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War on Hunger

A Report from The Agency for International Development

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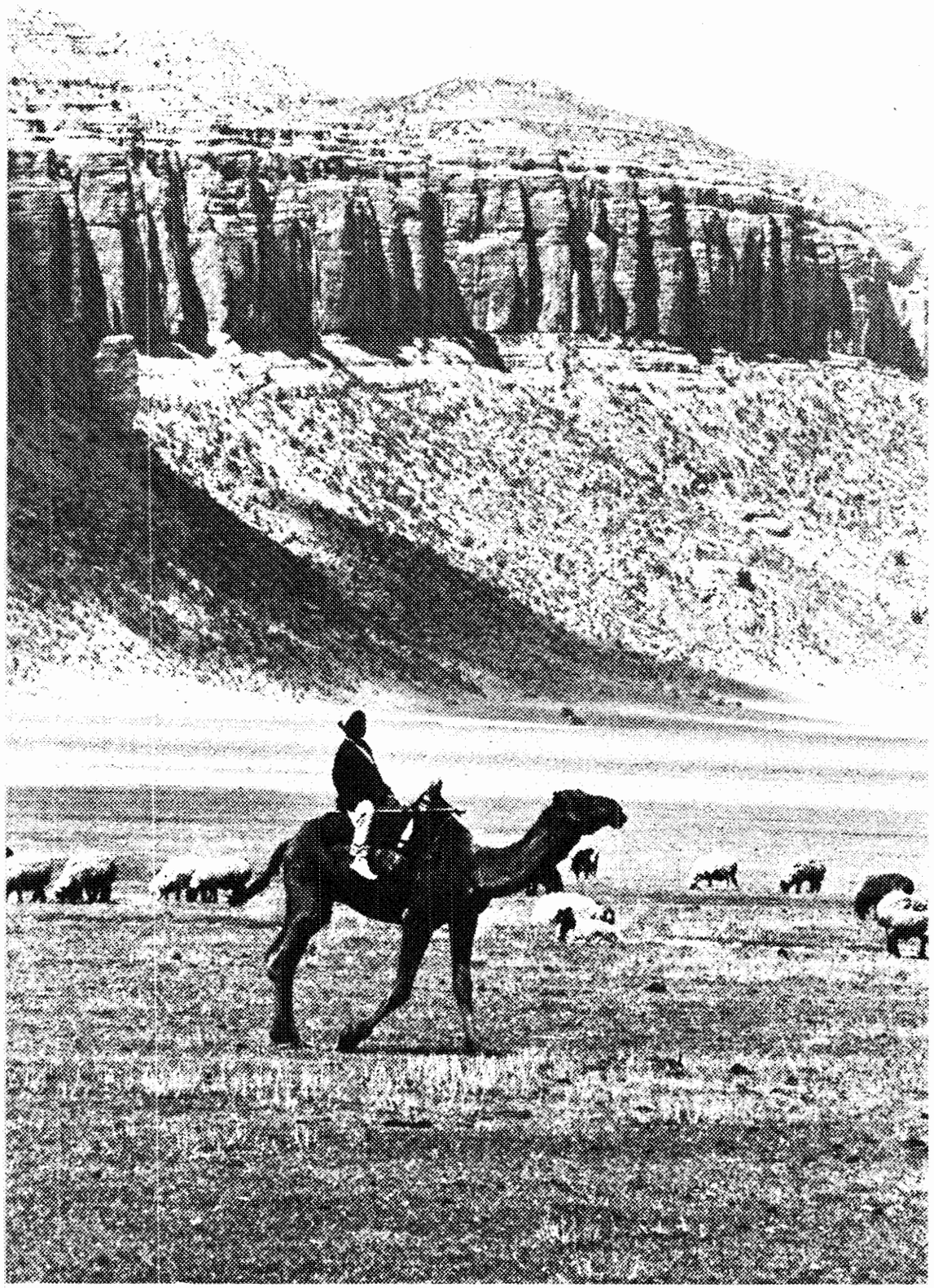

FRONT COVER: With the help of recently formed cooperatives, nomadic Qashqai tribesmen will be bringing many more sheep to Iran's markets this year. (See p. 9)

BACK COVER: Ship filled with Food for Peace grain is unloaded at Korean dock. (See p. 1)

OFFICE OF THE
WAR ON HUNGER

War on Hunger

A Report from The Agency for International Development

Published monthly by the Office of the War on Hunger, Agency for International Development.

Dr. John A. Hannah, Administrator

Irwin R. Hedges
Acting Assistant Administrator for War on Hunger

These Latin American girls are some of the more than 50 million children in 106 countries currently benefiting from food donated for school lunch and maternal/child feeding programs under P.L. 480.

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Carol H. Steele, Editor

Readers are invited to submit news items, original manuscripts (including speeches) and photos on any aspect of the War on Hunger. Contents of this publication may be reprinted or excerpted freely.

FOOD for PEACE MARKS 15th YEAR

I am pleased to transmit the report for 1968 on the Food for Peace Program under Public Law 480—a program which over the years has helped provide better diets for millions of people in more than 100 nations. In addition to its primary humanitarian aspects, Food for Peace contributes significantly to the maintenance of export markets for U. S. agricultural commodities and to the U. S. balance of payments position.

While this is my first official report on the program as President, I have been closely associated with it since its beginning. This great humanitarian effort began in 1954 during the Presidency of Dwight D. Eisenhower. As Vice President at the time, I was keenly interested in the program and have followed its development and accomplishments ever since.

It is evident that the battle against hunger must continue, both in the United States and in the world at large, through programs such as Food for Peace. The present Administration eagerly accepts this challenge and dedicates itself to dealing effectively with the problems of hunger and malnutrition at home and abroad.

Richard Nixon

The United States Food for Peace program, established under Public Law 480, marks its 15th year in 1969 as a significant instrument for progress in the developing world.

The 1968 annual report to Congress notes the emphasis on self-help in Title I sales programs and the use of Title II food donations to stimulate work projects and combat malnutrition.

"Self-help legislation has had a substantial influence on the agricultural progress of many less developed countries," the report states. "It is not easy to get agriculture moving, but the process now benefits from the past experience of a great many countries."

In the donations program, the report says, "Voluntary agencies are now more than 50 percent of the way to their goal of shifting from dole feeding to food for work activities by the end of 1970." It also notes that "there are more than 50 million children in 105 countries currently benefiting from food donated for school lunch and maternal/child feeding programs."

High-yielding seeds and other inputs; self-help efforts; and highly favorable weather conditions in many areas enabled major recipients of Food for Peace to harvest record grain crops, lessening the need for food assistance from the U.S. The $1.178 billion in agricultural commodities exported under P.L. 480 last year compares with $1.237 billion in 1967 and $1.306 billion in 1966. The grand total for 15 years is $17.6 billion. Concessional sales programs account for $12.6 billion of the total.

Self-Help Programs

Self-help performance, a criterion incorporated into the legislation in 1966, is assessed by the report as having "encouraged higher agricultural budgets, improvements in the availability of production inputs, the establishment of price incentives for farmers and needed improvements in marketing." The report goes on to say, "Despite the many notable achievements, progress has been uneven and perhaps even disappointing in a number of countries."

This dam is one of 38 self-help irrigation projects sponsored by the Government of the Philippines and constructed with Food for Peace assistance.

The 1966 provision requires that the President consider the extent of self-help measures being taken by a country before the United States enters into a sales agreement. Nine suggested categories of self-help activities focus on land use, infrastructure, research, education, public investment and policy. In mid-1968 Congress added a 10th category, voluntary programs for the control of population growth. This provision emphasizes the relationship between agricultural development and population control and is in addition to family planning measures elsewhere in the Act.

In many nations the most important self-help activity of 1968 has been an accelerated program of wheat production. Afghanistan, Bolivia, India, Morocco, Pakistan, Paraguay, Tunisia and others are making progress in this effort through ever-wider use of improved seed and fertilizer.

Wheat has accounted for more than two-thirds of Public Law 480 sales during the past 15 years. The 7.8 million metric tons of wheat or wheat flour shipped in 1968 brought to 116.5 million metric tons the amount exported since the beginning of the program.

In the rice growing nations of Ceylon, Guyana, Indonesia, Korea, Liberia, Pakistan, Sierra Leone, Vietnam and others, programs contributing to greater use of improved seeds and fertilizer again ranked at the top of the list of self-help programs.

Most of the countries receiving food aid are engaged in research or already putting into practice new storage and marketing facilities, insect and rodent control programs, production incentives, credit programs, and transportation facilities.

• New high-yielding varieties of seeds were a key factor in India's bumper grain harvests during 1968, and increased imports and production of fertilizer added to the success. Increased output depends heavily on irrigation, and emphasis is on expanding minor irrigation—as opposed to large dam projects—through the added use of pumps, tubewells, etc. The Price Incentives Program involves price supports, a purchase program and establishment of buffer stocks.

• In Indonesia self-help efforts are being made to improve seed multiplication, farm credit, rice milling, storage, provision of rural water pumps, training of extension workers and farm to market roads. The country increased rice production from 8.9 to 10.2 million tons in 1968 and hopes to further increase it to 10.5 million tons this year.

• Morocco has included a major range management and animal nutrition program in its new Five-Year Plan. The goal is to increase production of livestock products by 50 percent over a seven-year period by improving selected rangeland areas and providing supplemental feeding.

• Pakistan's commitment to agricultural development paid off in 1968 with substantial gains in foodgrain production. Successful steps were taken to increase supplies of improved seeds, pesticides and irrigation. The seed program focused on sharply expanded acreages of Mexican-type wheats and improved rice varieties from the International Rice Research Institute. The Government has encouraged domestic and foreign private investment in the production and distribution of fertilizer, and is going ahead with plans for improved research, education and marketing.

• In Vietnam the Government packaged high-yielding IR-8 rice with proper amounts of fertilizer and pesticides in kits for sale to farmers throughout the country. A series of courses were designed to train extension workers, efforts were made to decrease rice storage losses, and the Government increased its sponsorship of credit to farmers. Development of a domestic feed industry and production of chickens and hogs was encouraged.

Family Planning

Proceeds derived from the sale of Food for Peace agricultural commodities have provided the Agency for International Development with an important source of financing for population and family planning programs. More than $50 million in U.S. owned local currencies was made available to help finance the local costs of such programs in fiscal year 1968. AID dollar assistance that year totaled $34.7 million, an increase of $30 million over the previous year.

Legislation permits the allocation of local currency at the request of the country for activities related to the problems of population growth. In fact, a modification approved July 29, 1968, states that not less than five percent of the total annual sales proceeds shall, if requested by the foreign country, be used for voluntary programs to control population growth.

In India, the local currency equivalent of $38 million was earmarked for family planning. Of this amount more than half will be used to help finance the Indian manufacture of 6,000 vehicles. A $2.7 million AID loan will help provide the foreign components for these vehicles.

U.S. owned local currencies are also going into family planning projects in Ceylon, Ghana, Indonesia, Pakistan and Turkey.

Child Feeding

More than 50 million children currently benefit from the food donated for school lunch and maternal/child feeding programs in 105 countries. Here the emphasis is not only upgrading of diets by whatever means is best, including the use of blended foods, but also encouraging both the firm establishment of the school lunch as a part of local culture and gradually increasing assumption of local responsibility and financing.

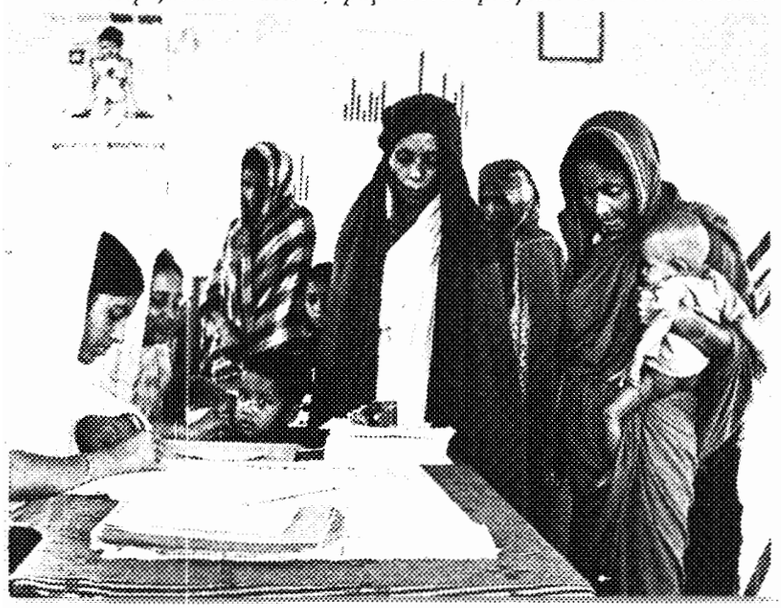
- A milk distribution program in Brazil is reaching more than 5.5 million children. More than one million of those receive a complete hot meal in addition to milk. The Brazilian Government is increasing its contribution each year so that eventually it will continue the program without U.S. help.
- In Peru assistance is being given to a pilot project in applied nutrition for pregnant and nursing mothers and pre-school children. The school feeding program provided a full breakfast or lunch to an estimated 720,000 primary school students during the 1968 school year.
- In Korea a variety of steps are being taken to improve the diet of children through the school feeding program. Seventeen demonstration schools equipped with new kitchens have been opened and the school lunch formula is being standardized for both rural and urban areas.

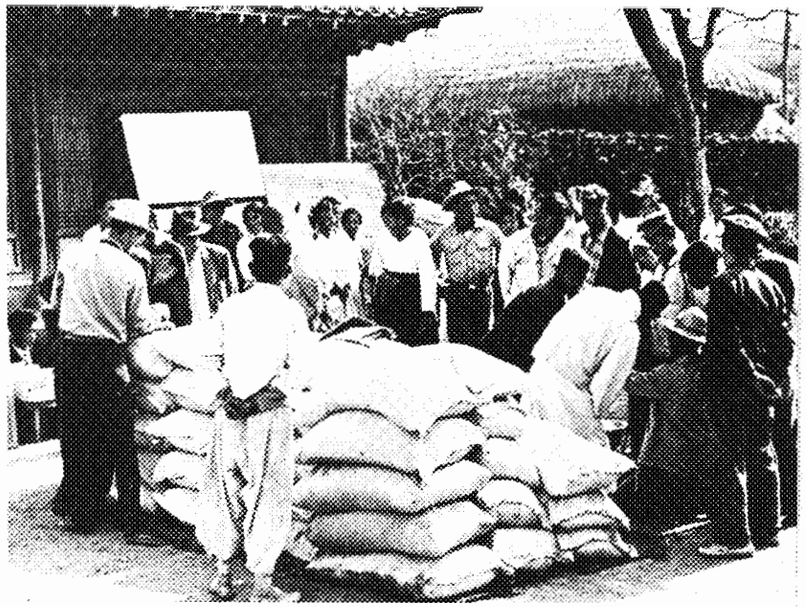
Food for Work

Food for work programs have been conducted on a government-to-government basis for many years. During the past year new or continuing programs were approved for operation in 11 countries, employing 1.1 million people and reaching a total of 5.5 million recipients.

- The Government of the Dominican Republic is distributing state-owned land in rural areas to unemployed, underemployed and/or landless people. Food commodities will help families settling on the land, and recipients are required to maintain minimum levels of output or achievement as a requisite for continued U.S. food assistance. Colonists are also required to contribute a minimum of 20 hours of labor per month toward projects of benefit to the whole community.
- Commodities were authorized to support an economic and community development program in 10 provinces in Chile. To receive food, Chileans will work on construction, repair and maintenance of rural roads; reforestation; and a variety of community improvements.
- Korean workers receiving U.S. food aid are involved in resettlement projects, bench terracing, paddy rearrangement, fishery development, reforestation, tideland reclamation, road construction and other types of local improvement.
- A new Malaysian agricultural development program designed to encourage resettlement of needy people, increase productivity and improve the well-being of rural inhabitants is receiving U.S. food support. Farmers will work clearing land, contouring, planting and weeding. After development is completed, they will be given title to their farms.

More than $50 million in local currency generated from the sale of P.L. 480 agricultural commodities is used to help finance costs of population projects in seven nations.





Pay day for these Koreans means food for the table. Under Food for Work programs, workers receive grain from the United States as part of their wages.

Other P.L. 480 Programs

There was progress in 1968 in the effort to phase out local currency sales and sell commodities for U.S. dollars only by the end of 1971. Concessional dollar sales accounted for 64 percent of a total of $740 million in sales in 1968, compared with 25 percent the previous year.

Local currencies derived from foreign currency sales of agricultural commodities are used instead of dollars by U.S. agencies in meeting overseas expenditures.

Food for Peace commodities worth approximately $99.6 million, including transportation, were donated to foreign governments in 1968 for the relief of victims of natural disasters. While food was the main item required, the United States also provided tents, blankets, medicine, cloth and other supplies.

RESEARCH: The Seed for Agricultural Progress

by Douglas D. Caton

". . . and he gave it for his opinion, that whoever could make two ears of corn, or two blades of grass to grow, upon a spot of ground where only one grew before, would deserve better of mankind, and do more essential service to his country, than the whole race of politicians put together."

Jonathan Swift
in *Gulliver's Travels*

Many and varied are the factors contributing to the production of Jonathan's extra ear of corn or blade of grass. Not the least among these factors is agricultural research.

Agricultural research has been an area of heavy investment within the United States over the past half century. Until recently, however, it was largely neglected by both the international assistance agencies and the governments of developing countries.

In recent years, research in the various spheres of agriculture is receiving the attention it deserves. The relatively quick and dramatic payoffs in rice breeding, following the success in wheat—called the Green Revolution—have awakened widespread interest in research in the developing countries.

Within the next few years, we can expect agricultural research to gain further impetus as the large multi-national agri-business concerns that manufacture fertilizer, pesticides and farm equipment and distribute seeds and market farm products, make greater investments in their own agricultural research at home and abroad. Such firms finance and conduct more than half of all agricultural research in the United States today.

The Agency for International Development has played an important role in furthering research and—within budgetary limitations—is ready to initiate, adopt or sponsor a variety of projects.

Prototype for Development

A case in point is an AID-sponsored research project, "Factor Analysis for Accelerating Agricultural Productivity in Less Developed Countries, Guadalajara, Jalisco, Mexico." Its purpose is to investigate the economic, social and political factors which inhibit the adaptation of proven agricultural practices in traditional agricultural societies.

The International Marketing Institute of Cambridge, Mass., which is conducting the research, will attempt to design a model for agricultural development on an area basis—a prototype that will demonstrate opportunities for private capital investment as well as the technical and economic feasibility of improved production practices.

Resources of the private investor, who is now largely concerned with commercial, financial and manufacturing enterprises and who collectively controls vast amounts of money, manpower and know-how, must be tapped if the general attack on world hunger is to be successful. Thus, one of the principal objectives of this research project is to determine why agriculture in the face of demonstrated opportunity for marked increases in production, does not attract outside investment.

The project's basic assumption is that if the resources available to bring about change can be organized into an institution satisfying (a) the need for profit by the investor; (b) the need of the farmer for protection against risks involved in making the change; and (c) the need of the government to assure its people that the public interest is being protected and advanced, then rapid, effective change will take place.

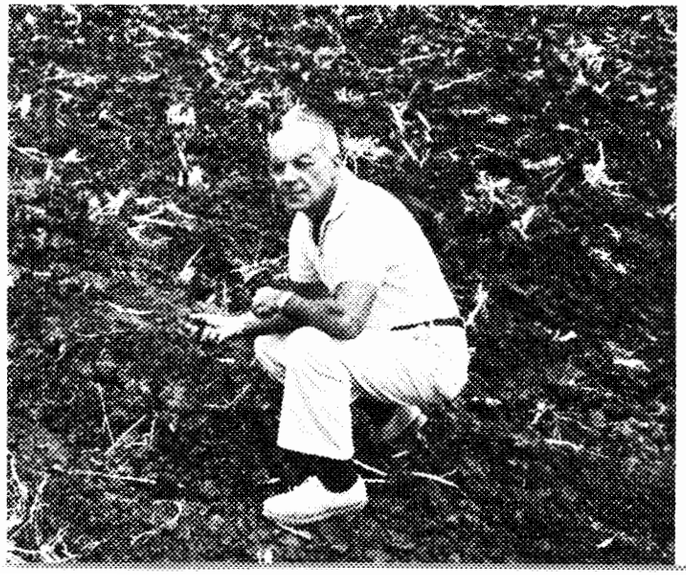
Studies under this project could help to establish a solidly competent analytical methodology for selecting good institution building projects.

Origin of Research Project

The question has often been asked: How do ideas for such projects take on flesh and blood? Where do they originate?

In this instance, the roots of the project may be traced to an article by Dr. Simon Williams which appeared in the November/December 1965 issue of the *Harvard Business Review*. At the time Dr. Williams was study-

Dr. Simon Williams, Associate Director of the International Marketing Institute, Cambridge, Mass., is Project Director for an AID-sponsored study now underway in Mexico.



Dr. Caton is Director of the Agriculture and Rural Development Service of the Office of the War on Hunger, Agency for International Development.

With the help of a model corporation soon to be organized through private Mexican and/or American investment, farmers in a valley near Guadelajara will raise improved corn and sell it through the corporation.

ing the problem of hunger and agricultural food production dynamics under the sponsorship of the International Minerals and Chemical Corporation.

The article came to the attention of AID's Agriculture and Rural Development Service, and discussions with Dr. Williams followed. He came to Washington with a proposal for a research project to bring out and analyze requirements for the creation of dynamic farmer organizations in the less developed countries.

The project was approved by an ad hoc committee of the AID Research Advisory Committee (RAC) on April 1, 1966, and a contract was signed with the International Marketing Institute to be effective Sept. 1, 1966. Dr. Williams was designated project manager.

In addition to directing the research in Mexico, Dr. Williams supervised the work of a market and credit analyst (partly supported by a Ford Foundation grant); an agronomist (Mexican); engineering and dairy consultants; a resident anthropologist; advisors made available by the Rockefeller Foundation (at no expense); and a number of Mexican nationals.

The research team has interviewed top officials of every American corporation conducting agri-business operations in Mexico. Also, all Mexican Government banks and agencies supplying credit to agriculture and all American banks doing business in Mexico have been contacted. Interviews with 250 wholesalers, millers, retailers and government marketing officials have been conducted. Heads of some 200 rural families living in the study area have been interviewed.

The contractor's team has investigated and analyzed a range of factors important for a model corporation to be developed by the project: site selection; market outlets; diversification of farming enterprises; legal organizational features; potential sources of investment and loan capital; cultural problems; political issues; and technical resources. AID is not involved in setting up the corporation, but is, of course, interested in it.

Dr. Williams will soon be taking formal steps to organize the corporation, which will be financed with an initial capital of $960,000 supplied by American and/or Mexican investors. It will be a joint venture, with private investors owning the voting stock and cooperating farmers owning the non-voting stock. With in three years, 560 small farmers operating 4,500 hectares of unirrigated land hopefully will cooperate in the project.

Model Corporation

Other features of the model corporation:

- Farmers will produce corn under direction of the corporation and will agree to sell all of it, except that required for subsistence, to the corporation. Each farmer will share in the profits in relation to the amount of corn marketed.
- The corporation plans to produce and market 10,800 hogs annually from 600 improved brood sows and to produce and market some 11,000 liters of milk daily from a dairy of 600 top-quality Holstein cows. Profits from these enterprises will be shared with the farmers.
- In producing corn, the corporation will furnish management, farm credit, seeds, fertilizers and pesticides; farmers will provide land, labor and animal power.
- Farmers will gain increased production of corn, profit sharing, lower interest rates and knowledge of improved practices. Investors, who assume most of the risks, will receive an annual return on investments and will be repaid the principal at the end of 20 years, when the corporation will be transferred to farmer stockholders.
- The corporation plans to study the feasibility of producing and processing fruits and vegetables or otherwise increasing productivity of land.
- The corporation will help to design and carry out educational programs for adults and youth so the farmers may soon take on increased managerial and operational responsibilities.

It is assumed that this corporate model can be utilized in other areas of Mexico or elsewhere. That there will be a wide demand for the model now appears certain. Numerous inquiries from American agri-business corporatitons and from government officials indicate strong interest in it.

AID agricultural objectives abroad are focused on the processes by which a developing nation's ability to produce more food is strengthened. Putting greater and more widely distributed income in the hands of farmers results in a healthier economy and stability, while at the same time it greatly reduces the risk of world famine. Agricultural research projects such as the one now being brought to a successful conclusion in Mexico can contribute much towards achieving agricultural and rural development goals overseas.

High-Yielding Sorghum Succeeds in Turkey

by S. H. Fuchs and Ataf Atilla

A high-yielding U.S. variety of sorghum is sprouting on the silt-laden Soke Plains of Western Turkey and shows such amazing promise that Turkish farmers are asking for more seed, experimenting with new methods of irrigation and planting, and planning ways to further improve their yields next year.

The result of demonstrations organized by an Agency for Internatitonal Development-sponsored team from the Department of Agriculture's Soil Conservation Service, successful sorghum crops are only part of an overall plan for the development of the Lower Buyuk Menderes watershed.

Eventually, the Buyuk Menderes Project will aim to improve crop production through flood control practices on the frequently flooded watershed lands. The immediate objective is improving cropping methods on land that floods less frequently. The Buyuk (meaning "big") Menderes (meaning "meander") River goes on a rampage every winter, covering miles of farmland as it flows toward the Aegean Sea. Some farmers use boats to get to their land during the winter months.

Keeping an eye out for sparrows, farm hand waits atop a platform to scare away the pesky birds which take a high toll of the ripening sorghum.

For thousands of years, silt has accumulated in some places at a rate of one and a half to two inches per year, creating thousands of acres of new cropland in the Lower Soke Plains. Because of the high silt content, low organic content and poor soil structure, most of the soils absorb moisture slowly. Hardpans have developed, and some of the soils are alkaline. High water tables and poor drainage add to the problem on many farms.

The project's long-range goal is to provide technical assistance to people of the flooded areas to help them in planning conservation cropping systems, use of crop residues, tillage methods and irrigation water management. A master plan for the area calls for a series of dams and flood control structures to halt the annual flooding. After this threat is removed, land leveling, drainage, toxic salt reduction and other practices will become practical.

As a first step the U.S. team, which arrived late in 1967 at the invitation of the Government of Turkey and AID to support Turkey's General Directorate of Farm, Irrigation and Soil Conservation (TOPRAKSU), organized farm demonstrations to introduce U.S. varieties of sorghum and better cropping methods on land not subject to frequent flooding.

Cotton has been grown extensively in the area for the past 25 to 30 years, and many fields are badly affected by the disease known as fusarium wilt. Many of the flooded areas cannot be planted before mid-June or later, and the winter rainy season comes before some of the cotton can be harvested. The result is a low-yielding, poor-quality crop.

Since a small amount of sorghum was already established in the region and local farmers were interested in this crop, the team decided to compare U.S. varieties with the native white variety. Field trials began in the spring of 1968 on five farms. Winter-flooded fields and fields recently leveled but not subject to flooding were selected.

Native farmers usually broadcast sorghum when the ground is dry, scattering it in all directions at about 25 pounds per acre. No fertilizer is used, and a moldboard plow turns the seed down to six or seven inches. A heavy wooden drag, called a surgu, smooths and firms the soil. On extra-cloddy fields a disk harrow and sometimes a cultipacker is used to break up the clods. If a stand develops, it may take two weeks. Fields are irrigated by hand-built borders that form small basins, and weeds are controlled with short-handled hoes.

On three of its demonstration fields, U.S. and TOPRAKSU team members prepared lister beds and dragged them with a surgu before planting. One field was pre-irrigated after land leveling and before plant-

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Mr. Fuchs is a Plant Materials Specialist for the U.S. Department of Agriculture's Soil Conservation Service. Mr. Atilla is an Agronomist for Turkey's General Directorate of Farm, Irrigation and Soil Conservation (TOPRAKSU).

Checking trial plots of sorghum planted on Turkish silt, are (left to right): Harvey Johnson, Deputy Division Director for the U.S. team; Kazy Bozkurt, TOPRAKSU Project leader; and Ataf Atilla, TOPRAKSU Agronomist.

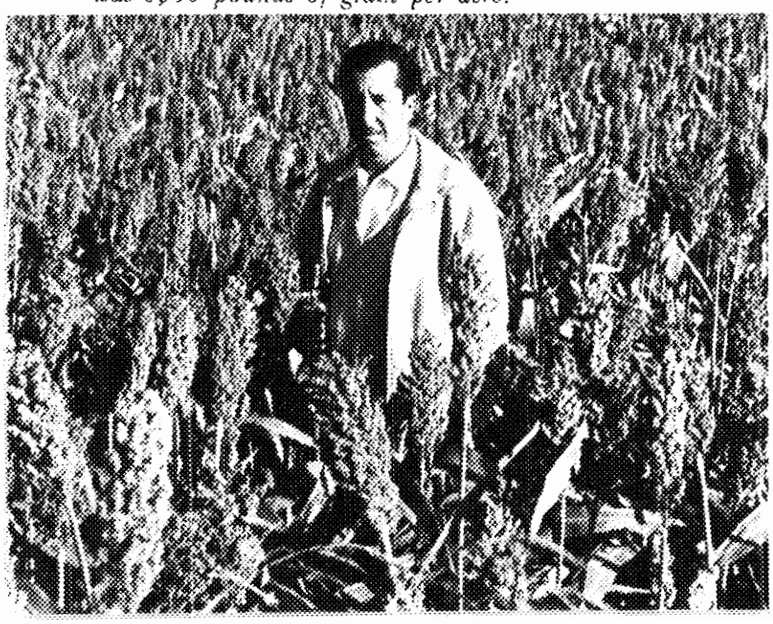
ing. Rows were spaced three feet apart to accommodate a tractor and cultivator for weed control. A planter, manufactured in a nearby village, was equipped with adjustable plates to plant the sorghum at the rate of about six pounds per acre. To the amazement of local farmers, good stands developed five days after planting.

AID's equipment specialist in Turkey, Marvin Parker, devised a cultivator to cut off the weeds near the sorghum plants. Watching it in action, a farmer said, "This machine in one day will do the work of 100 men with hoes."

Modified cultivator sweeps were used to make irrigation furrows, which were fed up by siphon tubes. Turkish farmers found it hard to believe that a few men with tubes could irrigate with ease the same amount of land a dozen or more men struggled to irrigate with small basins.

Narrow-spaced rows were evaluated on one farm. In June, the straw from a 60-bushel crop of Mexican wheat was plowed under. The field was then bordered and pre-irrigated before sorghum was planted on July 1. A wheat drill was used for planting, and every other drop on the drill was closed to avoid spacing the rows too closely. The sorghum was up to a good stand five days later.

Turkish farmer Rifki Ozbasli looks over his prize-winning sorghum corp. Using a U.S. variety of sorghum and improved planting and irrigating methods, his yield was 8,950 pounds of grain per acre.



The success of the demonstration plots was clear cut. On fields planted conventionally, the best field of local white sorghum, fertilized with 50 pounds of nitrogen, yielded 3,000 pounds per acre. One of the U.S. varieties produced up to 7,400 pounds of grain per acre on a field planted on 36-inch rows and fertilized with 70 pounds of phosphate (P_2O_5) and 75 pounds of nitrogen.

The highest yield, produced on Rifki Ozbasli's field, was 8,950 pounds per acre. The crop followed wheat and was bordered, pre-irrigated and drilled on 14-inch rows. The variety tested there was not used in the 36-inch row plantings. Another variety in the same field produced 6,000 pounds per acre and in the 36-inch row trials produced 7,400 pounds per acre. Rifki used about 35 pounds of phosphate and 75 pounds of nitrogen per acre. He irrigated twice, and the weeds were chopped out by hand once. The more vigorous sorghum variety grew so rapidly that further weed control was unnecessary.

Turkish farmers were convinced. They saw the benefits of land leveling and liked the labor-saving methods of irrigating sorghum on leveled land with either furrows or borders. They observed the obvious higher yields produced by the best care and management. For example, one demonstration field that was not irrigated produced about one-fourth the yield of the irrigated sorghum plots. The farmers were impressed by new planting methods which brought good stands with about one-third the amount of seed required by the conventional method. Trials also demonstrated the advantage of a crop that produces an abundance of residue which is used to help improve the soil.

They have a few additional problems to solve, too. Sparrows were the number-one pests last year and, despite tireless efforts of the farmers, the birds ate a great deal of the ripening grain. Two farmers hired a man to carry a shotgun and beat on five-gallon cans. One farmer built a platform in his field to give a man with a slingshot and a very loud voice a vantage point for scaring away the birds.

Minor troubles, however, are not likely to keep Turkish farmers from growing their new-found sorghum varieties.

Sorghum can be planted in the Aegean region as late as July 1 with the certainty that it will mature before the rainy season. This will allow two crops a year, wheat and sorghum, and will give the fusarium-infested land a rest by abandoning the continuous cotton program.

Area farmers are enthusiastic about the new crops and are already planning ways to improve their yields next year. Sub-soiling land with a hardpan, more liberal use of fertilizers and timely irrigation are some of the changes already in the works.

National Planning Association Report

DRASTIC AID CHANGES URGED

A drastic restructuring of the U.S. foreign aid effort "to make it more relevant to the changing requirements of the 1970s" has been proposed by the National Planning Association.

NPA is a private research organization headquartered in Washington. Its board of trustees comprises prominent figures from the worlds of agriculture, business and labor.

In a 25-page policy statement entitled "A New Conception of U.S. Foreign Aid," NPA recommended that a third of U.S. development assistance funds be transferred to international institutions and that technical assistance and private enterprise activities be administered by autonomous, non-governmental corporations.

NPA said that the purpose of its study was "to make foreign aid a more effective means of helping those willing and able to help themselves."

"There is an inherent difficulty," the statement said, "in a development assistance relationship between the wealthiest, most powerful and most achievement-driven society on the planet and new or newly awakened nations. Each recipient country is struggling in its own way to evolve a minimum sense of cultural identity and consensus on national purpose amid the incompatible modern and traditional elements of which it is composed and the conflicting interests and goals pursued by its various leadership groups.

"Such nations naturally resent being pressured by outsiders, even for their own good, and especially when the foreigners seeking to influence them are so much richer, more powerful and more successful in the activities involved than they are. This always latent resentment becomes manifest if the pressure applied by the Americans is too overt, strong or unskillful, regardless of how well-intentioned it may be. When it does, the recipient country carries out the advice given only half-heartedly or resorts to subterfuges, often blaming the U.S. for the subsequent failures."

"Reactive" Posture Urged

For these reasons, NPA said, the U.S. foreign aid effort needs to be tailored along lines conducive to "a more *reactive*, rather than *active*, posture on the part of the officials engaged in carrying it on."

NPA agreed that increased use should be made of multilateral means. "But multilateralization is not a panacea," the statement said, "nor could it be made the sole—or even the major—channel for U.S. foreign aid for some time to come."

As a step toward multilateralization, NPA recommended transferring up to one-third of development assistance funds to "appropriate international institutions"—chiefly the World Bank group. Also, it said, the U.S. should provide more development assistance through consortia in which other donor nations are represented.

The NPA policy statement called for a "careful reassessment" of the relationship of food aid to agricultural growth in recipient countries. It pointed out that the successful development of new high-yield varieties of rice and wheat in such countries as India, Indonesia, Mexico and the Philippines has brought hope that the threat of world famine may be averted.

"In the past," the NPA said, "the availability of U.S. food aid has frequently enabled recipient governments to temporize about undertaking new agricultural incentive policies and to hold down food prices for the urban population. In consequence, prices have often been too low to enable farmers to meet the financial obligations incurred for fertilizer and water use. Thus, the very food aid supposed to help a nation develop can stifle the initiative of its farmers, the only source from which its new growth in agriculture can come."

Prices Must Be Maintained

This situation imposes a heavy responsibility on the administrators of the U.S. food aid program, NPA said. "Because the new developments in agriculture are so promising," it continued, "it is now more important than ever to ensure that American food aid does not drive down agriculture prices in the recipient countries and prevent their farmers from responding to rising food needs."

NPA recommended "a periodic reexamination of the food aid program to make certain that it is not inhibiting farmer intiative or postponing adoption by the recipient governments of modern agricultural development policies."

In the field of technical assistance, the NPA statement asserted that "nothing is more important than to keep open and expand the channels for adapting and transferring technical knowledge and skills from the United States to the transitional societies of Asia, Africa and Latin America."

Technical assistance has been at once the least controversial part of the foreign aid program and the most difficult to administer effectively, it said.

The NPA document said that "shortcomings of the technical assistance part of the U.S. foreign aid effort reinforce, and are in turn exacerbated by, the counterproductive effects in their recipient countries of excessive U.S. activism. In our judgment, a radical change in the basic approach and organization of U.S. technical assistance is needed.

(Continued on p. 19)

COOPERATIVES FOR IRAN'S NOMADIC HERDSMEN

Qashqai tribesmen sign the charter creating Iran's first tribal cooperative, a successful catalyst toward improved breeding, feeding and management of their herds.

Herdsmen of Iran's nomadic Qashqai tribe traditionally have migrated from the mountainous areas of western Iran during the summer to the coastal areas of the south during the winter in search of grazing land for their livestock.

The annual trek, which covers up to 300 miles, is hard on the people and perhaps even harder on the animals. Loss of livestock from starvation alone is as high as five million head in some years—more than 10 percent of the nation's livestock population.

In addition to cuts in potential income due to migrational weight loss of their livestock, tribal herdsmen lose money by selling them without knowledge of market prices. Animals are usually sold at a sacrifice during drought periods when more than 75 percent of the spring lambs and over 50 percent of the adult animals would otherwise perish.

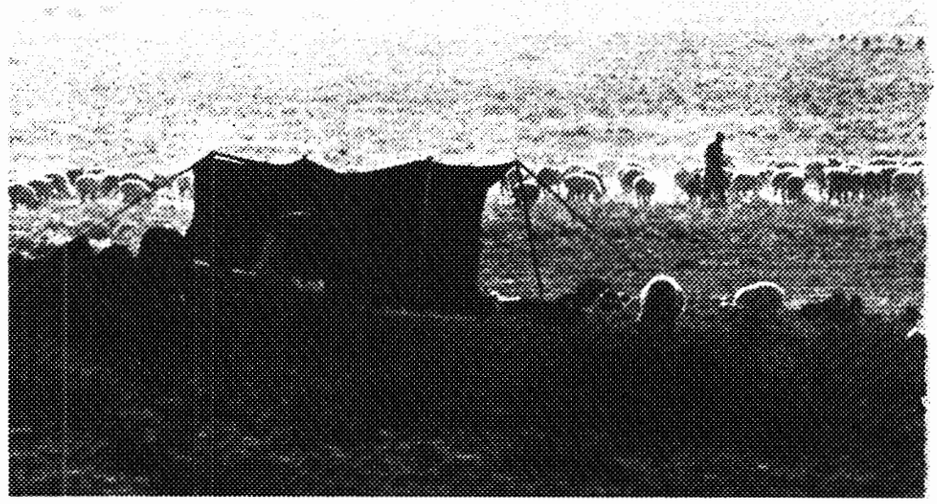
If tribesmen could fatten the livestock themselves and then sell directly to the market, they could make a much better living and the nation would have more and better quality meat. Setting up feedlots on migration routes and near markets would solve many of the herdsmen's problems, but organization and cooperative action are needed to carry out improvements.

Although efforts to develop a modern livestock industry have been underway for more than 30 years, they met with modest success until Bank Omran (Development Bank) of Iran, assisted by Agency for International Development advisers and financing, entered the picture just two years ago.

Cooperatives organized in mid-1967 under Bank Omran leadership mark the first coordinated attempt to meet a wide variety of needs of the nation's tribal people and are helping to bring nomadic herdsmen into the "mainstream of economic development."

The Qashqai Cooperative Livestock Feeding Demonstration Project was set up to establish feedlots, provide supplemental feedstuffs and extend subsistence credits to Qashqai tribal herdsmen during drought periods.

Family life continues as tribes move from mountains to coast.



Flocks of sheep graze at a stopping p

Bank Omran initiated the project with 20 million rials ($166,000) of bank funds. AID contributed 10 million rials ($133,000) in local currency generated from the sale of Food for Freedom commodities.

The project includes a main station located on a 750-acre site in Hosseinabad, near Shiraz, for 2,000 head of sheep and goats and two feed stores. There are also six sub-stations, each with a 1,000-ton feed store and a feeding pen which has a capacity for 200 sheep and goats.

Supplemental feed, a mixture of beet pulp (which was once mostly wasted), wheat bran, crushed barley, cottonseed cakes, bone powder, dried alfalfa and beet molasses, costs only three cents per day. The first experiment on 510 sheep showed that they gained an average of 25 pounds on the mixture. When the sheep remained at the feedlot for 90 days, they gained a total of 306,000 rials ($4,100) worth of additional meat.

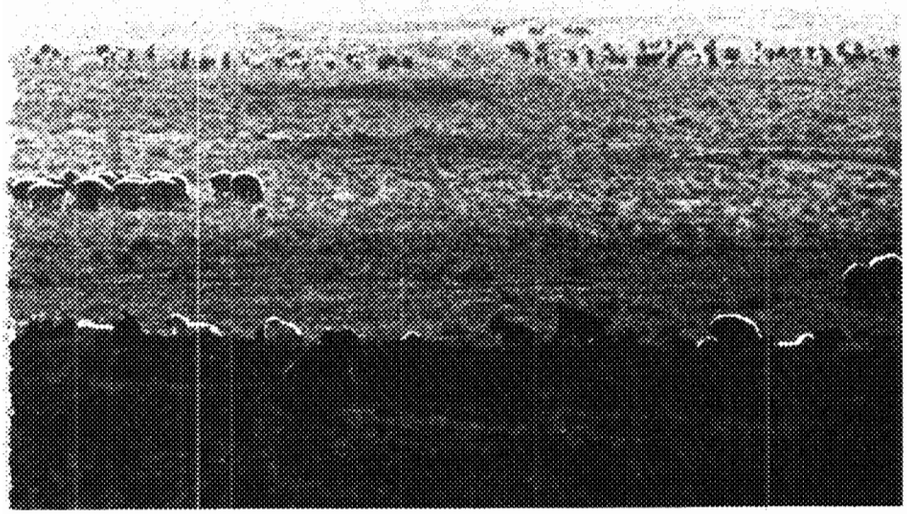
Qashqai tribesmen have responded enthusiastically to the project and have repaid loans conscientiously. In fact, the project has proved so successful that Bank Omran has increased the Qashqai cooperative credit funds to 100 million rials ($1.3 million). To have an equipped center right next to their range and to have ready access to feed, medicine and technicians has long been beyond the dreams of even the most optimistic herdsmen. Now that it is a reality, many of them are wasting no time taking advantage of it.

Iran's livestock industry is almost entirely dependent on tribal herds and flocks. While the numerous nomadic and semi-nomadic tribes constitute only one-tenth of Iran's population of 26 million, they own 32 million sheep and goats or about 70 percent of the livestock population. Not only do the tribes partially support millions of their settled compatriots, they also give rise to more than $50 million of annual exports in the form of animal by-products.

Efforts to develop a modern live-

Cooperatives help Iran's tribesmen join in the nation's economic life.

Children of nomadic Qashqai tribesm



place along the 300-mile migration route.

Native sheep grow large and healthy at co-op feedlot stations.

stock industry in Iran began in 1935 when the Heydarabad Livestock Station was established as a demonstration farm near Karaj, 35 miles west of Tehran. This and subsequent projects did not effectively reach livestock owners and tribal herdsmen because of a lack of facilities and know-how for coping with the tremendous problems involved, including production of feed, forage and pasture; proper handling of feed; utilization of feed which was being wasted; development of selective breeding programs at stations; and training of technicians.

More effective efforts for livestock development began in 1950 when the U.S. foreign aid program took an interest and during the next 17 years spent more than $5.5 million on projects directly and indirectly concerned with livestock.

AID livestock, marketing and credit advisers made large contributions to the development program by initiating pilot projects to demonstrate the benefits of improved breeding, feeding and management. However, these programs were aimed toward solving the problems of Iran's settled farmers.

Prior to 1967 when the Qashqai project began, there were no cooperatives organized with the members of any tribes in Iran. To obtain loans at 12 percent interest from the Agricultural Bank, tribal people were required to have a co-signer for their promissory notes. In most cases the co-signer would charge 50 percent of the loan.

Bank Omran organized 24 tribal cooperatives early in 1967 and loaned tribesmen 16 million rials ($213,000) the same year. All of the 2,600 tribesmen who joined the cooperatives in 1967 repaid their original loans in full in just seven months.

With 150,000 people making up the 16 sub-tribes and 142 clans within the sub-tribes of the Qashqai tribe, the cooperatives are not likely to be short of potential members. Encouraged by recent successes, tribal herdsmen are joining in growing numbers, and all Iran is bound to profit.

AID livestock advisor discusses low-cost feed with a Bank Omran official.

ren attend tent schools on the trail.

NUTRIENT STATUS OF SOILS IN LATIN AMERICA

Research in all phases of the War on Hunger is being given increasing emphasis by the Agency for International Development. This study of soils in Latin America, financed by AID and carried out by North Carolina State University, is especially significant in the effort to increase agricultural production in the developing nations.

Soil samples are now being collected in 14 nations throughout Latin America to help farmers take the guesswork out of choosing proper fertilizers.

New and improved varieties of food grains continue to gain deserved recognition throughout the world. But, as might be expected, they bring with them new problems to be faced by farmers who have planted their crops, tended and harvested them in the same way for centuries.

To produce the extraordinary yields of which they are capable, new varieties require careful fertilization, something most farmers in developing nations are reluctant to take on both for economic reasons and because they simply don't know what kind of fertilizer to use. In many cases correct information for either improved or traditional varieties has not been available from any source, and fertilizer has been applied through guesswork, if at all.

An Agency for International Development-sponsored soil fertility research project conducted by North Carolina State University is now helping farmers in most countries of Latin America eliminate the guesswork and find out what types and quanties of fertilizer they should use to produce the best crops.

Current Uses of Tests

Analysis of soil as a source of information to guide farmers in the use of fertilizers was rarely used in Latin America at the start of this project in 1963. Laboratory work was confined almost exclusively to research and to soil survey.

Today, 14 nations involved in the soil fertility project have at least one modern laboratory capable of analyzing more than 100 samples a day. Brazil has 17 laboratories and contemplates expanding that number to 30 within the next two years. More than 167,000 soil samples were tested in 1968, compared with 103,000 in 1967 and 30,000 in 1965 (see table).

Information obtained from the soil fertility evaluation project is basic to all crop production, and several impact programs in various countries are using it as such. In Peru the soil tests have been integrated into the impact potato program.

In Guatemala soil test information was used effectively in selecting fertilizers and lime for the new rice program.

In both Honduras and Nicaragua the Desarrural (Agriculture Extension Service) and the Agricultural Development Banks make extensive use of the soil laboratories services.

When pineapple yields decreased markedly in an area of southern Costa Rica, soil samples were collected and analyzed. Deficiencies of nitrogen, phosphorus, potassium, calcium, magesium and sulfur were discovered, and field trials confirmed the findings. Uncovering all of these deficiencies would have been a very difficult and time consumming task if only the usual field trial methods had been employed.

Within a few months after a laboratory was opened in Recife, Brazil, and acid soils were identified, two lime companies in the area had more business than they could handle. Until then the companies were having considerable

SOIL SAMPLES TESTED IN LATIN AMERICA

Country	Number of Samples Tested		
	1965	1967	1968
Brazil	20,000	50,000	100,000
Bolivia	0	0	1,200
Paraguay	500	1,500	3,500
Peru	1,900	9,000	11,000
Colombia	890	5,200	8,000
Venezuela	0	2,500	4,000
Ecuador	1,050	1,462	2,000
Panama	800	10,000	7,500
Costa Rica	250	3,000	4,500
Nicaragua	400	4,651	5,500
Honduras	1,572	3,159	3,000
El Salvador	1,700	6,000	8,000
Guatemala	1,500	6,803	9,000
	30,562	103,275	167,200

difficulty marketing their product. Other lime companies have entered the field during the past two years to help supply the demand.

Some nations are just discovering that fertilizer can pay off for them. Bolivia has used very little, if any, fertilizer, and generally the thought persisted that fertilizers would not pay for wheat in that country. During the 1967 and 1968 seasons, 17 field trials were conducted in which fertilizers were applied according to soil analyses. The returns obtained varied from $2 to $5 for every dollar invested in fertilizer.

Potential Economic Benefits

The fertilizer "input" in crop production constitutes almost half the total investment by farmers in the supply items—fertilizers, lime, seed and pesticides. If the greatest return is to be obtained from that input, fertilizers must be selected to meet specific deficiencies. The return on the money invested in fertilizer can greatly influence the economy of both the individual farmer and the country.

For example, where a country is investing $100 million in fertilizers, an increase of one or two dollars for each dollar invested by proper choice of materials would increase the economy of the country by $100 million or $200 million. Also, where fertilizers must be imported, the proper selection of materials is important to foreign exchange.

The individual farmer will be helped more and more as the number of soil samples increases and soil needs are pinpointed in ever-smaller areas. Where fertilizer recommendations are made on the basis of actual soil tests of a field, benefits may be double those where fertilizer recommendations are made on an average basis for a region.

A study of 112 farms in a central coastal region of Peru where fertilizers were applied to corn showed the following return:

	Return per Dollar Invested	
	In Nitrogen	In Phosphate
All 112 Farms	$1.88	$1.58
Soils low in phosphorus (soil test)	1.48	2.13
Soils high in phosphorus (soil test)	2.31	0.66

A similar study of eight years of field trials with fertilizers in the potato-growing Sierra region of Peru showed:

	Phosphate Applied	Return per Dollar Invested in Phosphate
	kg/hectare	
All fields	80	$4.09
	160	$2.85
Soils low in	80	$7.25
Phosphorus	160	$4.95
Soils high in	80	$0.91
Phosphorus	160	$0.75

To test the 100,000 hectares of corn and 250,000 hectares of potatoes in these two regions of Peru would have cost about $140 thousand, but the return from the information gained would have been nearly $14 million—a return of $100 for each dollar invested in soil analysis.

North Carolina State researchers have developed a three-phase method for correlating the results of soil tests with actual plant response to fertilizers. Soil samples are first analyzed and, based on the information obtained, potted plant studies are initiated to determine the critical level for each nutrient. The critical level is then tested in field trials.

New Concepts of Evaluation

Using this approach, a single critical level is established for phophorus, potassium, calcium, magnesium and some of the micronutrients. On soils testing below the critical level, the odds are high that a profitable response will be obtained from the use of a fertilizer containing that element (assuming that "normal" prices are paid for fertilizers used and for the crops produced).

Above the critical level is a maintenance range for fertilizer use. When the particular element tested is at a high level in the soil, return on the farmer's fertilizer investment is not likely to be great. By combining test results on critical

levels with available data on prices, a simple system of fertilizer recommendations can be devised.

The first step in the evaluation procedure is to obtain representative soil samples from the major cultivated soil types in the area being studied. After laboratory and potted plant studies are completed, the critical level is established by plotting the soil test values against the percentage yield of crops calculated from fertilized and unfertilized treatments. One of the major advantages of this approach is the ability to select fields for fertilizer trials at desired nutrient levels to test the critical level. This greatly improves the efficiency of field studies, including those designed to gain information on methods, rates and time of application of fertilizers.

The project has shown that soils with similar characteristics (texture, clay mineral content, exchange properties, organic matter, etc.) are sufficiently similar around the world that research information from one area can be readily applied to another area.

New Materials Developed

An effective soil fertility evaluation program must have laboratories with a high daily capacity and the ability to make accurate analyses. To accomplish this, the North Carolina team has introduced the multiple unit concept to the programs of cooperating Latin American countries. Many new pieces of apparatus and new techniques have been devised to increase the speed and accuracy of handling samples, and 30 laboratories in 14 countries are equipped with the new apparatus. With it, each laboratory can accurately analyze more than 100 samples a day.

Training materials relative to all phases of a soil fertility evaluation program have been developed to meet the needs of farmers, technicians and administrators. Maps are being drawn up for several Latin American countries to show the distribution of soils that are below or above the critical level for various nutrient elements.

A large number of local bulletins, circulars, magazine articles, report forms, charts, maps, etc. have been published within the countries in which the project operates. Most of these are either in Spanish or Portuguese. Several have been co-authored by project staff members, and most are the direct result of project activities.

Four seminars have been conducted at the North Carolina State campus in Raleigh with participants from 16 Latin American countries. Booklets were prepared on material discussed during the seminars and were printed in both Spanish and English.

Potted plant correlation studies are used to interpret the results of soil analysis and determine critical levels of various soil nutrients.

Three regional conferences have been conducted as part of the project: a symposium in Honduras on "Economic Impact of Soil and Plant Analyses Programs", a conference in connection with soil science meetings in Costa Rica, and a regional South American conference in Rio de Janeiro.

Country by Country Status

- *Brazil:* Seventeen laboratories have been equipped with Brazilian designed and made multiple unit apparatus in conjunction with the project. Currently Brazil is testing about 100,000 samples per year, but this is expected to increase markedly during 1969.

- *Peru:* A good plant analysis laboratory is operated in conjunction with a soils laboratory. A Perkin Elmer 303 and a Perkin Elmer 290 Atomic Absorption instruments are available and are used primarily for the determination of micronutrients and secondary elements in plant materials.

- *Bolivia:* Bolivia has recently completed a laboratory at Santa Cruz to test samples for farmers. In 1967-68 season emphasis was placed upon 17 field trials with fertilizers on wheat. The treatments were based on soil analyses, and samples were tested by the Peruvian laboratory. The outstanding results of the trials created a great deal of interest in improved varieties and the use of fertilizer.

- *Paraguay:* A sharp increase in the use of fertilizers can be attributed largely to the activities

Field trials are the final test. In these trials, farmers had excellent results by applying fertilizer according to soil analysis predictions.

of the soil testing program. Although both the number of samples tested and the tonnage of fertilizer used has increased markedly since 1965, there is still much to be accomplished to fulfill the needs of the country.

• *Ecuador:* Ecuador has two laboratories equipped with multiple unit apparatus. They are closely associated and, between them, tested more than 3,000 samples during 1968. Their capacity is several times this number. Correlation studies are being conducted by the Soils Department at the University in Quito and the first potted plant studies with phosphorus have just been completed. Field trials are also underway with fertilizers on rice.

• *Colombia:* Although analytical laboratories have been available, testing samples for farmers is a relatively new service in Colombia. The number of samples tested has grown from less than 1,000 during 1965 to about 8,000 during 1968. Considerable emphasis has been placed upon research, including correlation studies using various extractants.

• *Venezuela:* The program is just getting underway. Logistics of taking samples and getting them to the laboratory have still to be completed. A number of field and greenhouse studies have been conducted, and some of the information can be used for correlation of soil testing procedures.

• *Guatemala:* The number of samples tested has increased from about 1,500 in 1965 to more than 9,000 during 1968. Summaries have been made of the results using two-way tables for phosphorus and potassium. Maps have been prepared to show soil test results. The Peten region of northern Guatemala offers a large potential colonization area. Some soil classification was done by the soil testing project and a few hundred soil samples analyzed from the area to determine needs of the soils to make them suitable for cultivation.

• *El Salvador:* The Government soils laboratory at Santa Tecla is one of the best laboratories in Latin America and will compare favorably with laboratories around the world. Summaries have been prepared of soil test results on a two-way table basis. Considerable variation is noted in the soils of the country and in the fertilizer requirements.

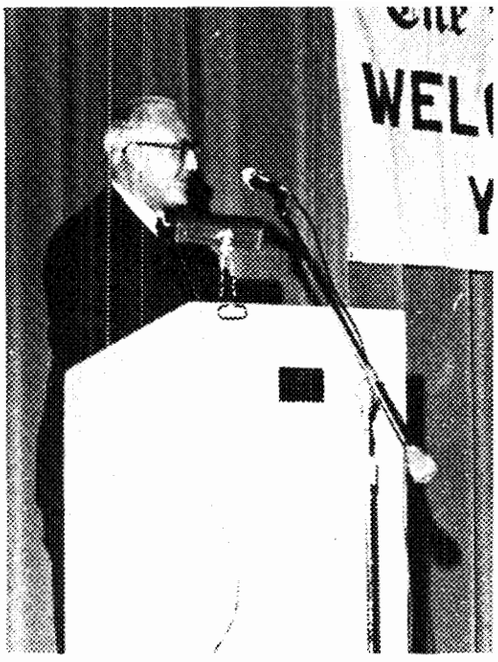
• *Honduras:* About 4,000 samples are now being tested for farmers annually. Information from the tests is being used by both the Extension Service and the Development Bank as a guide to increasing crop production through the proper use of fertilizers. Soil test summaries have been prepared on a two-way table basis and these readily show the large amount of variation in nutrient needs. Very little research has been conducted for correlation of procedures.

• *Nicaragua:* Very few samples were being tested in Nicaragua in 1964, but a laboratory at Managua can now adequately serve the country. Both the Extension Service and the banks are involved in the program and use the information gained. A small potted plant study was initiated and soil tests were used in connection with fertilizer demonstrations on farmers' fields. Little correlation data is available yet, but there is much interest in the program and it is expanding as fast as funds permit.

• *Costa Rica:* A relatively large increase in the number of samples tested has been made although little effort has been given to obtaining samples. A summary has been prepared of the results from about 5,000 samples on a regional basis within the country.

• *Panama:* Much of the effort of the soil testing laboratory at the start of the program was in analyzing samples for the Cadastral Survey. Data from the farmers' samples has been prepared for punching onto IBM cards, and a manual summary of soil test data was completed. A small potted plant study on acid soils was completed in 1967.

• *Mexico:* A number of field trials have been conducted by various research workers and organizations and some correlation studies have been made. However, a coordinate program is still lacking. There appears to be considerable interest in improving the program.



Robert M. Snyder (at podium) responds to questions about the War on Hunger during a series of community meetings sponsored by several New Jersey newspapers.

During the week of March 17-21 the State Department provided a team of four speakers for a series of community meetings in New Jersey. The series was sponsored by the local newspapers, The Record, The Morning Call, *and* The Sunday Record Call *of Hackensack and Paterson.*

The three State Department officers, Hume Horan, Ralph Jans and Richard Funkhouser, covered the specialized areas of Middle East, Red China and Vietnam, and Europe and NATO. Robert M. Snyder of the Research and Institutional Grants Staff represented the Agency for International Development, discussing the War on Hunger with college and high school students, members of service and civic clubs and general community audiences. Mr. Snyder is a veteran AID officer, having served as a mission director in Asia and Africa, among other posts. We asked him to note his impressions for War on Hunger.

UP IN NEW JERSEY

by Robert M. Snyder

My 15 presentations to approximately 7,000 people during the five days in New Jersey sought to draw a general picture of the catastrophe toward which we are headed unless a way is found to maintain a balance between food supplies and population numbers.

From experience, I pointed out that the first problem with which I was confronted 17 years ago on my first assignment overseas was "How Can Pakistan Solve Its Food Problem?" At that time (November 1952) the population of Pakistan was 75 million and the country was one million tons short of cereals needed to feed its people until the next harvest. By special legislation the U.S. Congress eased that problem. Today, 17 years later, Pakistan's population is 128 million, and they appear to be well on their way to producing sufficient food for themselves.

"This is the result not only of the great efforts of Pakistan itself but of our own AID program, the UN program, the World Bank assistance, and help from other friendly organizations and nations," I emphasized in my talks. "Without the greatly increased use of improved seeds, fertilizers and agricultural practices resulting from research and demonstration, these outstanding results would not have been possible."

I then explained the problem we face today, again using Pakistan as an example:

"How will that country be able to assure proper food for itself by the year 2000 if, as predicted, its population grows to something like 250 million by that time?" I described the assistance being given in seeking to reduce the population growth rate and increase the quantity and quality of food.

Despite the greater interest in the Middle East and Vietnam, there were, on several occasions, as many questions about population and food production problems as there were on other foreign policy issues.

The question was asked if our War on Hunger program abroad was not hindering our ability to feed the hungry in America. I pointed out that no food is shipped overseas if it is needed at home and that what we are really doing is to help foreign nations develop the capability to solve their own food problems. In the meantime we try to meet emergency situations by supplying the necessary food to tide them over the crisis.

I cited Malawi, where I lived for the last four years. AID helped plan, construct, equip, staff and train Malawians to operate a College of Agriculture, a Polytechnic Institute, a Statistical Service, a communication system and an extension service. The expertise for these projects was secured by contract with the University of Massachusetts, the University of Southern California, the Census Bureau of the Department of Commerce, and the University of Missouri, respectively. From the University of Syracuse we also provided several technicians under a middle-level manpower project. In most cases the technician was assigned to a regular Malawi Government position and that government paid his basic salary and provided housing. This was necessary because the nation of Malawi, as late as 1959, had only 35 college graduates, only 425 students in high school and only 25 students in college. By 1965 most of the 250 Peace Corps members in Malawi were filling almost two-thirds of the teaching positions in the secondary school system of that country.

"This technical assistance effort will be most helpful in developing technical capability to keep the food production and population in balance in that area," I said.

Audiences asked many questions: "Doesn't sending food to Biafra just prolong the war?" "Why does the U.S. sometimes destroy food and animals when there are so many hungry people needing food?" "Why do we send our money abroad when we have so much need for it among the poor at home?" "How does the U.S. propose to control the population growth rate?" "Are our efforts greatly hampered by Pope Paul's policy statement?" "Is it true that there is great waste and spoilage of our food sent overseas?"

In at least three meetings the question was asked, "Why do countries to which we give assistance not show more appreciation for it in their public statements?" Many people asked, "What is the significance of the miracle grains?"

An explanation of our research efforts in population and family planning and in increasing the quantity and quality of food seemed to interest many. The fact that 26 nations now have family planning programs and 30 more have voluntary training programs seemed convincing evidence that the population-food production problem was a real one and that the United States was being increasingly active in helping to find solutions to the problem. Many seemed surprised to hear that less than eight percent of AID dollars are spent abroad and in fact more than 93 percent are spent for goods and services in the United States to help developing countries.

The opportunity to meet with and discuss our program and problems with these groups was exhilarating. I am convinced there is a great need for more of this type of discussion with the American people.

Community Meetings on Foreign Policy are arranged to provide a team of foreign policy specialists to discuss issues with interested audiences in neighboring communities for a full working week. Travel and living expenses are paid by the State Department. For further information, please write:

Chief, Speakers and Community Meetings Division
Room 5823, Department of State
Washington, D.C. 20520

IN BRIEF

Food Situation in India

Sharp increases in India's food-grain production during 1967-68 and the prospects of a good harvest in 1968-69 have markedly improved the country's food situation, according to an April dispatch from the U.S. Agricultural Attache in New Delhi.

Wheat production for this year is forecast at 18 million tons, 1.4 million more than in 1967-68. Production of coarse grains (sorghum, corn, millet and barley) is estimated at 26 million tons, down 2.9 million from the 1967-68 harvest primarily because of dry weather in the major producing areas during August and September.

* * *

600th Doctor for Vietnam

The 600th U.S. physician to volunteer for civilian service in South Vietnam was honored by the Agency for International Development on April 3 in an informal reception at the State Department. He is Dr. Jack R. Bontley, 61, of Columbus, Ohio. With eight other doctor-volunteers he left for South Vietnam the next day.

Sponsored jointly by AID and the American Medical Association, the "Volunteer Physicians for Vietnam" program recruits U.S. doctors to serve the civilian population of the war-wracked Asian country for two months without pay. The program has been in effect since September 1965.

* * *

Turkey Gets a Boost

Turkey's capacity to feed itself will be enhanced when a giant development complex in the Adana Plain is completed in 1975. The multi-purpose Seyhan project, comprising flood control, power generation and irrigation works, will boost production of cereals, fruit, vegetables and cotton an estimated $15 million annually.

Recently the World Bank and its affiliate, the International Development Association, advanced $24 million in loans and credits to Turkey to help finance the second stage of the project. Both the bank and IDA have been associated with the big undertaking since it got under way nearly 20 years ago. They contributed almost $50 million in loans and credits toward financing the first stage, now near completion.

The Adana Plain, potentially one of Turkey's richest areas, is located in the south between the Taurus Mountains and the Mediterranean. Its farmers are in process of changing over from traditional to modern methods of agriculture.

* * *

Fertilizer Plant Receives Aid

A fertilizer complex in India with a planned nitrogen capacity greater than that of any existing plant in the country will receive the backing of the Agency for International Development under both loan and guaranty agreements.

The $70 million project planned by Zuari Agro Chemicals, Ltd.—a joint venture of U.S. Steel and one of the Birla group of Indian Industrial firms—will be financed principally by U.S. Steel and a syndicate of U.S. institutional lenders as well as AID, the International Finance Corporation and Indian interests.

In addition to applying almost the full range of incentives offered by the Agency's Office of Private Resources, including "extended risk guaranty" coverage on repayment of loans, AID will lend the Zuari firm more than $25 million in local currency to help finance local costs. This is the largest "Cooley" loan ever made to a single project. Funds for loans of this type are drawn from proceeds of sales of U.S. agricultural commodities under the Food for Freedom program.

Iran Receives Loan

The World Bank has lent Iran $30 million to help increase farm output in an area on the Dez River in Khuzestan province. Lying below the 642-foot high Mohammed Reza Shah Pahlavi Dam, the area embraces some 140,000 acres. It is cultivated by about 4,000 smallholders, whose farms will benefit by the irrigation works, drainage systems and other improvements now being installed.

Quotes

"The Green Revolution not only deflates fears of inevitable endemic famine. It also creates an opportunity to deal with the real food problems which the developing world faces: chronic undernourishment and malnutrition.

"In attacking malnutrition, the need is not for large sums of money. Means of fortifying foods at relatively small cost are available. The need is to put them to wider use. Much is being done to this end, by governments of the developing countries and by AID. But the fact remains, as AID's chief nutrition expert in India [Alan Berg] has pointed out, that governments which have discussed the need in principle have not faced up to the magnitude of their role. More, much more, needs to be done."

Henry Owen, *Director*
Foreign Policy Studies Program
Brookings Institute
April 10, 1969

* * *

"Birth control is making greatest headway among the liberal social reformers [in Latin America] . . . Their main worry about family planning is the way it is sometimes promoted by the United States. The more they are told, by U.S. Presidents and others, that five dollars invested in birth control is worth a hundred dollars invested in economic development, the more concerned they become that the bargain-loving United States will choose the lesser investment. In addition, they are afraid that both American and local conservatives will substitute Lippes loops for agrarian reform . . .

"The problem of Latin American population control is far from simple, surrounded as it is by ideological controversy, questions of religious faith, and suspicions of foreign political domination. In the light of these delicate considerations the internationalization of population control programs should be given the highest priority."

Dr. J. Mayone Stycos, *Director*
International Population Program
Cornell University
January, 1969

* * *

"There are more causes for the hunger and poverty in the large Asian and South American countries than their extra numbers of persons. Most of the developing nations suffer from serious factors that have little connection with population growth. These can be poor agriculture, absence of small industry, inflation of money, instability of the prices in their one-crop economy, a lack of markets for their goods, the monetary policies of the larger nations, political struggles, military expenses and the despair brought on by centuries of deep disturbances . . .

"The aim of a population program is to speed up economic growth, to improve health and education of a nation and to insure greater employment. But a population program will not succeed in any area that is backward and negligent toward the reform of its economic structures . . .

"The developing nations are particularly sensitive to foreign population programs . . . The prosperous nations that encourage population programs without equal or perhaps even more intense attention to the many other problems of underdevelopment invite grave suspicion of motives."

Rev. Albert J. Nevins, M.M.
Editor, Maryknoll
Publication of the
Maryknoll Fathers
April, 1969

In Print

Recent Publications of Interest

Education for the Revolutionary World of the Future. Published by the Center for International Programs and Comparative Studies of the New York State Education Department, Albany, N.Y. 12224, 24 pp. Available on request.

This recently issued pamphlet offers guidelines for New York schools, colleges and universities and for the State Education Department in meeting the challenges of rapidly changing societies.

Stating that formal education in the United States is a cultural and social leveler which fails to take into consideration the wide diversity of the world's nations and peoples, the booklet lists a broad range of problems in which education should become involved. To effect needed changes, the pamphlet suggests, it will be just as important and perhaps more difficult to "educate all Americans to a more realistic understanding of the culturally and socially different groups at home and abroad, particularly the disadvantaged" than to improve educational opportunity and quality for the disadvantaged minority in American society.

The booklet offers a number of suggestions for educating youth for the future, among them:

- Total language learning situations in language camps or even abroad for large numbers of students in the middle grades.
- Strengthened "non-white studies" throughout the school curriculum.
- Broadly based creative expression courses, such as black arts in America, Indian music or contemporary Latin American architecture.

"Our objective," the pamphlet states in closing, "should be no less than to provide every student in our schools . . . with a real understanding of the social and cultural diversity of the modern world."

The View From the Barrio by Lisa Redfield Peattie. Published by The University of Michigan Press, 144 pages, $6.95.

Nearly all the problems of a developing society exist in clearly observable form in the barrio of La Laja, a neighborhood in the planned city of Ciudad Guayana in Venezuela. The author had been a part of the planning. She returned to live for two and a half years in the barrio where she was able to report, analyze and participate in the life of the community.

The exhilarating successes and frustrating failures of programs and projects are told in realistic terms. "The sewer controversy," for example, became not just a case of engineering bungling or of puzzled anger on the part of the housewives and bathers who feared pollution of the Orinoco River. It was also a case of breakdown in communications. The bureaucracy was unable to talk to the people, and vice versa.

"Self-help" is not merely a matter of organizing the people's desires and talents either. "La Laja," the author writes, "did not build a water line, a baseball field, and a center for giving children free breakfasts just 'by its own efforts'. But by defining these activities as 'the community solving its own problems' the organizing leaders in each case were able to mobilize enough group pressure to establish new channels of connection with the centers of power outside the community, and new skills in making such connections."

Such material and the lucid way it is presented make this volume a valuable and instructive handbook on development.

—*J.E.R.*

* * *

Research on Agricultural Development in Central America, by Heraclio A. Lombardo. Published by The Agricultural Development Council, Inc., New York, 1969, 72 pages. Available on request from the ADC, 630 Fifth Avenue, New York, N.Y. 10020.

This monograph, the fifth in a series sponsored by the American Universities Research Program of the Agricultural Development Council, examines research in Central America (Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama). Completed studies are classified by topic, and more than two-fifths of the items fall into "farm management and farm organization" and "land and water use" classifications, with heavy emphasis on cost of production studies and on land tenure, land reform and settlement. One-third of the projects were dedicated to "economic and agricultural development" and to "supply and demand for agricultural commodities", with the majority discussing agricultural development or industry or crop studies. The booklet lists a complete bibliography of these studies. It also offers a list of priorities for future research in Latin America.

DRASTIC CHANGES—*from p. 8*

"Essentially, two objectives must be accomplished: substantial improvement in understanding the complexities of socio-cultural change in Asia, Africa and Latin America on the part of those responsible for allocating technical assistance funds; and reorganization of the administration of the U.S. technical assistance effort so as to reduce the role of U.S. government officials and stimulate the initiative and self-responsibility of the recipient countries. We believe that these objectives can best be achieved by separating technical assistance from the other types of U.S. aid and removing direct responsibility for it from the U.S. government."

Institute Recommended

In the light of these judgments, NPA recommended the establishment of an autonomous Technical Assistance and Development Research Institute. It would be located in Washington and financed jointly by the U.S. government and by contributions from private organizations, especially foundations. As envisaged by NPA, the Institute would have four major functions. It would:

(1) Act as a facilitating and referral agency for those overseas seeking technical assistance from institutions and individuals in the United States.

(2) Encourage the formation of special organizations in the United States to provide technical assistance under contract to recipient countries.

(3) Conduct "in house" research and make grants for research projects to be undertaken by universities and private organizations both in the United States and in the recipient countries.

(4) Finance technical assistance at the request of the governments and appropriate private institutions of the recipient countries.

The Institute would be chartered by act of Congress as an autonomous, non-profit, tax-free institution, like the National Academy of Sciences, for an initial period of 10 years. NPA said that "its negotiating, contracting and auditing procedures should be modeled on those of the large private foundations and not of AID."

The Institute's directors would be appointed by the President for staggered terms and would include the AID Administrator and other appropriate government officials; representatives of the foundation and other private contributors, and professionals from the academic and technological disciplines related to the development process.

"It is clear," said NPA "that the bulk of the Institute's resources would have to be provided by the U.S. government."

Similarly, NPA recommended that the functions now carried out by AID's Office of Private Resources also be turned over to an autonomous corporation. It would be wholly owned by private investors and chartered by an act of Congress. A minority of its directors would be appointed by the President; among them would be the AID Administrator and other appropriate government officials.

SUGAR BABIES sweeten lives of Vietnamese

When the "Year of the Monkey" made its official debut in Vietnam at Tet, the New Year, Vietnamese welcomed it with firecrackers, gifts, new clothing—and Sugar Baby watermelons.

Special Tet melon markets were set up in Cholon and Saigon. Whole areas of sidewalk were roped off, and farmers pedalled cartload after cartload of Sugar Babies through the town to stack them in huge piles on beds of straw.

From the Demilitarized Zone to the Mekong Delta, the round, dark green variety of melon introduced to Vietnam seven years ago by the Agency for International Development has become a prized gift at Tet and an even greater prize for the growers.

The saga of the Sugar Babies in Vietnam began in the fall of 1962 when Joseph Hamilton, a crop advisor for AID, brought about 30 different varieties of melon seeds to Vietnam for testing.

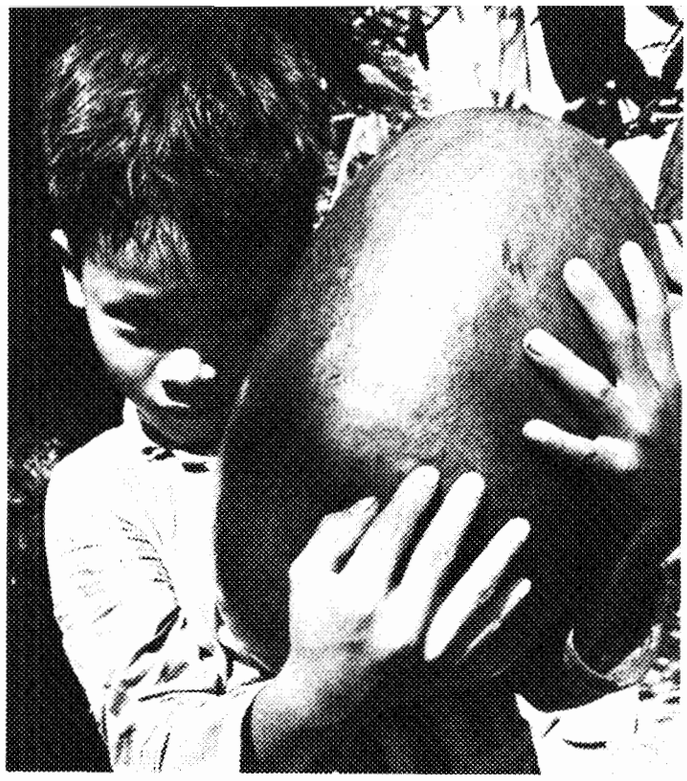
A thousand plants were tested in three provinces in the Saigon area that year. The following winter there were perhaps 15 acres of the new varieties, but farmers were already showing a preference for the Sugar Babies because of the success they were having in marketing them.

During the winter of 1967-68, in five of the leading melon-growing provinces of Vietnam, there were more than 3,700 acres of land in melon production, and the national total was well over 5,000 acres. That year An Giang province alone grew melons on 500 acres of land. This year more than 1,300 acres are devoted to melon production in the province.

A few years ago, Sugar Babies were for sale only in the larger markets in Saigon and Cholon, and a good-sized melon might cost as much as the equivalent of $4.25. Prices now range from 85 cents to $2.50, depending on size, and the melons can be found everywhere.

Despite the lower prices for the consumer, they are still an amazing profit-making crop for the Vietnamese farmer. The average return to the farmer is about $800 per acre. Although production costs are up, the farmers make sizeable profits on a crop that takes only 85 days to grow.

The profits are going back into increased agricultural production. Every farmer queried said that he would be putting part of his melon profits into his farm in the form of pumps, sprayers, seed, fertilizer, motorized tillers, pesticides, fruit trees or labor to plant new crops. Many planned improvements to their homes, while others said they would buy water buffalo or make payments toward the purchase of land which they now rent.



A young resident of Con Son Island displays a watermelon grown by his father on land considered worthless just six years ago.

The impact of the melons on the fortunes of Vietnamese farmers in some cases has been spectacular. For example, the inhabitants of Con Son Island in the Mekong River near Can Tho formerly were river dwellers living in sampans and barges along the Mekong. In 1963 they settled on the island, which was little more than a mud flat, and built it up with dikes so that they could grow corn and cucumbers.

The next year Vuong Van Ty, the agriculture extension chief for Phong Dinh province brought 15 Sugar Baby plants to Con Son and showed the farmers how to cultivate the melons. Two years ago close to half the island's 340 acres of land were planted in melons, and last year the profitable vines covered more than two-thirds of the arable land.

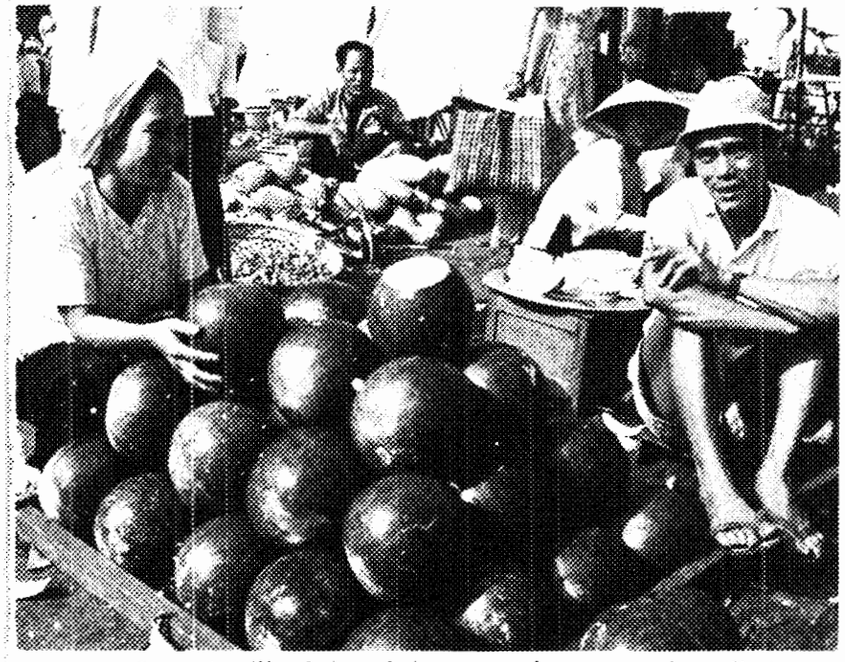
One group of 40 families brought 60 truckloads (72,000 melons) to Saigon to sell so that they would not lose any of their profits to middlemen, and the island's farmers are well on their way to becoming some of the wealthier inhabitants of the Mekong.

Having gained the farmers' confidence with melons, Ty, who had since been to Taiwan on a participant training grant sponsored by AID, taught them other intensive methods of cultivation practiced in Taiwan. This year's melon crop will be followed by soybeans, mung beans or corn.

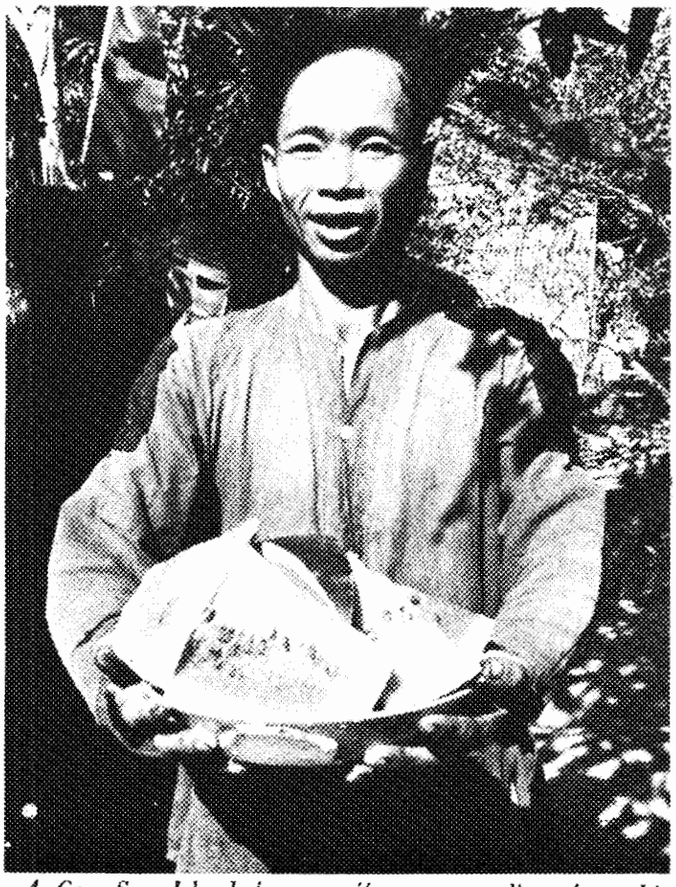
The farmers are also trying new techniques, such as planting cucumbers and gourds on bamboo trellises built out over irrigation ditches and growing green beans along the edges of the same ditches. Some are growing as many as five crops a year.

"I get a very warm welcome here," Ty observed to a visitor recently. And so do America's Sugar Baby watermelons.

The Cholon market is a busy place when delicious Sugar Baby watermelons are for sale. The Sugar Baby was one of 30 varieties tested in Vietnam.



Some families bring their own melons to market, eliminating the middleman and taking home higher profits to build up their farms and homes.



A Con Son Island farmer offers guests slices from his new Sugar Baby crop. The highly profitable melons are easy to market in Vietnam.

Watermelons, watermelons everywhere and plenty of them to eat. These Vietnamese children have already branded their favorite Sugar Babies.

DEPARTMENT OF STATE
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Office of The War on Hunger
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