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THE ROCKEFELLER FOUNDATION

TO: Conquest of Hunger Program Committee

FROM: SW

DATE: May 21, 1973

Attached is a copy of the revised COH Program Statement. As you will recall, proposed changes were circulated in an SW memo dated April 17, to which you were invited to respond.

This statement appears as Appendix II in the large report (red cover) entitled "The International Agricultural Research Institutes and the Consultative Group: A Review of Progress and of Rockefeller Foundation Involvement", revised May 1973.

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foodCONQUEST OF HUNGER

Two-thirds of the world's population live in the developing countries, and 50 to 80 percent of these people are found in rural areas. Most depend on small farms, struggling for existence through traditional agriculture. Per capita incomes of such rural people commonly are abysmally low -- well under the national averages of \$50 to \$200 per year, a small fraction of the \$3,900 of the United States. These rural dwellers for the most part have little hope for even minimal education, health care, diets, housing, or even the barest amenities. It is the improvement of the lot of these poorest of the world's people toward which the Foundation's future efforts under Conquest of Hunger will be mainly directed.

In spite of the very considerable gains in farm productivity and income brought about by the new agricultural technology in developing nations, food production in most countries is still barely keeping pace with population growth. Given present rates of population increase, world production of basic food crops must be increased by four percent per year in the decades ahead if only modest improvements in diets for the poor are to be achieved. This will require the doubling of world food output in the next 18 years and a quadrupling in 36 years -- a most difficult task, considering that it entails efforts by over 100 developing nations to effect changes on tens of millions of farms. A major concern of the agrarian nations and major assistance agencies is the development of the network of institutions for research and the training of people required for such a massive effort. Furthermore, a series of institutional changes must be carried out by the local governments to insure that the benefits of the new technologies are distributed more equitably.

Through its support of national programs and international institutes, the Foundation has assisted substantially with the development of the technology by which rapid increases in productivity of a few of the basic food crops could be achieved. Substantial numbers of scientists and technicians have been trained and nations have been encouraged, with some success, to strengthen their relevant institutions and to utilize more fully the talents of those nationals trained over the years by the Foundation or others. Acreages devoted to the high yielding cereals have expanded at an accelerated rate in areas in which the international institutes, the foundations, and major assistance agencies have supported intensive research and production programs. Where there has been no such cooperation, food production generally has remained stagnant.

International institutes have been established to provide competent help to developing countries with rice, wheat, maize, and a few other commodities.¹ There remain, however, a greater number of important yet still neglected food crops and animal species for which no similar assistance is available.

Given the continuing urgency of the world food problem and the Foundation's concern for man's quality of life including improved health and nutrition, it is recommended that efforts be concentrated in the following problem areas, with consideration both to needs for increased agricultural productivity and to concerns for preservation of the environment:

¹The main institutes are: The International Rice Research Institute (IRRI), Philippines; International Maize and Wheat Improvement Center (CIMMYT), Mexico; International Center of Tropical Agriculture (CIAT), Colombia; International Institute of Tropical Agriculture (IITA), Nigeria; International Potato Center (CIP), Peru; International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), India; and International Laboratory for Research on Animal Diseases (ILRAD), Kenya.

1. The Rockefeller Foundation as a pioneer in the development of strategies, institutions, and model programs required for acceleration of agricultural progress, expects to move toward broader definitions of the roles of the international agricultural research and training centers, working in close cooperation with members of the Consultative Group for International Agricultural Research.² The institute system will remain central to the Conquest of Hunger Program. Sustained Foundation support for the institutes is projected, hopefully on a diminishing scale to permit greater amounts of Foundation resources to be used for innovation and to link expertise in technically advanced nations with work at the centers, and that of the centers with efforts of the poor countries. The Foundation now has 31 scientists assigned to the international agricultural institutes and many may continue to be assigned there.

2. Research and training priorities:

a. Continuing attention will be devoted to means of improving yields and nutritional quality, and of intensifying disease and insect resistance of the basic food grains. These problems have not yet been solved as evidenced by the current production figures throughout Asia. Emphasis will be on strengthening the science base on which success of intensified agricultural production efforts will depend.

b. The long-neglected food legumes and certain oilseed crops will receive attention through support of research to increase yields while maintaining or improving nutritional quality. This will supplement continuing efforts to improve protein quantity and quality of the major cereal grain crops -- the present

²The Consultative Group consists of the World Bank, UNDP, FAO, governments, foundations, and other funding agencies. In support of the international institutes and centers, this Group provided a total of \$15 million in 1972 and \$24 million for 1973.

sources of approximately 50 percent of proteins for human consumption. For both food legumes and cereal grains, studies will be supported to identify those changes in grain quality which would be important for plant breeders to incorporate in new varieties.

c. There will be an intensification of efforts to improve animal health and production, particularly in Africa, where animal production is important for both human nutrition and economic development; research on hemoparasitic diseases will be emphasized.³ Possibilities of improving poultry and swine production in Asia will be explored.

d. World efforts to control plant pests and pathogens should be initiated. This will require new international, cooperative research and control programs aimed at protecting the basic food crops.

Progress on some aspects of the above research areas can be accelerated by joint efforts of international institutes and other centers of specialization, particularly universities in the United States; such cooperation will be encouraged whenever appropriate. Intensification of pioneering, independent work at universities or other research centers will be desirable, as will arrangements for occasional conferences among leading world authorities in specific lines of research.

3. The Foundation will continue to search for and support efforts to obtain scientific breakthroughs in critical new areas. Among those of present interest are (a) extension of nitrogen fixation to the grasses; (b) effecting broad crosses through use of cell and tissue culture as a means of genetic improve-

³Primarily East Coast Fever (a red blood cell parasite of cattle) and trypanosomiasis.

ment of basic food crops; (c) exploration of new techniques and approaches in aquaculture; (d) production of single cell protein, especially from cellulosic crop residues; and (e) identification of the nature of plant resistance to diseases.

4. Assistance to nations, or to groups of small nations as in Central America, which give high priority to better organization for orderly and accelerated rural development is an urgent need. Three mechanisms are envisaged for such assistance. One is to provide a group of highly experienced consultants for a limited period as was done in the three-man team the Foundation loaned to the Ethiopian government to reorganize the national agricultural effort. A second is to provide especially qualified individual leaders for important institutions in developing countries, on or outside the Foundation staff, for more sustained periods, as the Foundation has done in numerous instances. The third is to improve the level of understanding of the development process; one way to achieve this would be through workshops where potential leaders for development might learn from those with substantial experience and accomplishment, and thus increase the number of exceptionally capable persons available for rural development programs.

5. Formulation of strategies and low-cost techniques which can be employed effectively by poorer nations to improve the quality of life of rural dwellers will be given priority. Recognizing the very large extent and variety of rural conditions, the Foundation would concentrate on one or a few experimental and demonstrative rural integrated development projects for selected populations and regions, with simultaneous attention to problems of small farmers' income generation, health and family planning, education, housing, nutrition, and cultural values. This will require interdisciplinary cooperation of Foundation staff in the agricultural, medical, and social sciences. At the same time the Foundation will work

with leading authorities on development to synthesize workable strategies for maximum speed in comprehensive rural development, adopting levels of expenditure and input which could be maintained or replicated by the national economies of less developed countries.

6. Increasing emphasis will be given to the analysis of the socio-economic aspects of food production and distribution in the LDC's, particularly as these relate to small farmers and laborers. Issues to be investigated include sources of income generation, rural employment and unemployment, marketing, credit, land tenure arrangements, the impact of farm mechanization, adoption of new seed varieties and other elements of new production technology, availability of inputs, and policies affecting trade, distribution, and storage of basic food products.

To advance most of the objectives stated in the foregoing, the Foundation will continue its role in agricultural diplomacy to assist in the organization of international efforts to achieve concerted action among less developed countries and contributing agencies for faster agricultural and rural improvement.