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Report of the Workshop on
Public/Private Collaboration
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Held at the
Aspen Institute for Humanistic Studies
Aspen, Colorado
August 20-26, 1978

Report of the Workshop on

PUBLIC/PRIVATE COLLABORATION
AND THIRD WORLD FOOD SYSTEMS

Held at Aspen, Colorado
August 20-26, 1978

Edited by

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SUMMARY COMMENTS

This report is the result of a workshop to explore how business and government can work together innovatively in the process of developing better food supplies and nutrition for poor people throughout the world. It was written in Aspen, Colorado, by 36 participants from the private sector, government and research institutions during the week of 20-26 August, 1978.

The workshop was both thoughtful and enthusiastic. It fomented such a wide range of suggestions, recommendations and ideas that it is difficult to suggest its key findings. The following, I believe, are most significant:

Both government and business share a compelling interest in collaborating in food systems development in the Third World. An advisory group to the U.S. government made up of experienced agribusiness people would greatly facilitate this process.

Food systems which effectively meet the nutritional needs of populations are developing haphazardly and inadequately in most Third World countries. A systems approach to this problem involving close collaboration between governments and private industry is urgently required.

One of the greatest strengths of the private sector lies in its experience in training of managers and technicians. This capability should be drawn on by governments in developing nations.

Women and their important present and potential role in the food systems of most Third World countries are an overlooked and neglected force. Innovative approaches to training and employing women and creating leadership roles for them must have the highest priority.

So-called "outreach programs" involving U.S. corporations in poor countries in such activities as volunteer advisory services and the "sister company" concept could be very valuable in food system development. Government initiatives are needed to organize and coordinate such outreach activities.

A major promise for food systems improvement lies in expansion and replication of programs which use intermediary organizations, often nonprofit, in development projects supported by industry. These experienced, linking organizations have specialized development skills which serve well in business/government collaboration.

We at the Aspen Institute are eager to build on the ideas and concepts put forth by the workshop and promote the policies and actions required for their implementation. We welcome further input and cooperation from readers of this document.

Mary L. Wolff, Workshop Coordinator
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5 October 1978

Workshop on
Private/Public Collaboration and Third World Food Systems

Aspen Institute for Humanistic Studies
20-26 August 1978

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I. PREAMBLE

From its beginning, development assistance has been a response to the compounded miseries of poverty, food shortages, malnutrition, poor health and population pressure which persist to plague the world. Despite the vast international assistance effort of the past 35 years, the absolute number of disadvantaged people is very large and still rising. As ever, this condition is unacceptable. It causes widespread political, social and economic disorder. It raises profoundly disturbing ethical issues. Its impact is grave, not only on the nations in dire need but, as well, on the United States.

But what more can the United States contribute toward alleviating the ills which press upon the world? Domestically, the range of economic and social problems to be dealt with are generating an unprecedented demand on the human and physical resources of the nation, concomitant with the uncertainties fostered by inflation. Each year it becomes more difficult to assure major additional commitments to foreign assistance programs...indeed, the threat is always present that past levels of financing such programs may be lowered. Further to exacerbate the situation, political sensitivities the world over add further limitations to what the United States can do, impeding as they often do the flow of aid, no matter how brilliantly and with what goodwill such aid has been conceived.

Clearly, then, what "more" the United States can do depends upon innovation...innovation which at once multiplies impact and enhances the acceptability of the aid proffered.

Such innovation is uniquely possible within the target areas of food shortages, malnutrition and rural development. For generations, government research and extension activities have been meshed with the evolution of the food-related industry of the United States. Proprietary technology is far less important in the food system than in many other industrial areas. There are few national security interests involved in the transfer of food-related technology. If only the comprehensive and dynamic body of U.S. experience in dealing with food supply and distribution, worldwide, could be integrated, there is no question that such collaboration would yield a novel, powerful force for development beyond any thrust put forward by the United States in the past.

The idea and ideal of collaboration between the public and private sectors of the United States, to the end of bettering food systems and the quality of life among deprived people, is hardly new. The dream of an effective, efficient system of such interaction goes back at least two decades, with very little concrete result. Yet, the dream persists and the time seems auspicious to try once again to implement the idea for both national and international good.

Despite obvious limits to the money and material which can be expended for aid, there is a heightening rather than diminishing sense of responsibility in the United States toward helping the poorer nations

resolve their problems of food supply, economic stringency and human deprivation. Many U.S. agribusiness executives believe and state strongly that their companies can contribute to Third World rural development, regardless of variations in political and social form.

Above all, awareness is becoming pervasive that raising food production alone will not resolve the problems of malnutrition, overpopulation, poverty and attendant misery. This awareness opens the door to the minds and hearts of aid recipients exactly because "rural development," by definition, subordinates the traditional dominant role of economic growth to that of a tool for achieving social equity; for satisfying with greater justice the totality of basic human needs; or, said more simply and eloquently, for making development truly humane.

Indeed, the time has never been more opportune to search out the optimum blends of public and private sector inputs to the development process. This is not to say that the blending task will be easy. Development assistance will often call upon private enterprise to define new kinds of returns to offset traditional concepts of risk. "Return" may have to extend the notion of profit into new realms of meaning, with new dimensions of time and rate. Collaboration overseas will no doubt demand of government many laws, policies, safeguards and assumed authority which have their roots of justification in national rather than international interests. Inevitably, more participation by corporations, especially those identified as "multinationals," will precipitate ideological challenges. These may offend and must be handled with grace, a grace born out of respect for those who are different and a belief in the integrity of purpose behind development assistance emanating from the United States.

No matter. Granted the task is formidable. It was the spirit of this Workshop to get on with the job. In this spirit, the steps to be taken toward implementation of the collaboration called for, have been studied and analyzed in a wide variety of ways.

Our conclusions and recommendations are presented in the pages that follow.

II. WORKSHOP OBJECTIVES, BACKGROUND AND ORGANIZATION

A. WORKSHOP OBJECTIVES

The Workshop on "Private/Public Collaboration and Third World Food Systems" was organized by the Program on Food, Climate and the World's Future of the Aspen Institute for Humanistic Studies. Its purpose was twofold:

- to make recommendations to the U.S. State Department to help develop U.S. inputs for the forthcoming UN Conference on Science and Technology for Development, scheduled for August 1979 in Vienna; and
- to furnish inputs to the U.S. Agency for International Development (AID) to help it enlist the participation of corporations with food-related interests to improve Third World food systems in ways that will increase employment and reduce malnutrition.

B. WORKSHOP BACKGROUND

U.S. efforts to plan for the upcoming United Nations Conference on Science and Technology for Development (UNCSTD) have underscored the need for an integrated policy on technology transfer to developing countries. They have also spotlighted the great diversity of relevant, but uncoordinated, government programs. As the U.S. government searches for ways to get its own house in order, AID and the Office of the Conference Coordinator in the State Department have indicated an interest in exploring how the government can work more closely with the business community across a spectrum of technology transfer problems. One of the most important of these is food system development.

The interest of the Aspen Institute Program on Food, Climate and the World's Future in the same problem was stirred in the summer of 1976. At the informal instigation of the UN Office of Science and Technology, the Institute held a workshop to consider the issues that might arise at the UN Conference. It also explored ways in which nongovernment organizations, such as the Institute, could contribute to their discussion. The conflict between the Third World countries and transnational enterprises emerged as a potentially disruptive issue--one which the Aspen Institute was urged to address.

The Aspen Food and Climate group decided to look at one aspect of the issue, that involving food. Agriculture and food-related activities represent a major segment of economic activity in most developing countries. Proprietary technology is far less important in the food industry than in many other industrial areas. There are few national security interests involved in the transfer of food-related technology. Thus, the food area may offer more fertile ground for developing business/government collaboration in technology transfer to developing countries than most other segments of the economy.

C. WORKSHOP ORGANIZATION

The Aspen Institute organized the Workshop with a grant from AID. It was held in Aspen, Colorado, August 20 to 26, 1978. Participants in the Workshop included 36 representatives from the business sector (mainly agribusiness firms), government (U.S. executive and legislative branches), and food development specialists from academia and national and international development institutions.

Background papers were presented and discussed during two days of plenary sessions.* The group then divided into two subgroups for two days of working sessions at which specific recommendations were drafted. Reports from the two working groups were integrated and discussed during two additional days. The final report has been edited by the Aspen staff and reviewed again by the participants before being put in its final form.

*Many of these papers were distributed at the Workshop. A few copies are available from the Aspen Program on Food, Climate and the World's

III. DEFINITIONS AND WORKING TERMS

To avoid any misunderstandings in interpreting recommendations, the following key terms were defined by the Workshop:

Private Sector -- Includes business enterprises organized under any of the four forms of doing business: corporation, cooperative, partnership and individual entrepreneur, as well as nonprofit activities sponsored by these entities. The Workshop also considers foundations and the many independent private volunteer organizations active in the Third World as part of the private sector.

Agribusiness -- For purposes of the Workshop the term agribusiness is meant to include all elements within the private sector devoted to any activity or service involved in the operation of food and natural systems. Hence, in addition to the primary production areas of farming, fishing, animal husbandry and forestry, and related inputs, it includes the storage, processing, containerizing, distribution and marketing of food and fibre products.

Food System -- The Workshop views a national food system as the organized assembly of productive and supportive efforts required to produce food and move it from where it is grown to the consumer, at the least cost and with maximum nutritive value. A well-developed food system provides adequate incentives and benefits to producers. Beyond the farm, it encompasses the functions of storage, preservation, processing and packaging, warehousing, distribution and marketing. Also encompassed are international markets and international food security arrangements.

Collaborative -- The word collaborative implies a thrust and effort far beyond the term "cooperation" which characterized much of U.S. bilateral food aid initiatives in the past. It also implies the synergistic application of private and public sector experience and know-how drawn from developing as well as developed countries. It suggests a greater commitment and a more active role in the venture by sharing partners. In essence, a collaborative effort toward meeting food needs of the poor in LDCs should extend the effort beyond the usual constraints that have inhibited progress in the past.

Bilateral-Multilateral -- The Workshop views the term bilateral as one where arrangements for collaboration occur between the private sector, the United States government and the host country where the desired development is to take place. These arrangements may include other developed nation governments or more than one developing nation government. Often the initiating effort is made between the two governments, with the private sector participants brought in as required. Multilateral development efforts, on the other hand, are channeled through the U.N. system and other organizations supported by a number of nations. Sometimes bilateral and private interests are also involved in multilateral organizations.

IV. CONSTRAINTS ON LDC FOOD SYSTEM DEVELOPMENT AS SEEN BY U.S. AGRIBUSINESSES

Before the Workshop could suggest potential collaborative arrangements for food system development in the Third World, some analysis of the constraints on U.S. agribusinesses was required in terms of traditional investment parameters. In the view of participants, there are two major factors that influence business involvement in most developing countries: the degree of risk and the scope of the market potential. Both are conditioned by an LDC's political and economic environment and are directly related to the prospective long-term profitability of the venture.

Business opportunities in LDCs can be oriented to the local market or export, or both. To be attractive to foreign investors a country should have a minimum production base that includes a suitable physical environment for agricultural production. It should also have an adequate supply of skills and an infrastructure that meets the minimum needs for a feasible investment. There should be local markets or the willingness to develop them. A buoyant economy clearly encourages business perception of a long-term opportunity. A concentrated effort by external donors and the national government in the rural sector will also bear favorably on perceptions of business opportunities, both with respect to the supply of input and the utilization of increased output.

The perceived degree of risk is a major factor in decision making by agribusinesses. Appraisals are based on a company's judgments regarding political stability and the local operating environment. Agribusinesses recognize that conditions may change and agreements may have to be renegotiated; but acceptable risk calls for some assurance that change will be subject to negotiation in good faith. The local operating "rules" needed also call for a clear understanding about repatriation of earnings, capital and income. In addition, they should include reasonable administrative conditions and constraints on the movement of goods and services.

Many U.S. agribusinesses are highly flexible regarding the modes of operations they are willing to adopt in LDC environments. Many of the charges being made against transnational enterprises are rejected by corporations. Nevertheless, there is widespread awareness that certain past practices of agribusiness enterprises in LDC contexts are no longer politically or economically desirable from either the country or company point of view.

For politically viable and mutually beneficial arrangements there must be demonstrable net benefits for both the companies and countries involved. There now exists a much greater willingness than formerly on the part of U.S. agribusinesses to become engaged in countries having widely diverse political and economic systems. There is also evidence of a greater willingness to enter into joint ventures, or other arrangements, involving local participants. Such ventures may involve sharing financial risks and management prerogatives with either LDC private or public entities. Furthermore, many U.S. agribusiness enterprises are prepared to make their technological and managerial competences available to LDCs under

Whatever the nature and scope of involvement by U.S. agribusiness enterprise in LDC contexts, the essential requirements are: 1) prospective profit opportunities commensurate with the risks entailed; and 2) sufficient freedom for the exercise of the management prerogatives necessary to permit the competences of these enterprises to be efficiently utilized.

When these requirements are satisfied, U.S. agribusiness firms are able and willing to contribute, and have contributed substantially, to LDC food systems in the following ways:

- Seeking out and mobilizing investment capital;
- Providing technology, technological information, the ability to adapt technology;
- Relating the national to the international food system;
- Acting as a catalyst for the growth of a local private sector;
- Providing up-to-date market information on a timely and regular basis and often participating in the actual marketing of crops;
- Developing technical, managerial and entrepreneurial skills through formal training and in-service programs; and
- Providing production credit to farmers.

The transfer of capital, technology, information, and management know-how by U.S. agribusinesses can assist broadbased rural development in LDCs by benefiting small producers, creating employment, and in other ways, if:

- National economic policies (fair prices, credit, tax, tariff, exchange rate policies) provide incentives, not deterrents, to small producers and/or their cooperative organizations;
- Physical infrastructures (e.g. feeder roads, irrigation systems, and rural energy sources) exist in rural areas;
- Credit, extension, training, health and sanitation, and other services benefit small entrepreneurs, small producers, and the landless (including both men and women in all categories);
- The integration of traditional farmers into the money economy is encouraged by agribusiness;
- Small agribusinesses wishing to participate overseas are enabled (through public and private assistance) to work in LDCs and to involve small producers;

-There is an orderly marketing system;

-There is a competent, trustworthy banking system; and

-There is stability and continuity of professional staff among the public institutions whose functions affect private business operations.

V. RECOMMENDATIONS

U.S. BILATERAL INITIATIVES

A large measure of the expertise and knowledge required to create a functioning food system that meets LDC needs rests in the agribusiness sector of the developed world, including food-industry corporations and cooperatives. To some extent this technology is already being transferred through normal commercial channels to developing countries seeking to create a modern food production and distribution system. This process, however, needs to be accelerated by various means.

Participants recognized, of course, that a large measure of expertise and knowledge also rests in the public sector, i.e., universities, experiment stations, USDA, etc. They agreed that these institutions should continue to contribute as they have in the past and that new linkages between them and the business community should be explored. However, since the Workshop was primarily concerned with the collaborative roles of business and government, the roles of other institutions were looked at only marginally.

The problem addressed by the participants was how the vast resources capabilities of agribusiness enterprises can be extended: first, in ways which are acceptable to the individual needs and values of the people in the less developed countries; and second, in ways which increase the productivity of the lands and labor of the rural poor, at the same time ensuring for these people the major portion of the economic and social benefits resulting from change.

Workshop participants concluded that significant progress can be made in solving this problem by developing active collaboration and linkage mechanisms between governments and the business sector. The recommendations which follow, all related to specific needs in food development, suggest some possible steps in this direction:

A. THE NEED FOR FOOD SYSTEM DEVELOPMENT IN LDC'S

Recommendation 1

GOVERNMENTS OF THE U.S. AND OF THE DEVELOPING NATIONS SHOULD COLLABORATE WITH THEIR RESPECTIVE SECTORS IN AN ASSESSMENT OF FOOD SYSTEM DEVELOPMENT NEEDS AND IN THE EVOLUTION OF PROGRAMS TO FULFILL THESE NEEDS.

-An initial systems analysis of the food system, nutritional status, population growth and distribution, natural and human resources, and climate, utilizing all existing studies available. The purpose of this study is to determine the best--the most impact per dollars invested--point of entry into a food system for the purposes of improvement. That is, many countries and those who have studied them, are aware of the elements of their food system and even which elements are the weakest. However, few analyses have led to defensible decisions as to where changes should first be made, especially in light of scarce resources to allocate to the change process. The recommended analysis should be done by a

team of experts drawn from both government and business sectors in the host country and in the United States and/or in other developed or developing nations. Study participants could also be drawn from international agencies and development banks. They should also include experts drawn from the field with direct knowledge of the reality of life among the people most affected by changes.

-Development of a consortium of technology resources--agribusiness firms, cooperatives, food-related institutions, etc.--possibly from several nations, to participate in implementation of the food system development plan at the invitation and with the support of the host country.

Recommendation 2

THE U.S. GOVERNMENT AND DEVELOPING COUNTRY GOVERNMENTS SHOULD COLLABORATE IN AN EFFORT TO ENCOURAGE U.S. FOOD ENTERPRISES ALREADY OPERATING IN A GIVEN LDC TO EXTEND THEIR TECHNOLOGICAL AND OPERATIONAL KNOW-HOW TO IMPROVE THE EFFICIENCY OF THE LOCAL FOOD SYSTEM OR TO FILL SPECIFIC GAPS IN THE FOOD CHAIN.

Often necessary developments such as agricultural product storage, warehousing, sanitation programs, technician training, waste recycling, etc., do not meet the usual profit making requirements of private enterprise. Hence, government incentives and encouragement are required for their initiation.

As an ancillary effort, similar encouragement should be directed to U.S. food enterprises to participate in needed food system developments in adjacent or nearby cooperating nations.

An important area eligible for this extension process lies in the so-called "service" aspects of food systems development. Many of the services required for effective food production and delivery systems emerge as an extension of on-going operations. For example, in the area of fruit, vegetable, and grain production, technical services related to varietal adaptation, soil analyses, fertilization, pest control, timely harvest, quality control, etc., may be provided to the grower by the purchasing firm. Similarly, in the animal field (layer and broiler chickens, dairy, swine, etc.) technical services, including feed formulation, health care, housing design, etc., may be provided by the purchaser or supplier as a normal part of their business service. Cooperatives are unique in having a high level of credibility in this area.

The development of these services as separate businesses may result from normal business operations and/or the sale of know-how. By itself such a sale may be a profitable business, or at least, a no-loss auxiliary business, the benefits of which are indirect but very important. Benefits include better quality raw material, more assured sources of raw material, better image in the eyes of the people, etc.

Thus, it is important to recognize that service and technical know-how developed within the private sector is a marketable product. The potential customers are other similar newly established business enterprises, wherever they may arise within the LDCs. It should also be noted that supplying services includes an element of training which has considerable spin-off value to the local food system and its development.

Recommendation 3

GOVERNMENTS, BOTH DEVELOPED AND HOST COUNTRY, SHOULD ENCOURAGE THE EXPANSION OR REPLICATION OF EXISTING SUCCESSFUL COLLABORATIVE PROGRAMS THAT INVOLVE PARTICIPATION BY THE BUSINESS SECTOR IN FOOD SYSTEM DEVELOPMENT.

This could be accomplished by incentives such as loans, concessions and specific project development and implementations contracts, and could involve use of PL 480, Title III, funds.

Recommendation 4

THE U.S. GOVERNMENT SHOULD EXPLORE WITH U.S. AGRIBUSINESS FIRMS THEIR INTEREST IN DEVELOPING A "SISTER COMPANY" RELATIONSHIP WITH AN LDC COMPANY IN A SIMILAR BUSINESS ON A LIMITED BASIS AND FOR A FINITE PERIOD OF TIME.

Under such a relationship, the U.S. company probably would not invest, but would provide specific short-term managerial and technical assistance to help resolve startup and early operational problems. This arrangement might be partially financed with government funds.

Agricultural cooperatives are especially well adapted for this kind of assistance. U.S. cooperative members are often eager to share cooperative techniques with those who are less fortunate. The satisfaction derived from helping people help themselves may motivate cooperatives to lend assistance even though a profit for their owners may not be anticipated.

Recommendation 5

THE U.S. GOVERNMENT SHOULD GIVE SUBSTANTIAL SUPPORT TO FOOD-RELATED RESEARCH OF BENEFIT TO DEVELOPING COUNTRIES.

The government should:

- Continue major support to the international agricultural research centers through the Consultative Group on International Agricultural Research (CGIAR);

- Support the development of indigenous research institutions in LDCs, including assistance from U.S. universities and corporations under government contract;
- Explore with U.S. agribusiness corporations the possibility of accepting government support to undertake research of importance to the Third World food systems;
- Encourage such work at universities under Title XII of the Foreign Assistance Act and the Section 406 amendment to the Food for Peace Act of 1966 (providing for development of tropical agricultural research capacity at U.S. universities relevant to developing country food problems); and
- Take initiatives to insure that research design covers not only the production and conservation functions but relates also to the delivery of new technology in ways that yield beneficial impact on the quality of rural life.

Scientific and technological research will continue to be of central importance in the improvement of agricultural production and food systems in developing countries. Much agricultural and food research of northern countries is not directly applicable to tropical areas. Thus, developing countries need help to develop their indigenous research capabilities. Assistance could be provided by U.S. corporations and universities under contracts with the U.S. government.

The findings of the National Research Council in its "World Food and Nutrition Study: The Potential of Research" should be carefully reviewed in carrying out the above initiatives.

Recommendation 6

THE U.S. GOVERNMENT SHOULD ESTABLISH AN ADVISORY COUNCIL COMPOSED OF PEOPLE FROM AGRIBUSINESS FIRMS ACTIVE IN DEVELOPING COUNTRIES, TO FURNISH GUIDANCE AND FURTHER RECOMMENDATIONS.

This council could be advisory to AID and/or the new President's Commission on World Hunger. It could also, if desired, serve as an advisory body to the proposed Foundation for International Technological Cooperation. Business experience in the LDCs has provided the private sector with a wealth of information relative to needs, problems, effective modes of operation, etc., that could be extremely valuable to government agencies in determining policy and planning strategy for food system development. Unfortunately, this source has been little utilized. It is highly desirable in our view to establish an advisory body from those segments of industry, so that government can draw on business know-how and at the same time transmit its perceptions of the problem to business.

The resources of a typical U.S. agribusiness firm, listed below, suggest its potential role in the technology transfer initiatives suggested above. Such a firm may offer:

- Firsthand experience;
- Theoretical knowledge;
- R&D capabilities;
- Managerial expertise;
- Contacts with other experts and entrepreneurs;
- An assortment of production, education, processing and distribution facilities and equipment; and
- The intangibles of a desire to succeed, flexibility and willingness to share.

It is clear that agribusiness can help the government to transfer technology by:

- Identifying countries and projects that will yield mutual benefits, and that have some likelihood of success;
- Participating in planning sessions between the U.S. government, the developing country, and the business sector;
- Making its resources available to representatives of the U.S. government, and developing countries, as educational and on-the-job training facilities;
- Demonstrating how communication skills can help achieve the developing countries' national goals, and then undertake such efforts;
- Engaging in two-way communication with the developing countries in consumer research, market survey and product acceptance testing;
- Providing experienced managers and technicians for various periods of time to either the U.S. government, or the particular developing countries to assist in:
 - Initial studies;
 - Proposal development; and
 - Project implementation
- Actually undertaking projects and enterprises in the LDCs. These projects can be either total systems and networks, or be just a single component of a total program;
- Developing joint efforts and consortia with U.S. companies, and/or

B. THE NEED FOR NUTRITIONAL CONCERN IN FOOD SYSTEM DEVELOPMENT

A frequent complaint in developing countries is that foreign agribusiness firms neglect the real needs of consumers in those countries or do not transfer enough product information for safe and effective use.

Recommendation 7

THE U.S. GOVERNMENT SHOULD ENCOURAGE MORE PARTICIPATION BY THE PRIVATE SECTOR IN THE PROBLEM OF NUTRITIONAL NEEDS AND CONSUMER EDUCATION IN LDCS--PARTICULARLY INVOLVING WOMEN.

This would entail cooperative programs, perhaps partially funded by government, which use person-to-person instruction and mass media for consumer education on all aspects of nutrition and family health. Such a program might also involve training nutritional personnel and developing instructional literature.

Recommendation 8

GOVERNMENTS SHOULD ENTER INTO COLLABORATIVE ARRANGEMENTS TO TURN PRIVATE SECTOR PRODUCT DEVELOPMENT CAPABILITIES TOWARD THE PROBLEM OF LOW-COST/HIGH NUTRITION FOOD PRODUCTS THAT SATISFY CONSUMER ACCEPTANCE AND NEEDS IN DEVELOPING COUNTRIES AND ENCOURAGE ESTABLISHMENT OF LOCAL PRODUCTION ENTERPRISES FOR THESE PRODUCTS.

Incentives could be provided through guaranteed markets such as school feeding programs. These cooperative food development programs could include participation by government food R&D facilities (i.e. USDA, regional laboratories, and/or host country food institutes), universities and corporations.

C. THE NEED FOR TRAINING IN FOOD SYSTEM DEVELOPMENT

The highest priority needs of many LDCs are for technology administration, managerial know-how and related business skills. This is especially true in the food system technology area. Thus, more training programs are needed.

Recommendation 9

THE U.S. GOVERNMENT SHOULD ESTABLISH AND SUPPORT MECHANISMS TO INVOLVE THE TECHNICAL AND MANAGERIAL SKILLS OF U.S. AGRIBUSINESSES IN SHORT- AND LONG-TERM TRAINING PROGRAMS, BOTH IN THE U.S. AND IN DEVELOPING COUNTRIES TO BENEFIT: 1) AGRICULTURAL PRODUCERS; 2) LOCAL ENTREPRENEURS AND TECHNICIANS IN AGRO-INDUSTRY; AND 3) PERSONNEL OF AGRO-SERVICES THAT PROMOTE AGRICULTURAL PRODUCTION AND FOOD SYSTEM DEVELOPMENT. SPECIAL ATTENTION SHOULD BE GIVEN TO THE INTEREST AND NEEDS OF SMALL BUSINESS

Examples of the above include:

- On-the-job training of unskilled rural workers for agro-industrial food processing firms;
- Bookkeeping, accounting and business courses for small and medium-sized agribusiness entrepreneurs;
- Higher level technical (i.e. engineering, chemical food technology) training for mid-level technicians for the food processing and marketing industries;
- Establishing and supporting LDC educational and vocational training institutions, such as business colleges, etc.;
- Providing scholarships for students to obtain an agribusiness MBA and/or receive on-the-job training in agribusiness firms in the U.S.; and
- Furnishing refresher courses in food development and marketing economics to mid- and top-level LDC policy makers.

Mechanisms by which these can be carried out are:

- To have U.S. funded agribusiness/rural enterprise projects in the LDCs include a component to achieve the above;
- To increase the AID training budget and tie this incremental amount to the goal of achieving the above;
- To assure that a significant portion of the AID Educational and Human Resources Development budget be applied to projects that will further the above goals; and
- To establish an agribusiness policy committee advisory to the government to help set goals and guidelines, advise, recommend and monitor business sector training activities.

Perhaps the most important aspect of the training problem in the LDCs lies in the neglect of the fundamental contribution of women to the food system. Women constitute as much as 70 per cent of the agricultural workers in some LDC countries and are the key factor in building the final and most vital link in the delivery chain. It is their key role in growing, buying, preparing and serving food to the family that often determines the balance between healthy and malnourished adults, as well as children. It is imperative that the highest priority and attention be given to the women, both rural and urban in LDCs, in matters related to food production, preparation, basic nutrition, sanitation and family health care.

D. THE NEED FOR ACTIVE OUTREACH AGENTS IN FOOD SYSTEM DEVELOPMENT

One of the major obstacles to technological advancement in LDCs is the lack of knowledge by entrepreneurs that better technology is available. Once they realize that improved methods exist and can make their activities more effective or profitable, they will search for them. Existing technological information systems and assistance groups are underutilized because so few potential users understand and value the benefits they could gain from using them. Moreover, those who possess and offer the technology rarely have studied the customs, religious traditions (and tabus) and methods that have prevailed in the LDCs to make their offering in relevant and understandable terms.

Industry is a primary source of technological knowledge in the U.S. If we are to be maximally effective in supporting the needs of the LDCs for technology and science for their development, we must create mechanisms to link industrial (as well as academic, governmental, and consulting) sources of technological knowledge to their needs. Educating a user community is an important and neglected aspect of the linkage chain.

One initiative for a linking mechanism is the Foundation for International Technological Cooperation recently proposed by President Carter. The outreach activities we propose here might be inaugurated by FITC. (Other comments and recommendations on the role of FITC are presented later in this report.)

Recommendation 10

THE U.S. GOVERNMENT SHOULD CREATE AN INTERNATIONAL TECHNOLOGICAL OUTREACH SERVICE.

This outreach service should:

- Provide direct outreach liaison within individual LDCs to contact and educate potential users of various available and appropriate technologies and thus create information flows needed for advancement;
- Recruit persons from U.S. business establishments in LDCs to serve the liaison function;
- Encourage the establishment of private linkage organizations to carry out outreach functions;
- Provide coordination and linkage mechanisms to connect individuals or institutions in the LDCs having technological needs with relevant U.S. sources of technological capabilities;
- Provide mechanisms for referral of LDC needs to appropriate U.S.-based volunteer organizations;
- Provide linkages for transfer of knowledge from one LDC to another;

- Maintain knowledge of and coordination with related programs in that LDC by other nations or international agencies, and use this knowledge to provide appropriate advice to U.S. sources of similar programs or to local users with relevant interest;
- Create an information repository, clearing house and distribution center regarding the needs of the LDCs for know-how, technology, and science for development, and relevant U.S. sources of knowledge and capability; and
- Serve as a channel for formal U.S. coordination and cooperation with other national and international (multilateral) programs in the field of science and technology for development.

E. NEED FOR SUPPORTIVE GOVERNMENT POLICIES IN FOOD SYSTEM DEVELOPMENT

Recommendation 11

THE U.S. GOVERNMENT SHOULD DEVELOP A CLEARLY STATED POLICY TO FAVOR AND ENCOURAGE PARTICIPATION OF U.S. AGRIBUSINESS IN PLANNING AND IMPLEMENTING DEVELOPMENT PROGRAMS IN LDC'S.

A well-defined U.S. government policy will facilitate official foreign assistance in carrying out these ventures. Without such a policy, the various agencies concerned tend to ignore the contributions agribusiness can make in LDCs.

The U.S. government should also cooperate with LDC governments in developing comprehensive food system development plans and encouraging the appropriate roles for agribusiness within those plans. In this way the firms can contribute to the development goals as seen by the host government.

The U.S. should urge multilateral assistance agencies to adopt a similar policy supporting the participation of agribusiness firms within LDC food system development plans.

In practice, the ways in which agribusinesses are encouraged to commit their resources will be selective and will take into account not only the quality of the products and managerial and technical resources available, but also the way the commitments will affect important developmental changes. Some of these changes might be:

- Food systems improvement;
- Provision for continuous flow of new and relevant technology; and
- Consistency in government policies and priorities bearing on institutional or community development, or distribution of income.

An agribusiness commitment can take many forms, such as equity investment, contracts to manage or provide training, the sale of products and equipment, or combinations of these. Nevertheless, the commitment should be of long-term duration and be priced competitively with alternate sources of technology.

Recommendation 12

THE U.S. GOVERNMENT SHOULD STRENGTHEN ITS INVESTMENT AND TRADE INCENTIVE FACILITATING PROGRAMS.

Though the principal responsibility for encouraging the transfer of technical and managerial resources to LDCs lies within the recipient nations, international interdependence and the necessity of international cooperation require that the U.S. government maintain an effective program of investment and trade incentives.

Such incentives are best applied broadly, leaving to the host country and individual entrepreneurs the final decision on whether or not the investment or import will be approved. U.S. government incentives should reflect the fact many agribusiness projects bear significantly greater financial risk than projects in other business fields. Others arise from the lack of resilience in the local food system in the face of disruptions from any cause. These disruptions may arise from the impact of sudden and unpredictable political or economic decisions on a food system that is inherently unstable. Such decisions, in turn, may be responses to the pressures and changes that come from the introduction of modern elements into the food system. Hence, there is a much higher incidence of unpredictability for investors in LDCs than in developed countries. These major risks are deterrents to investment.

U.S. government incentives to agribusiness should also take into account the need to protect vital U.S. assets (including U.S. jobs) from catastrophic loss due to LDC investment operations or international trade. This is particularly important to smaller U.S. firms or those with little overseas experience. These incentives, as they change over time, should reflect the fact that U.S. companies have investment and market opportunities in many countries (including the U.S.) where the business and political risks are considerably less.

Overseas Private Investment Corporation (OPIC) insurance should be designed to cover effectively all forms of investment, including equity, contract services, definite term joint ventures, and production-sharing arrangements. The insurance should be available to U.S. investment operations in all developing countries and should cover the breach of important contractual obligations by the host government.

Recommendation 13

THE U.S. GOVERNMENT SHOULD IDENTIFY AND
REVIEW GOVERNMENT POLICIES THAT INHIBIT
U.S. AGRIBUSINESS INVESTMENT IN POOR COUNTRIES.

While U.S. income tax policy has a significant impact on the investment and international trade decisions of U.S. agribusiness managers, tax policy mainly affects the cost of doing business in and with LDC food systems.

The U.S. anti-trust policy is of special significance in relation to the willingness of U.S. companies to participate in consortia and other groupings of investors. In the context of a broad public policy to encourage LDC investment and trade by U.S. agribusiness, the Justice Department should be willing to review business plans in advance of commitment by agribusiness firms. The Justice Department should also issue advisory opinions or comment on the acceptability of plans in terms of current and relevant anti-trust policy.

In addition, the U.S. government should work with host countries in identifying local obstacles and attitudes which negate the benefits of foreign investment and international trade for these countries.

Recommendation 14

THE U.S. GOVERNMENT SHOULD ADOPT NEW, OR
REFINE EXISTING, PROGRAMS TO PROVIDE
FINANCIAL RESOURCES FOR AGRIBUSINESS
DEVELOPMENT IN POOR COUNTRIES.

The Export-Import Bank of the United States should make agribusiness exports, including exports of contracted technical services, a priority within its LDC country financial exposure limits. Further, OPIC, the Export-Import Bank, and AID financing should be made more widely available as a means to reduce exposure and risk by U.S. agribusiness firms which invest cash, provide services, or sell products and equipment.

AID, OPIC, the Export-Import Bank, and the Commodity Credit Corporation (CCC), programs should be integrated to a greater degree so that their individual parameters can be incorporated into project financial plans. This would improve the possibilities for capitalizing U.S. agribusiness development projects. The law governing CCC credit terms should be amended to permit the CCC to provide U.S.-sponsored agribusiness projects with specified commodities on a multi-year basis.

The Executive and Legislative branches of the government should adopt and emphasize programs and legislation that promote agribusiness development in rural areas of LDCs. There will be an opportunity to do so since the Executive branch intends to propose legislation next

U.S. MULTILATERAL INITIATIVES

Industry involvement in food system development can be channeled through both bilateral and multilateral programs. Each has its advantages. The U.S. position at the UNCSTD Conference must consider the most efficient multilateral action to maximize the effective use of limited public and private resources.

Advantages of the multilateral system include its ability to:

- relate resources to needs;
- overcome constraints (e.g. human rights, intellectual property protection, etc.);
- political "credibility" for industry/government dialogue and cooperation; and
- bring together management, technological and local resources.

The international basis for industry's role in development is established in UN Resolution 3362 of the UN Seventh Special Session and the Lima Declaration, which sets goals for greatly increasing the percentage of world industrial capacity located in developing countries. Foreign investment--according to national policies--is also supported in these.

A. THE NEED FOR INCREASED BUSINESS INVOLVEMENT IN THIRD WORLD FOOD SYSTEM DEVELOPMENT

Recommendation 15

THE U.S. SHOULD SEEK TO BROADEN THE BASE AND INCREASE THE RESOURCES AVAILABLE FOR THIRD WORLD FOOD SYSTEM DEVELOPMENT BY ENCOURAGING GREATER PARTICIPATION OF THE BUSINESS SECTOR IN MULTILATERAL EFFORTS.

Recommendation 16

THE U.S. SHOULD SUPPORT THE STRENGTHENING OF EXISTING MULTILATERAL CHANNELS RATHER THAN ESTABLISHING NEW ORGANIZATIONS WHICH MAY REDUCE THE EFFECTIVE USE OF AVAILABLE CAPITAL AND MANPOWER.

These channels which identify, mobilize and utilize public and private resources (such as the World Bank group, UNIDO, FAO, ICP, regional banks, etc.) should be strengthened by:

- Providing an international forum for government/industry dialogue that will increase industries' understanding of development needs and processes--and governments' understanding of industry procedures and capabilities;

- Utilizing industry advisors to help assess viability of projects proposed by LDC governments and multilateral institutions;
- Promoting investment and technology transfer by industry in LDC projects that have an impact on development goals. In this regard, efforts should be expanded to seek and promote new partnership forms which deliver industry expertise and finance to priority projects particularly small scale farming and rural enterprise. Examples of intermediary organizations such as the Industry Cooperative Program (ICP) and the International Finance Corporation (IFC), are politically acceptable in LDCs, and fill a void not covered by other institutions.
- Promoting the dialogue among government, multilateral organizations and industry on technological development to inform LDCs on technological alternatives, interest industry R&D and engineering organizations in solution of LDC problems, and resolve obstacles to technology transfer; and
- Expanding UN system and other multilateral training efforts which link industry expertise with LDC institutions, particularly those designed to strengthen extension services that increase small farm family productivity and income.

Recommendation 17

THE U.S. SHOULD SUPPORT A POSITIVE VIEW OF THE ROLE OF BUSINESS IN THE DEVELOPMENT PROCESS AND DOCUMENT ITS VIEWS WITH CASE HISTORIES.

Recommendation 18

THE U.S. SHOULD CONTINUE TO SUPPORT EQUITABLE PROTECTION OF INTELLECTUAL PROPERTY AND PROPRIETARY TECHNOLOGY, PARTICULARLY UNDER THE PATENT SYSTEM.

B. THE NEED FOR BUSINESS REPRESENTATION ON THE U.S. DELEGATION TO UNCSTD

Recommendation 19

THE U.S. SHOULD INCLUDE A SENIOR INDUSTRY EXECUTIVE IN THE U.S. DELEGATION TO UNCSTD AT A HIGH LEVEL OF RESPONSIBILITY.

This will: a) provide industry guidance to the delegation on-the-spot; and b) lend credibility to the government's stand on involving industry in development policy and operational decision making.

VI. COMMENTS ON THE PROPOSED FOUNDATION FOR INTERNATIONAL TECHNOLOGICAL COOPERATION (FITC)

President Carter has proposed the establishment of a new Foundation for International Technological Cooperation and has set up a planning group to work out the details. This group has just begun its work and must have program plans and budget proposals ready by the end of October.

An outline of plans and concepts for the Foundation prepared by the U.S. Office of Science and Technology on 14 June 1978 indicates that "Relations with U.S. industry, and activities concerned with industrial technology, will be of special importance. Consultations with American industry and labor will be held at an early stage of program development." Food is one of the planning group's four major program areas. The proposed Foundation may be an important element in the government's plan for U.S. inputs to the 1979 Conference on Science and Technology for Development.

For all of these reasons the Workshop participants thought it timely and important to explore the Foundation's potential role as a coordinating mechanism for government/business collaboration in the food area. We discussed the pros and cons of establishing such a new government entity, potential functions of the Foundation, and possible operating modes. The following comments and suggestions emerged from these discussions:

Questions About Establishing FITC

The group questioned whether the creation of a major new organization for technology transfer was justified. Many wondered if the functions suggested for FITC in the Plans and Concepts document of the Office of Science and Technology Policy could not be undertaken by existing organizations under current or improved programs.

They raised the following questions and concerns: a) the business community has not yet been consulted in any major way in planning the new organizations; b) it is likely to duplicate existing organizations and functions, thereby increasing government expenditures; and c) it may be focused primarily on basic scientific and technological research, rather than on the most pressing needs of most developing countries; namely the application and adaptation of existing technology, the transfer of managerial know-how and the development of links from the governments and business sectors of developing countries to the business sectors of the U.S. where much of the needed technology is actually located.

Other questions raised were related primarily to organization: a) in the short-run, the start-up time seems too fast for careful planning, but in the long-run time may be lost because it takes years to establish an effective operating agency; b) the proposal may be altered in major ways by Congress; c) Executive branch rivalries may prevent the Foundation from achieving an effective coordination function among the various agencies concerned with science and technology and development; d) there may be lack of attention to substantive functions because of preoccupation with organizational issues; and e) there is a lack of public understanding and support.

Recognizing that the Administration is committed to the Foundation, the Workshop participants moved from questioning the wisdom of establishing it to considering what its functions should be.

Functions of FITC Related to Business

The participants thought that the primary function of FITC should be to see that verified needs of developing countries for science and technology are matched to existing qualified agencies and institutions in the U.S., including those in the business sector. It should not undertake new projects on its own. Moreover, regarding business relationships with developing countries, FITC should not extend its role to overseeing or controlling the negotiations or ultimate projects unless U.S. government financing is involved. Where such funding is used, FITC's objectives should be accomplished to the fullest extent possible via contracts with businesses, colleges and universities, and other private sector agencies. In some cases U.S., State and local governments might be used.

Simply stated, there are not adequate mechanisms for agri-technology transfer at every institutional level; between relevant institutions in the developed countries; from the international research centers to national (LDC) programs; and from national research programs to potential farmers and users.

The participants wished to call FITC's attention to the records of many U.S. agribusiness companies in developing singularly effective skills in applying research knowledge to production and distribution problems. FITC should recognize and focus these skills on solutions of productivity, distribution, and consumer utilization problems, which are at the heart of the development process.

In this connection, participants thought that FITC might be the appropriate vehicle for organizing the international outreach efforts described earlier (Recommendation 10) and for enlisting the participation of the corporate community in those efforts.

FITC should encourage businesses and other private sector agencies to review previous experiences in developing countries to learn what went right or wrong and suggest for themselves and others, approaches that might be more successful in the future.

They thought that FITC should facilitate the participation of food related U.S. corporations in Third World food system development by providing them with comprehensive information about the status of infrastructural development in individual Third World countries. It could also suggest what additional resources might be available from the U.S. government, host governments or other international financing agencies to help solve infrastructural problems related to the projects being contemplated by the businesses.

Further, it could serve as a catalyst by joining in discussions between host governments and interested U.S. businesses in the initial stages of project development.

And finally, the Workshop suggested that FITC stress the development of communication links to help government officials and agencies understand the motivations and operations of businesses and the constraints under which they operate. These links would also help business executives understand the political and legal framework and constraints within which government agencies and programs operate.

VII. POST WORKSHOP REFLECTIONS

Perhaps the most thoughtful result of a workshop comes during the period, a week or two after, when participants, confronted by a hastily assembled draft of their report, have time to ponder and reflect on what they said and heard. A wealth of these post-workshop reflections came to us through the mail and over the telephone. When possible they were incorporated in the text of the preceding report. But many were fresh ideas or added important new dimensions to the past discussions. The following were selected as very useful additions to the workshop effort.

Income Generation for the Poor - A Basic Issue

The importance of income generation for the poor in meeting their nutritional needs is not, we believe, adequately stressed in the report. However, this lack of emphasis does not represent a lack of concern among participants. On the contrary, the importance of creating earnings opportunities for the poor was implicit in the entire week's discussion.

The participants recognized that national and international agricultural assistance was for many years focused primarily on increasing production. They stressed the need to move beyond that preoccupation to initiating total systems approach to food. Such an approach includes, of course, looking at the income side of the economic equation of supply and demand.

They were sympathetic to the recent shift of national and international development policies toward a focus on rural development, involving an integrated effort to create processing, manufacturing and service businesses in rural areas to provide jobs and income. Moreover, they agreed that U.S. agribusinesses, with the right modes of collaboration with governments, both U.S. and host country, could expand their contributions to these rural development efforts. It now remains to take the broad policy recommendations developed at the workshop and explore in specific detail how the proposed collaboration can be developed to achieve the goals of improved food systems that provide jobs at the same time they provide food.

More on the Role of Women in Food System Development

Participants agreed that the education and training of women, who constitute as much as 70 per cent of the agricultural workers in some developing countries is frequently overlooked in development planning and programs. Their function in food processing and marketing and their roles as the final links in the food delivery chain are seldom recognized and appreciated.

Participants pointed out that a new determination is needed by governments and international agencies to devise food systems that actually deliver food from the point of production to the mouth of the

consumer with emphasis on the neediest, without interruption, wastage or intentional deviation. For such systems the participation of women is essential.

Specifically, the workshop evinced a special concern that the needs and roles of women be given special attention as businesses undertake nutritional improvement and education programs and in all food-related training efforts. While this concern is referred to in connection with Recommendations 7 and 9, the report does not give it the emphasis demonstrated in the workshop discussions.

More on Intermediate Organizations In Corporate Development Efforts

Participants discussed a number of successful collaborative programs involving the participation of the business sector in food system development. In Recommendation 3 they urged the expansion or replication of these activities. They did not spell out in the report how these collaborative efforts work, but they urged us at the Aspen Institute to collect illustrative case studies from workshop participants and others. We are doing so and will welcome input and suggestions from readers of this report.

A common element in many of the examples cited is the use of an intermediate corporation or organization to take on the specialized investment development function. These intermediary institutions, often, though not always, nonprofit, are supported by one or more corporations and sometimes by public funds as well. They have specialized skills in development not possessed by most corporations. They represent one of the most promising instruments available for business/government collaboration for Third World development. Their advantages and possibilities merit wide discussion among concerned business and government leaders.

Corporations Have Responsibility to Define Problems and Suggest Solutions

In Recommendation 2 the workshop urged the U.S. and developing country governments to collaborate in encouraging U.S. food enterprises operating in developing countries to extend their technological and operational know-how to improve the efficiency of the food system. There is a concomitant responsibility for corporations to use their analytical abilities to help governments perceive new ways to improve the efficiency of their food systems.

While this point was not made explicitly in the report, we believe it was implicitly and explicitly recognized by the business participants and is accepted by many agribusiness executives. Much of the workshop discussion revolved around how to use current mechanisms, or create new ones, to mobilize these corporate analytical abilities for the mutual benefit of governments and stockholders.

Multinational Corporations Promote Technology Transfer Among
Developing Countries

In connection with several recommendations, participants discussed the value and importance of transferring technology adapted for use in one developing country for use in another developing country with similar needs and development environments. This point did not emerge nearly as strongly in the report as it did in the discussions.

Participants frequently emphasized that technologies appropriate to U.S. and other developed countries are not necessarily the most effective in solving technological problems in developing countries but that satisfactory technologies may often be found in other developing countries. Multinational corporations can and do provide a conduit for the transfer of such technologies. This function could be strengthened and expanded in collaboration with governments and international agencies.

APPENDIX A

Workshop
Agenda and Schedule

21 August, 1978, Monday - MORNING SESSION: Walter Orr Roberts, Moderator
Susan K. Levin, Rapporteur

- 9:00 Welcome and Introduction
- 9:15 Workshop Objectives and Organizations - Mary L. Wolff
- 9:30 Food, Hunger, Trade in Grain and the World Bank - Montague Yudelman
- 10:00 Discussion
- 10:30 Technological Collaboration with the Third World: A New
Look at U.S. Policies - Jeffrey Garten
- 10:50 Discussion
- 11:00 AID's Food and Agricultural Policies - Robert H. Nooter
- 11:20 Discussion
- 11:30 The UN Conference on Science and Technology for Development
Robert H. Nooter
- 11:50 Discussion

AFTERNOON SESSION: Walter Orr Roberts, Moderator
Susan K. Levin, Rapporteur

- 2:00 A Business View of Technology Transfer - Harvey Wallendar
- 2:30 Discussion
- 2:45 Panel: Changing Patterns of Third World Food System Development
Motivating the Small Farmer - Robert L. Ross
Fundacion Chile - Pablo Herrera
Cooperatives in the Third World - Melvin Sims
- 3:45 Discussion
- 4:20 Workshop Organization - Mary L. Wolff
- 4:30 Adjournment

22 August 1978, Tuesday - MORNING SESSION: Walter Orr Roberts, Moderator
Susan K. Levin, Rapporteur

- 9:00 Conceptual Framework for Analyzing Third World Food Systems -
Edward L. Felton
- 9:15 Roles for Agribusiness in Third World Food Systems -
Dwight S. Brothers
- 9:30 Summary Aspen Workshop on Planning for Science and Technology
for Development - Paul M. Doty

- 9:45 Woman, An Untapped Source of Power in the Fight for Hunger -
Lisa Sergio
- 10:00 Industrial R&D for Science and Technology for Development -
Raymond C. Sangster
- 10:15 Role of Industry in Creating Research Capability in Developing
Countries - Harold L. Wilcke
- 10:30 The Game Plan: Mary L. Wolff and Raymond C. Sangster
- 11:00 Musical Chairs: An Exercise in Agenda Focusing
- 23 August 1978, Wednesday - MORNING SESSION: Working Group Meetings
& AFTERNOON
- 9:00- Group I: Walter Orr Roberts and Thomas Wilson, Moderators
4:30
- Group II: Mary L. Wolff and Lloyd E. Slater, Moderators
- 24 August 1978, Thursday - MORNING SESSION
- 9:00- Working Group meetings continue
12:30
- 25 August 1978, Friday - MORNING SESSION: Walter Orr Roberts, Moderator
Susan K. Levin, Rapporteur
- 9:00 Presentation of Reports from Working Groups on Topics I and II
- 26 August 1978, Saturday - MORNING SESSION: Walter Orr Roberts, Moderator
Susan K. Levin, Rapporteur
- 9:00 Presentation: Draft of Combined Workshop Recommendations -
Lloyd E. Slater
- 9:30-
12:00 Discussion and Adjournment

-End-

APPENDIX B

Papers Presented at Workshop

1. Designing Practical Initiatives for International Transfer of Technology and a "Sister Industry" Program Example
Harvey W. Wallendar, Council of the Americas
10 August 1978
2. U.S. Agribusiness Enterprises and LDC Food System Problems
Dwight S. Brothers
August 1978
3. Woman, An Untapped Source of Power in the Fight Against Hunger
Lisa Sergio
February 1975
4. U.S. Industrial R&D for International Development
Raymond C. Sangster, National Bureau of Standards
August 1978
5. The Role of Industry in the Development of Research Programs and the Application of Technology in Less-Developed Countries
Harold L. Wilcke, Ralston Purina
August 1978
6. AID and the Private Sector
William L. Rodgers, AID
17 August 1978

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