken by the Rockefeller and Ford Foundations at the International Rice Research Institute in the Philippines and in Mexico are not guaranteed to foster a real green revolution. He views the economic, social and political consequences of the green revolution and also the threat that it holds if it is poorly managed. The green revolution is shorthand for the rapid spread of the new high-yielding cereal varieties and associated techniques in some of the poor countries. It has not reached all countries. Where it has been initiated, the area which will accommodate the new seeds is a minor share of the total land in cultivation. However, the new seeds are a magnificent achievement and bring hope and promise to the developing world. Brown suggests that if the United States could lead the world in the elimination of famine, which we have done in the decade of the 60s, why can’t we exercise the same leadership to abolish hunger and malnutrition in the decade of the 70s? The spread of the new wheat and rice seeds has been phenomenal. Since 1965, some 40 million acres have been planted to the new miracle seeds. Production on this acreage has increased by approximately 20 million tons with a value estimated at 3 billion dollars. The annual increase yield per acre, where
Mexican wheat is used in India and Pakistan, has more than doubled. Total wheat production in Pakistan and India has increased more than 50 per cent over the past four years. Ceylon’s rice production has increased one-third in three years.

Rice is the world’s most important food. It is the basic diet of nearly two-thirds of the 3.5 billion people who now inhabit the globe. The demand in the next seven years may increase to 237 million tons. This is a reasonable objective. The increase will require an annual rice production growth of about 4 per cent during the next seven years as compared to about 2 per cent in the past.

Clifton Wharton, Jr., writing in 1969 about the green revolution, stated some people believe that “the race between food and population is over and that the new agricultural technology constitutes a cornucopia for the developing world and that victory is in sight in the ‘War on Hunger.’ Others see this development as opening a Pandora’s box; its very success will produce a number of new problems which are far more subtle and difficult.\(^{18}\)

The green revolution offers an unparalleled opportunity to break the chains of rural poverty in important areas of the world. Major technological breakthroughs in food production are believed to have lifted the specter of famine in the immediate future. Startling developments have been accomplished in wheat, rice and corn—major food staples in much of the developing world. The possibilities for doubling or even tripling production are based upon the new high-yield varieties coupled with adequate supplies of water, fertilizer, pesticides, and modern equipment. Overnight, the image of agriculture in the developing countries has changed from that of an economic backwater to that of a major potential contributor to over-all development.

The new technology will not spread as quickly as at first supposed because availability of irrigated land imposes at least a short-run limit to the use of new varieties. The new crops require a great deal more water and fertilizer if they are to produce at their full capacity. They are more susceptible to certain plant diseases and pests which means greater use of pesticides. Some of the new varieties, especially rice, do not appeal to the tastes of most consumers. Education and information services must be set up to help farmers, who are often illiterate, to plant the new crops and learn new skills. Credit facilities must be expanded. There are doubts about the ability of existing markets to handle the increased product. There must be improvement in transport and storage facilities if the greater production is not to go to waste. In the over-all view, these crops appear to represent one of the most exciting advances in world agriculture for a long time.

Orville Freeman\(^9\) former Secretary of Agriculture, has stated that the agricultural breakthrough in the poor countries is forcing us to change our concept of the population issue, although it isn’t a solution to the problem. It is diminishing the prospects of famine in the near future and buying time, perhaps an additional fifteen years, in which to develop the technologies, the will, and the strategies to stabilize global population growth.

Each country must develop a national strategy. The government must formulate a food price policy which helps to maintain incentive prices to farmers, but at the same time lowers prices to consumers as rapidly as the introduction of new technologies and declining production costs allow. The problem-solving technique, “systems analysis,” and the skills to apply it, should be made available to every less-developed country.\(^{20}\) The systems approach could be helpful in meeting the
Table 3—Food production index in the developing nations of the non-Communist world

<table>
<thead>
<tr>
<th></th>
<th>1960</th>
<th></th>
<th>1965</th>
<th></th>
<th>1969</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TFP†</td>
<td>PCFP‡</td>
<td>TFP</td>
<td>PCFP</td>
<td>TFP</td>
<td>PCFP</td>
</tr>
<tr>
<td>Latin America</td>
<td>105</td>
<td>99</td>
<td>133</td>
<td>109</td>
<td>145</td>
<td>106</td>
</tr>
<tr>
<td>East Asia*</td>
<td>109</td>
<td>103</td>
<td>126</td>
<td>105</td>
<td>151</td>
<td>113</td>
</tr>
<tr>
<td>South Asia**</td>
<td>111</td>
<td>106</td>
<td>111</td>
<td>94</td>
<td>138</td>
<td>106</td>
</tr>
<tr>
<td>Near East</td>
<td>101</td>
<td>96</td>
<td>120</td>
<td>101</td>
<td>132</td>
<td>100</td>
</tr>
<tr>
<td>Africa</td>
<td>107</td>
<td>102</td>
<td>117</td>
<td>98</td>
<td>124</td>
<td>95</td>
</tr>
<tr>
<td>Total</td>
<td>107</td>
<td>102</td>
<td>121</td>
<td>102</td>
<td>140</td>
<td>106</td>
</tr>
</tbody>
</table>

* Burma, Cambodia, Indonesia, South Korea, West Malaysia, Philippines, China (Taiwan), Thailand, South Vietnam
** Ceylon, India, Pakistan
† Total Food Production
‡ Per Capita Food Production

Material for this chart was taken from Food: Better in Asia, Spotty Elsewhere, War on Hunger, March, 1970.

complex problems that interact where the green revolution goes forward with its multitudinous social, economic, cultural, political and technological facets. A team headed by an experienced systems professional might include several economists, an agronomist, a marketing specialist, a food technologist, an ecologist, a rural sociologist and a public health nutritionist. A team such as this could submit to the decision-makers of a less-developed country an updated agriculture development plan in a short period of time.

The Foreign Economic Development Service of the U.S.D.A. has developed indices of total and per capita food production which give us a picture of the past and current situation. The food production index in developing nations of the non-Communist world in 1960, 1965 and 1969 is shown in Table 3. Total food production has increased in all areas. Per capita food production has increased very little (except in East Asia), and has decreased in Africa.

Total food production in the developed and less developed world increased at about the same rate from 1960 to 1968.

(Figure 3) In 1969, production in the less developed world continued upward, while that in the developed nations declined. On a per capita basis, the story is different. Production declined from

Figure 3—Indexes of agricultural production in the developed and less developed nations

1963 to 1966 in the less developed countries. Only in the last three years has the level of the 1960s been regained. Per capita food production has varied considerably in the different regions of the world. (Figure 4) Food trends in relation to population increase are shown in Figure 5.

A Task Force on International Development, headed by Rudolph A. Petersen, was appointed by President Nixon to examine U.S. foreign economic and military assistance programs. They first considered the basic question: Is U.S. participation in foreign assistance important? Their answer was a clear "yes." Actions of the United States and other industrial nations profoundly affect the developing nations and the happenings in the developing nations affect the developed countries. The Task Force saw the need for a more forceful stance by the United States in developmental assistance, both in promoting the concept and in implementing a truly international development effort. The Task Force recommended multilateral action on several fronts: 1) "untying of all development loans; 2) major long-term debt rescheduling for selected countries; 3) adoption of a nondiscriminatory tariff preference scheme for imports from development nations; 4) doubling the rate of international development agencies programs within the next few years; 5) improved coordination of international organizations and bilateral assistance programs and 6) a special international study on world population problems and assistance programs.” The Task Force supported higher levels of U.S. assistance now. It recommended significant increases in the U.S. contribution to international lending agencies. It also recommended that international development be directed toward increasing the role of the private sector.

McNamara, who is currently head of the World Bank, recently remarked that the United States spends twenty times more on military power than on foreign aid. He further stated that the real crisis that threatens to disintegrate our frail 20th century society, is the deepening crisis of want, the deepening schism between the have and have-not peoples. The U.S. is the only Western industrial country that has not abided by the newly agreed aim of devoting seven-tenths of one per cent of its gross national product to human development around the world. In proportion to gross national product, the U.S. now ranks 11th among aid-giving countries. It seems inconceivable that the American people, forming 6 per cent of the world’s population, but consuming almost 40 per cent of the world’s resources, should fail to contribute their fair share.

The many complex and diverse problems that have been discussed here have been necessary to arrive at any assessment of where we are in the race against starvation. We have made real progress in understanding the problem in its

---

**Figure 4**—Indexes of per capita agricultural production in the less developed nations, major regions.

Figure 5—Food and population trends in the less developed non-Communist countries

INDEXES, 1957–1959 = 100

140
130
120
110
100
90

1955 '56 '57 '58 '59 '60 '61 '62 '63 '64 '65 '66 '67 '68 '69

Total Food Production

Population

Per Capita Food Production


many facets. This is prerequisite to solution. The promises of the green revolution, the potentials of family-planning programs and the possibilities for economic development in the underdeveloped countries through international cooperation are great, and give us hope that famine can be averted. However, there is no room for complacence. Our accomplishments are meager in the face of a tremendous task. We have just started a long, difficult, and grueling race. If all of us, governments, industries, national and international organizations and individual citizens appreciate the scope of the problem and work together, it should be possible to improve nutrition, produce more food and limit population growth, thus winning the race against starvation.

REFERENCES


Dr. Goldsmith is Dean of the School of Public Health and Tropical Medicine, Tulane University, 1430 Tulane Avenue, New Orleans, La. 70112.
This paper was presented before the Delta Omega Section of the American Public Health Association at the Ninety-Eighth Annual Meeting in Houston, Tex., on October 28, 1970.