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**AID-UNIVERSITY
RURAL DEVELOPMENT CONTRACTS
1951-1966**

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June, 1968

**One Portion of the Final Report of the
CIC-AID Rural Development Research Project,
Contract No. AID/csd-840**

ACKNOWLEDGMENT

This booklet represents the efforts of a number of persons over a period of several months.

The greatest debt is to the 35 U.S. universities with rural development contracts who supplied file materials. These were reviewed intensively and formed the basis for the information contained in the descriptions. Preliminary drafts of each description were submitted to the U.S. universities for their approval and suggestions for change. Response was excellent and the changes that were suggested led to substantial improvement in this report. Dr. Ira L. Baldwin was particularly helpful in obtaining both file materials and suggestions for improvements in the descriptions from university personnel.

Dr. Ralph W. Cummings, Jr., conceived the idea of project descriptions summarizing key factual information about the AID-university rural development contracts, drew up the initial outline of items to be included in such descriptions, and prepared preliminary draft descriptions on a number of contracts.

The four overseas research analysts for the CIC-AID Rural Development Research Project kindly reviewed preliminary drafts of the descriptions. These persons included: J. A. Rigney, North Carolina State University; R. W. Roskelley, Utah State University; Philip F. Warnken, University of Missouri; and William A. Wayt, Ohio State University.

Special thanks are due to the persons who assisted in assembling data and typing: Charles Powell, Mrs. Vivian Alsip, and Mrs. Hazel Brooks.

INTRODUCTION

University Involvement in Contracts

Between 1951 and 1966, 35 U.S. land grant universities undertook 68 rural development contracts in 39 countries with the Agency for International Development. Programs active in mid-1966 involved 24 U.S. universities with 43 contracts in 24 countries.

Table 1 (page 2) summarizes the types of programs carried out through these university contracts. Most of them focus on institution building in the broad sense of assisting one or more host country agricultural educational, research, or extension institutions to develop a suitable philosophy and organization, adequate resources and facilities, a sound program, and a desire to assist in the country's agricultural development. In only four of the 68 contracts has there been an "action program" component where the immediate goal is an increase in agricultural production. Even these action programs imply the need to develop host country institutions or programs which will continue to carry out the contract activities.

Each of these contracts has generally included some combination of three principal inputs: (1) U.S. university staff members who serve overseas as advisors to the host institution, (2) host institution staff members who undertake study programs in the U.S., usually termed participant training, and (3) commodity assistance to the host institution. Where participant training or commodity assistance are not provided through contract funds, they may be financed directly by the USAID mission as a part of the overall project.

Contracts have been widely distributed among land grant universities. Six universities have held three or more contracts apiece for a total of 25 contracts, while 29 other universities divided the remaining 43 contracts.

Table 2 (pages 5 to 9) gives a graphic representation of contract duration as of mid-1966 in each of the four principal world regions receiving AID technical assistance. In mid-1966, all contracts in Africa were active, while all contracts in the Far East region had expired. In Latin America, two-thirds of the contracts were active, all but two of which were four years old or less. The Near East-South Asia region contains the greatest number of long-term contracts of any region. Two-thirds of the region's contracts were still active, all of which were nine years old or more.

Project Descriptions

The need for concise summaries of the principal features of these rural development contracts became apparent early in the investigations by the CIC-AID Rural Development Research Project. Few university administrators

TABLE 1. AID/University Rural Development Projects by Type of Development Objectives and Regions, 1951-1966

<u>Project Development Objectives</u>	<u>Region</u>				
	<u>Total</u>	<u>Africa</u>	<u>Far East</u>	<u>Latin America</u>	<u>Near East-South Asia</u>
	(Number of projects)				
Degree institution	40	5	11	12	12
Degree institution; technical agricultural training; primary school	1	1	--	--	--
Degree institution and ministry research and/or extension	4	--	--	3	1
Degree institution; ministry research and/or extension; action program ^{a/}	1	--	--	1	--
Degree institution; ministry research and/or extension; and secondary agricultural training	3	1	--	1	1
Ministry secondary and/or technical agricultural training	6	5	1	--	--
Ministry research and/or extension	6	1	--	3	2
Ministry research and/or extension and secondary and/or technical agricultural training	4	3	--	1	--
Ministry action program	2	--	--	2	--
Ministry action and research and extension program	<u>1</u>	<u>--</u>	<u>--</u>	<u>1</u>	<u>--</u>
TOTAL	68	16	12	24	16

^{a/}"Action" program has a goal of immediate increase in agricultural production.

or AID personnel are conversant with the world-wide range and types of rural development contracts undertaken since 1951. Brief descriptions of each rural development contract studied by the CIC-AID Project could serve as useful reference material for AID and U.S. university officials alike.

These project descriptions are intended as summaries of the basic distinguishing features of each project, and not as evaluations of progress made. The principal source of data for the descriptions was the project file materials submitted by each contracting U.S. university to the CIC-AID Rural Development Research Project. The file materials were supplemented where necessary by reports from the CIC-AID Overseas Research Analyst in each region and by unclassified AID documents relevant to the projects. In addition, each U.S. university reviewed the draft descriptions of its projects for errors and omissions.

To the extent that information was available, the following items are included in each project description:

- (1) Name of the contracting U.S. university, name of the host country, name and location of the host institution(s) on which the project has been focused, the type of project (see Table 1), and the project beginning and termination dates.
- (2) A summary of the principal contract objectives and any major changes in objectives, and a brief statement describing the host institution(s).
- (3) A discussion of project developments in the following areas:
 - (a) the principal project focus in terms of instruction, research, or extension activities, subject fields of particular concentration, and unusual features of the project operation;
 - (b) the numbers and subject fields of U.S. university staff members serving overseas, the use of short-term consultants, and performance in advisory or operational roles;
 - (c) the numbers, subject fields, and types of training programs of contract-sponsored participants;
 - (d) the total contract budget up through the latest firm budget year for which information was available;
 - (e) the contract supplies and equipment component; and
 - (f) substantial outside support to the host institution in addition to AID contract support, through such agencies as the foundations, other foreign governments, or international organizations.

These project descriptions reflect project developments through fiscal year 1966. More current information was included for some projects but no attempt was made to update project information to 1968. It is hoped that this publication will be revised annually or biennially to serve as a reference for those interested in university participation in rural technical assistance contract programs.

TABLE 2. AID-U.S. University Rural Development Contract Duration

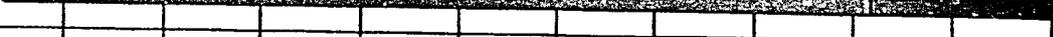
Contract	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="width: 15px; height: 10px; background-color: black; margin-right: 5px;"></div> Active project; December, 1966 <div style="width: 15px; height: 10px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); margin-right: 5px;"></div> Expired project; December, 1966 </div>															
	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
AFRICA																
<u>East Africa Regional</u> Colorado State West Virginia																
<u>Ethiopia</u> Oklahoma State																
<u>Kenya</u> West Virginia West Virginia																
<u>Malawi</u> Massachusetts																
<u>Nigeria</u> Colorado State Kansas State Michigan State Wisconsin																
<u>Sierra Leone</u> Illinois																
<u>Somali Republic</u> Wyoming																
<u>Tanzania</u> West Virginia																

<u>Contract</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>
AFRICA (continued)																
<u>Tunisia</u> Texas A & M																
<u>Uganda</u> West Virginia																
<u>Zambia</u> Connecticut																
FAR EAST																
<u>Cambodia</u> Georgia																
<u>Ceylon</u> Texas A & M																
<u>Republic of China</u> California Michigan State																
<u>Indonesia</u> Kentucky																
<u>Japan</u> Massachusetts																
<u>Korea</u> Minnesota																
<u>Philippines</u> Cornell (agr.) Cornell (forestry) State U. of New York																

 Active project; December, 1966
 Expired project; December, 1966

Contract	<div style="text-align: right;"> Active project; December, 1966 Expired project; December, 1966 </div>																
	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	
FAR EAST (continued)																	
Thailand																	
Hawaii																	
Oregon State				Expired project; December, 1966									Active project; December, 1966				
LATIN AMERICA																	
Argentina																	
Michigan State																	
Texas A & M															Active project; December, 1966		
Bolivia																	
Utah State																Active project; December, 1966	
Brazil																	
Arizona																	
Mississippi State																Active project; December, 1966	
Ohio State																Active project; December, 1966	
Purdue																Active project; December, 1966	
Wisconsin	Active project; December, 1966																
Chile																	
California				Expired project; December, 1966													
Colombia																	
Michigan State	Expired project; December, 1966																
Nebraska																Active project; December, 1966	
Costa Rica																	
Florida				Expired project; December, 1966													
Florida																Active project; December, 1966	

<u>Contract</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	
LATIN AMERICA (continued)																	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 20px; height: 10px; background-color: black; border: 1px solid black;"></div> Active project; December, 1966 <div style="width: 20px; height: 10px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); border: 1px solid black;"></div> Expired project; December, 1966 </div>
<u>Dominican Republic</u> Texas A & M																	█
<u>Ecuador</u> Idaho				█													
<u>Guatemala</u> Kentucky Oklahoma State							█										█
<u>Mexico</u> Texas A & M				█													
<u>Panama</u> Arkansas	█																
<u>Paraguay</u> Montana State New Mexico State										█							█
<u>Peru</u> Iowa State N. Carolina State																	█
<u>Uruguay</u> Iowa State																	█
NEAR EAST- SOUTH ASIA																	
<u>Afghanistan</u> Wyoming				█													█

Contract	<div style="text-align: right;">  Active project; December, 1966  Expired project; December, 1966 </div>																
	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	
NEAR EAST-SOUTH ASIA (continued)																	
India																	
Illinois (U.P.)																	
Illinois (M.P.)																	
Kansas State																	
Missouri																	
Ohio State (Punjab)																	
Ohio State (Rajas.)																	
Tennessee																	
Iran																	
Utah State																	
Iraq																	
Arizona																	
Jordan																	
Illinois																	
Montana State																	
Pakistan																	
Colorado State																	
Texas A & M																	
Washington State																	
Turkey																	
Nebraska																	

UNIVERSITY OF ARIZONA

Host Country: Iraq
Host Institution: Iraq College of Agriculture, located at Abu Ghraib
Type of Project: Degree-granting institution (college of agriculture)
Effective Dates of Project: November 3, 1952, to June 30, 1959

Project Objectives:

The general objective was to assist in the development of staff and facilities of the Iraq College of Agriculture, a constituent college of the University of Baghdad. The College of Agriculture had been established in 1950 as a two-year institution of advanced agriculture in conjunction with an existing three-year secondary school of agriculture. The beginning of the University of Arizona's efforts coincided with the upgrading of the College of Agriculture to a four-year degree-granting institution.

Project Development:

Emphasis was placed on assisting with the overall administrative development of the College and its programs of instruction and research. Contract team members participated in administration, teaching, research, and preparation of extension publications. The College was departmentalized and the curriculum was intensified and extended. By 1958-1959 the College had an enrollment of 298 students and a staff of 57 members; 242 students had been graduated with the B.S. degree by the end of 1959.

Fifteen University of Arizona long-term staff members served on the contract. There were short-term consultants in general and library administration. The number of long-term positions authorized and filled increased from four to seven during the life of the contract. The agricultural fields represented were animal and dairy science, crops, soils, agricultural economics, farm mechanics and agricultural engineering, and agricultural education.

Two participants studied at the University of Arizona and received M.S. degrees in public administration and mathematics.

Expenditures during the contract life were \$742,436 with heavy emphasis on providing U.S. personnel. Less than \$9,000 was spent for books, equipment and supplies, primarily for items to assist the team members in performance of their duties.

During 1958, ICA, FAO, and UNESCO each provided one staff member to the College.

The Iraqi revolution of July 14, 1958, and conditions following presented the College of Agriculture and Arizona contract team with a number of difficulties. The contract staff was reduced from seven to four in early 1959 with the four staff members completing the 1958-59 college year by remaining on duty until June 30, 1959.

UNIVERSITY OF ARIZONA

Host Country: Brazil

Host Institution: College of Agriculture, Institute of Rural Technology, and Institute of Animal Science, University of Ceara, located at Fortaleza in the State of Ceara

Type of Project: Degree-granting institution (college of agriculture)

Effective Dates of Project: October 30, 1963, to date

Project Objectives:

Arizona was to assist in development of a Land Grant College type of philosophy in instruction, research and extension at the College of Agriculture, University of Ceara. In addition, the team was to assist the Secretariat of Agriculture with development, coordination and execution of state-wide programs of extension, research, and training in the States of Ceara and Piaui.

Specifically, attention was to be given to advice and assistance in improved methods of graduate research and extension in the fields of land use and management, water management, regional crops of economic importance, food and fiber technology, livestock production, forage and feed crops, agricultural machinery, agricultural economics, agricultural extension, horticulture, and range management. Team members were to assist in teaching courses and to conduct specialized courses, to aid in improved curricula, courses, and teaching methods, and to assist in organization, administration, and approach to research project development.

Project Development:

Arizona team members have advised on curriculum development, teaching methods, and development of laboratory sections in their respective subject fields. Equipment for laboratories and research projects, especially in the soils-chemistry, physics, and animal nutrition laboratories, has been installed and put to use.

By 1966, 17 long-term staff members had served in Brazil in the fields of water resources, soils, forage and range management, horticulture, agricultural economics, field crops, agricultural engineering, livestock, research administration, agricultural extension, and college administration. Two short-term consultants in soils and agronomy had been used.

Seven participants had begun participant training by January, 1966, four working toward a bachelor's degree in home economics and three working toward a masters degree in poultry science, botany, and statistics.

The contract budget from October 23, 1963, to November 1, 1965, was \$476,791, while the budget from November 1, 1965, to November 1, 1966, was \$535,262. Provision for books, laboratory and research equipment is included.

UNIVERSITY OF ARKANSAS

Host Country: Panama

Host Institutions: (1) National Institute of Agriculture of Panama,
located at Divisa
(2) Extension Service, located at Panama City

Type of Project: Government ministry (agricultural secondary school;
research; and extension)

Effective Dates
of Project: May 17, 1951 - June 30, 1957

Project Objectives:

The University of Arkansas was to assist the Government of Panama in developing, operating, and evaluating programs of agricultural instruction, research and extension. More specifically, they were to develop a program of resident teaching in agriculture at the National Institute of Agriculture's vocational agricultural school, to develop an agricultural research program to be headquartered at the National Institute of Agriculture, and to develop a program of agricultural extension designed to improve agricultural conditions and to increase productivity in Panama. An Agricultural Extension Service program was authorized in 1953.

Project Development:

For the first two years, the Arkansas team members were the only USAID agricultural representatives in Panama.

During the period of the Arkansas contract, the junior high level vocational agriculture school was upgraded to a senior high school, with a curriculum of both agricultural subjects and general academic studies. Teaching methods were improved. Graduates of the new school were eligible for admission to colleges and universities.

Research efforts of the Arkansas team were concentrated on assisting in the development of an experiment station and on the training of Panamanian technicians and research assistants. The team also consulted on the administration of research projects and the management of the experiment station farm. Most of the research work involved comparative studies to adapt known research results to Panamanian conditions, but some basic research was also done.

The Extension Service began in 1953, and by 1956 some 14 extension agencies had been established. Arkansas team members worked with organization of youth clubs and development of work plans in each of the extension agencies.

Arkansas team members functioned in an advisory capacity in assisting, guiding, and training Panamanian personnel to administer and carry forward

the programs. Altogether, 19 long-term staff members served in the areas of extension administration, research and teaching administration, agricultural extension and information, agronomy, agricultural engineering, home economics, vocational agriculture, plant pathology, animal science, and horticulture. Five short-term consultants served in the areas of education, entomology, plant pathology, and marketing.

The contract authorized a budget total of \$975,960, including only nominal amounts for U.S. participant training and commodities.

UNIVERSITY OF CALIFORNIA

Host Country: Republic of China (Taiwan)

Host Institution: College of Agriculture, National Taiwan University, located at Taipei

Type of Project: Degree-granting institution (college of agriculture)

Effective Dates of Project: October 27, 1954, to October 26, 1957

Project Objectives:

The contract was to provide assistance in improving and strengthening the agricultural educational, research and extension programs of National Taiwan University. More specifically, the team was to aid in teaching, research and extension programs, to aid in development of technical consultative services, to advise in expansion of facilities, to aid in planning and conducting special conferences and training programs, to advise on selection and use of books and equipment, to aid in training staff and developing facilities to prepare and disseminate educational materials, and to assist in developing professional associations and publications.

Project Development:

California staff members worked in an advisory capacity primarily in the areas of teaching and research. They reviewed and suggested improvements in teaching methods and courses, the research program, and the library facilities, through seminars, demonstration lectures, research projects, variety trials, assistance to the University Farm, and consultation with outside government and private agencies. Seven long-term California staff members served in the areas of farm management, agronomy, vegetable crops, horticulture, and forestry. In addition, two four-month consultants in soils and plant nutrition and in veterinary science were utilized.

Eight participants were sent to the U.S. for one year's training (one for graduate training) in the areas of agricultural engineering, animal husbandry, agronomy, forestry, subtropical horticulture, food technology, and entomology.

The contract expenditures amounted to \$267,351. Some equipment for teaching and research and some books were purchased by the contract.

UNIVERSITY OF CALIFORNIA

Host Country: Chile

Host Institution: Departamento Tecnico Inter-Americano de Cooperacion Agricola (DTICA), headquartered at Santiago

Type of Project: Degree-granting institution (college of agriculture); and government ministry (research, extension)

Effective Dates of Project: December 21, 1954, to 1957

Project Objectives:

The contract was broadly conceived to aid Chilean agriculture in instruction, research and extension, through advice to Ministry of Agriculture agencies and to one or more Chilean colleges of agriculture. Specifically, California staff members were authorized to conduct seminars, to advise on course and curricula improvements if so requested by a college of agriculture, to aid in development of research projects and in preparation and dissemination of research results, and to aid in the training of research and extension workers.

Project Development:

California staff members conducted seminars and short courses, and held conferences for Ministry of Agriculture employees, and for students and staff members of the University of Chile, the University of Concepcion, and the Catholic University. These were aimed primarily at staff training. Assistance was also given in research programs. The University of Concepcion requested advice on the organization of its new College of Agriculture located at Concepcion and Chillan.

Five staff members served as advisors for one year each, three of whom were in the fields of irrigation, extension and farm management, and soils and plant nutrition (fields of the other two are unknown). One short-term consultant in agricultural education was used. A three-man team was authorized.

Two participants did graduate work at the University of California, Davis.

A total of \$150,000 was budgeted for the contract, including a minimal amount for equipment.

COLORADO STATE UNIVERSITY

Host Country: Pakistan

Host Institution: University of Peshawar, located at Peshawar in West Pakistan

Type of Project: Degree-granting institution (colleges of agriculture, engineering, home economics, teacher education, and basic sciences)

Effective Dates of Project: August 16, 1954, to September 30, 1965

Project Objectives:

The major objective was to provide assistance in a broad range of subjects to the University of Peshawar which had been established in 1950 as a residential teaching and affiliating university. In 1954, there were four constituent colleges on the Peshawar campus--engineering, Islamia College (general), law, and education. Colorado State was to assist the University of Peshawar in developing and strengthening research, teaching, and extension programs in the fields of agriculture, engineering, home economics, teacher education, and basic science.

Project Development:

Beginning in 1954, the primary emphasis was in engineering with one Colorado State University agricultural economist being the only agriculturist in the initial contract team of four members. The assistance in agriculture was increased in late 1955 and personnel in home economics and library science were also provided at this time.

By 1964, there were eight constituent colleges at the University of Peshawar, with the addition of Khyber Medical College in 1955, the College of Agriculture in 1957, and Colleges of Home Economics and Commerce in 1962. In 1964, enrollment in the Colleges of Agriculture and Home Economics was 501 out of a total enrollment of 4,200.

Although team members functioned as advisors for the most part, some assumed operational roles until counterparts could be appointed. Colorado State University team members served for a time as Principals of the Agricultural and Home Economics Colleges. Each advisor taught at least one course for demonstration purposes.

Contract positions authorized averaged six per year, with a high of eleven in 1956. Eighteen staff members served on long-term assignments between 1954 and 1965, with five of these serving for periods of four to six years. There were five short-term consultants in farm mechanics, engineering, and home economics. The agricultural fields represented by the long-term personnel were agricultural economics, farm mechanics, animal science, soil science, and agricultural extension.

Forty-six participants completed degrees in the 1955-1963 period, six at the bachelors level, 35 at the masters level, and one doctoral degree. There were five or more participants in home economics, engineering, crops and soils, animal and poultry science, and education with lesser numbers in nine additional fields.

The actual expenditures during the life of the contract were \$1,765,138.

The Ford Foundation assisted by supplying funds for the new building for the College of Agriculture.

COLORADO STATE UNIVERSITY

Host Country: Nigeria

Host Institutions: (1) Agricultural Research and Training Station located at Umudike, and
(2) the Agriculture and Veterinary Divisions, Ministry of Agriculture, located at Enugu (Eastern Region of Nigeria)

Type of Project: Government Ministry (agricultural technical school, research, and extension)

Effective Dates of Project: November 24, 1964, to 1967

Project Objectives:

The contract's general objectives were to assist in development of increased Ministry competence in agricultural research, teaching and extension, and in development of more effective coordination between the research and extension programs of the Ministry of Agriculture, Eastern Region. More specifically, Colorado State was (a) to advise in the administration and coordination of research, teaching, and extension activities, (b) to assist in developing a research program for Eastern Nigeria directed toward solution of pressing agricultural production problems in cooperation with the federal government and the University of Nigeria, (c) to assist in developing and upgrading the training program for sub-professional agricultural assistants and agricultural superintendents at the Agricultural Research and Training Station, and (d) to assist in the overall planning, organization and management of the extension service and in upgrading its staff through in-service training.

Project Development:

An AID development loan was approved for expansion of the research and teaching physical plant at the Agricultural Research and Training Station. Plans were to upgrade the agricultural assistant superintendent program from

two to three years. It was felt that curriculum changes and increases in output would necessarily have to wait for the expansion of facilities.

While the contract staff were supposed to perform in advisory roles, the lack of adequately trained and experienced Nigerian personnel meant that some team members had to assume virtual operational responsibility in their program areas. By the end of 1966, 24 U.S. staff members had served in the areas of chief of party, business manager, extension methods, home economics, rural youth, poultry, agricultural engineering, seed improvement, soil fertility, agronomy, livestock and ranch management, plant pathology, veterinary science, entomology, grain storage, horticulture, and agricultural information. A 28-man team was authorized.

By the end of 1966, three participants had begun training in the U.S., one for a masters degree in agronomy, and two for non-academic training in extension.

Contract expenditures from November 24, 1964, to December 31, 1966, were \$849,576, including provision for equipment.

With the outbreak of the Nigerian civil war in 1967, Colorado State personnel were evacuated to the U.S. and contract activities were suspended.

COLORADO STATE UNIVERSITY

Host Country: East Africa Regional (Kenya, Uganda, and Tanzania)

Host Institution: Veterinary Faculty, University College, located at Nairobi, Kenya. The University College is a constituent college of the University of East Africa.

Type of Project: Degree-granting institution (college of veterinary medicine)

Effective Dates of Project: January, 1965, to date

Project Objectives:

The broad contract objective is to assist in the development of the Veterinary Faculty within the University College at Nairobi, a constituent college of the University of East Africa. The faculty should be capable of training sufficient numbers of qualified professional veterinarians to meet East African needs and capable of producing its own faculty replacements. Colorado State specifically is to assist in development of the physical plant, the curriculum, and research projects, and to advise on academic and administrative policy formulation for the veterinary faculty.

Project Development:

Emphasis has been on instruction. Colorado State team members have developed and taught specific courses in their respective disciplines and have developed plans for research projects. The U.S. staff members participate as full members of the faculties' academic staff, give lectures and demonstrations, conduct tutorial and practical classes, and act as examiners if required. The team is well dispersed through all the departments of the veterinary faculty except anatomy. Five Colorado State staff members have served in the areas of veterinary biochemistry, physiology, surgery, microbiology, and parasitology.

As of 1966, one participant trainee had begun study in the U.S. toward a Ph.D. in microbiology and public health.

The contract budget through fiscal year 1966 was \$298,000, including provision for books, teaching aids, supplies, and scientific equipment.

Several other countries are participating in assistance to the veterinary faculty through provision of teaching staff members. Of the 40 staff members of the veterinary faculty, five are provided through the USAID Colorado State contract, twelve by Glasgow University (U.K.), nine by Justus Leibig University (West Germany), and six by Norway.

UNIVERSITY OF CONNECTICUT

Host Country: Zambia

Host Institutions: (1) Zambia College of Agriculture, located at Monze (formerly the Monze Agricultural Training Center);
(2) Natural Resources Development College, located at Lusaka

Type of Project: Government Ministry (agricultural technical training programs and extension)

Effective Dates of Project: March, 1963, to September 1, 1968

Project Objectives:

Connecticut was to assist in improving the quality and effectiveness of Zambia's agricultural extension training, through revision of curricula and improvement of teaching methods, through organization of in-service training short courses for extension personnel, and through organization of short courses for farmers. Other duties included assisting with improving the effectiveness of rural youth organizations, and assistance in training personnel concerned with agricultural credit and agricultural cooperatives, and tractor operations and maintenance. Connecticut personnel were later asked

to assist with the development of the Natural Resources Development College, a completely new diploma level agricultural school. Recently help in establishing an improved home economics program in the community development department was requested.

The Zambia College of Agriculture offers a one-year course and a two-year certificate course designed primarily as in-service training for Ministry of Agriculture employees. The Natural Resources Development College offers two-year diploma courses in agriculture, farm management, livestock, agricultural commerce, water development, draftsmanship, surveying, and home economics.

Project Development:

Connecticut team members have advised on curricula and organization of these training programs at the Zambia College of Agriculture and the Natural Resources Development College primarily in the areas of agricultural education extension, agricultural engineering, and agricultural economics. Some team members have done considerable teaching. By the end of 1967, six long-term U.S. staff members had served in the areas of agricultural extension, youth extension, agricultural engineering, agricultural economics, and home economics. One short-term consultant was utilized in the field of agricultural education.

Participants were funded directly by USAID. Four participants began a special two-year academic certificate program at the University of Connecticut in 1964, three in horticulture, and one in animal husbandry. One has been teaching at N.R.D.C. and is applying for admission as a candidate for the bachelors degree at Connecticut.

The contract budget from May 13, 1963, to March 31, 1968, was \$488,248, with no budget for equipment or for participants.

CORNELL UNIVERSITY

Host Country: Philippines

Host Institution: College of Agriculture, University of the Philippines. The College is located at Los Banos in the province of Laguna

Type of Project: Degree-granting institution (college of agriculture)

Effective Dates of Project: June, 1952, to June 20, 1960

Project Objectives:

The general contract objectives were to rehabilitate and expand the war-damaged College of Agriculture, to train professional personnel in agricultural

research, teaching and extension, to develop a central experiment station as part of the College, and to develop educational materials. Cornell was to assist specifically in (a) improving teaching methods and curricula, (b) developing research and extension programs, (c) improving research and extension organization and administration, (d) conducting in-service training for extension workers, (e) organizing special conferences and training programs, and (f) building classroom facilities and staff housing.

Project Development:

The program was aimed at broad development in instruction, research and extension. Research and instruction received greatest contract attention, with staff training and improving buildings and facilities also important components.

A total of 49 U.S. team members functioned as visiting professors in teaching and research in the College of Agriculture over the period of the contract. Fields represented and the numbers of U.S. team members in each were: Chief of Party (2), agronomy and soils (6), plant breeding (5), plant pathology (4), botany (2), horticulture (4), agricultural engineering (4), agricultural economics (6), agricultural extension (3), agricultural education (2), animal husbandry (4), home economics (1), entomology (3), college administration (1), and local government and community development (2). Three of these staff members were supported jointly by the contract and the Council on Economic and Cultural Affairs (now Agricultural Development Council). Two additional staff in education and local government were fully financed by CECA. One short-term consultant in home economics was used. The contract authorized a 14-man team.

A total of 74 participants were trained during the period of the contract, of which 57 received masters degrees and 11 were on short-term non-degree programs. Fields represented included agronomy, plant sciences, horticulture, soils, forestry, animal husbandry, entomology, agricultural economics, agricultural extension and information, agricultural engineering, agricultural education, home economics, agricultural college management, spectography, meteorology, electron microscopy, rodent control, and statistics.

A total of \$1,240,000 was budgeted for the Cornell contract, including provision for equipment. The Rockefeller Foundation made a grant of \$230,000 to the College of Agriculture for scientific, technical, and service equipment.

CORNELL UNIVERSITY

Host Country: Philippines

Host Institution: College of Forestry, University of the Philippines. The College is located in the Mt. Makiling National Park at Los Banos in the province of Laguna.

Type of Project: Degree-granting institution (college of forestry)

Effective Dates of Project: April 25, 1957, to June 19, 1960

Project Objectives:

The contract's general objectives were to expand and strengthen the overall forestry education program of the University of the Philippines, and to help restore the losses suffered during World War II. Cornell was to assist the College of Forestry in meeting the need for professional foresters and trained forestry technicians, and in providing those services expected of a major center of forestry education and research. More specific contract purposes included modernizing the curriculum, improving teaching methods, planning and carrying out a policy designed to give increased emphasis to the professional degree course in forestry, and stimulating research.

Project Development:

Major emphasis during the contract period was placed on the recruitment and training of College of Forestry staff, and on expansion of the College physical plant. Development and implementation of a more effective curriculum was also a priority item. Because of the shortage of faculty and heavy teaching loads, only a few research projects were initiated. Altogether, a total of five U.S. staff members served as working colleagues to the Filipino faculty in teaching and research in the areas of forest products, silviculture, soils and water, wood technology, and forest economics.

A total of 11 participants studied in the U.S. during the contract period. Seven of these were funded by the contract and four short-term participants were funded directly by USAID. Seven received a master's degree in the areas of forest management, wood technology, forest economics, applied silviculture, and photogrammetry. The short-term visitors studied the fields of general forestry, administration, photogrammetry, and reforestation policy.

The total contract expenditure came to \$155,349 including purchase of professional equipment and supplies. The Rockefeller Foundation provided \$10,000 to the College of Forestry for the purchase of books. USAID provided an additional \$39,765 worth of commodities above the contract budget.

At the time this contract was developed, Cornell University held a similar contract to provide assistance for the College of Agriculture of the University of the Philippines. Because of this arrangement, it was deemed desirable that Cornell be responsible for both contracts, rather than to

involve another U.S. university. Cornell assumed the administrative responsibility for the forestry contract with the understanding that the State University College of Forestry at Syracuse University would meet the staffing and training responsibilities. All of the visiting professors, except one, were assigned from the College of Forestry at Syracuse.

Cornell University's contracts with the U.P. College of Agriculture and the U.P. College of Forestry were terminated at the same time. Full responsibility for the forestry contract and the assistance program was then shifted to Syracuse University. Although there were two contractors, each concerned with a particular period of time, the programs were consistent in objectives, methods, and standards, since Syracuse provided the visiting faculty throughout both contracts.

UNIVERSITY OF FLORIDA

Host Country: Costa Rica

Host Institution: Ministry of Agriculture and Industries, headquartered at San Jose

Type of Project: Government ministry (research)

Effective Dates of Project: December 21, 1954, to March 15, 1960

Project Objectives:

The contract objectives called for assistance in the development, strengthening and expansion of agricultural research programs in the Ministry of Agriculture and Industries. Specific activities included special training of Ministry technicians, assistance in the preparation and dissemination of technical publications, and advice in improvement of facilities, programming, execution, and analysis of agricultural research activities.

Project Development:

Florida team members assisted counterparts within appropriate departments of the Ministry. Research development in animal industries (livestock and livestock products) received primary attention. Seven long-term staff members served in the fields of agronomy, entomology, soil chemistry, agricultural economics, and land use. Eleven short-term staff members in the areas of animal industries, potato marketing, plant physiology and pathology, and agricultural economics served between 1954 and 1960.

Seven participants visited the U.S. for short-term training in the fields of agricultural economics, phytohematology, livestock, agronomy, and veterinary science.

Contract expenditures from 1954 to May 15, 1958, were \$118,849, and the budget from May 16, 1958, to May 15, 1959, was \$110,228. No final figures were available; the projected total contract budget from 1954 to 1960 was \$357,072. A minimal amount for equipment was included.

UNIVERSITY OF FLORIDA

Host Country: Costa Rica

Host Institutions: (1) Ministry of Agriculture
(2) University of Costa Rica School of Agriculture
(3) Institute of Lands and Colonization
(4) USAID Mission to Costa Rica
The team is headquartered at San Jose

Type of Project: Government ministry (research and extension); and degree-granting institution (college of agriculture)

Effective Dates of Project: May 21, 1965, to date

Project Objectives:

The original contract objective was to increase the effectiveness of three key institutions (Ministry of Agriculture, Institute of Lands and Colonization, and the University of Costa Rica School of Agriculture) in their programs to bring about rural development. Florida was to assist these host institutions in determining objectives, policy, and plans for agricultural development projects, in planning the area development program in the Nicoya peninsula, in providing on-the-job training for Costa Rican counterparts, and in providing other technical advice and services as requested.

Recently the contract objectives have been more specifically focused on improvement of agricultural economic policy-making at the national level.

Project Development:

This project relied initially on an unusual staffing pattern. Two full-time staff members were stationed in San Jose. These men could call upon the equivalent of two additional man-years per year in short-term consultants from Florida. The full-time staff members were to serve partly as intermediaries between specific problem identification in one or more of the host institutions, and specialists at the University of Florida. The resident staff members advised on the development of research work at the host institutions in the fields of agronomy and agricultural economics. The Florida team originally planned to concentrate on projects designed to expand the production and marketing of basic food crops, especially grains and beans.

By mid-1966, 11 short-term consultants had advised on problems in weed control and pesticide control legislation; vegetable production and

marketing; animal nutrition; fertilizer use; minor element nutrition problems in crops; the southern pea industry; programming farms; irrigation studies; soil mineralogy study; and investigation of a swine disease outbreak.

With the focusing of the contract objectives about 1967 on agricultural economics policy-making, the staffing pattern changed. One long-term Florida staff member specializing in agricultural policy was to be substituted for several short-term consultants.

No participant training is provided by the contract. The contract budget from May, 1965, to May, 1966, was \$153,278, including provision for teaching aids, research materials, and vehicles.

UNIVERSITY OF GEORGIA

Host Country: Cambodia

Host Institution: National College of Agriculture, Animal Husbandry and Forestry, located at Phnom Penh

Type of Project: Government ministry (two-year diploma program)

Effective Dates of Project: June 20, 1960, to December, 1963

Project Objectives:

When the contract began the National College of Agriculture was a secondary level agricultural school, starting at the 11th grade. The contract provided that the Georgia team assist in upgrading the National College to a two-year agricultural college, whose graduates would be eligible for admission to a U.S. university to complete a bachelors degree in two years. The team was to assist with curricula revision, improvement of teaching methods and course content, and with developing a College farm for instructional and demonstrational use.

In June, 1963, the scope of the Georgia project and the role of the Georgia team members changed, with the decision that USAID would help to develop an agricultural university, including a new physical plant, with an integrated instructional-research-extension program. Georgia was to advise and consult with USAID on the development of the physical plant and instructional, research, and extension programs, and to provide participant training. These functions were to be carried out through short-term staff assignments. This revised project was just underway when the USAID Mission was asked to leave the country in November, 1963.

Project Development:

The Georgia team provided some assistance in drawing up a revised curriculum, in advising on needed physical facilities, and in conducting some field

demonstrations. Ten long-term staff members served in advisory capacities in the areas of horticulture, agronomy, veterinary science, animal science, agricultural engineering, forestry, agricultural economics, and English. Three short-term consultants--an architect, the Director of Resident Instruction, and an animal scientist--were utilized.

Thirteen contract-sponsored and nine AID-sponsored participants had begun study in the U.S. by the time the project terminated in 1963. These persons continued their education under direct AID auspices. Twenty participants earned bachelors degrees at Georgia; seven of these also earned masters degrees. Fields represented were agronomy, forestry, food technology, horticulture, agricultural engineering, general agriculture, and animal science.

The project budget amounted to \$488,683, including only a nominal amount for commodities.

In addition to the contract in Cambodia, the University of Georgia also had a separate AID contract with the National School of Agriculture, Animal Husbandry, and Forestry in South Vietnam from 1960-1962. This contract was not studied by the CIC-AID Rural Development Research Project.

UNIVERSITY OF HAWAII

Host Country: Thailand

Host Institution: Kasetsart University, located near Bangkok

Type of Project: Degree-granting institution (agricultural university)

Effective Dates of Project: May 21, 1962--August 31, 1965

Project Objectives:

The general objective was to strengthen the position of Kasetsart University as the country's center of higher agricultural education and research, and to develop it institutionally so that it could fulfill a key role in the development of Thai agriculture and in increasing the effectiveness of the Thai educational system. More specifically, the contract program was to involve assistance in raising academic standards, further developing curricula and improving teaching methods, strengthening faculty professional capability, improving inter-departmental relationships, improving internal management and administration, and developing a program of applied agricultural research focused on priority problems of Thai agriculture. This research program was to be financed jointly by the contract and the University, with active participation by the University faculty.

Project Development:

Considerable emphasis was placed on development of an effective program of applied research. Important but secondary emphasis was given to improvement of the teaching program, upgrading of the faculty, and strengthening internal University management, administration, and inter-departmental relationships.

A total of eight long-term U.S. staff members worked in an advisory capacity in the fields of horticulture, dairy husbandry, fisheries, agronomy, entomology, and waters management. An administrative assistant was also employed. Seven short-term advisors served in the areas of English, agricultural business, home economics, veterinary science, arts and sciences, poultry, and graduate programs. A seven-to-nine man team was authorized.

Thirteen participants were trained under the Hawaii contract in the fields of agricultural engineering, animal science, agricultural economics, agricultural education, civil engineering, dairy technology, horticulture, fisheries, and wood technology. One received a Ph.D., one a B.S., nine an M.S., and two deans participated in short-term leader training and observation tours.

Contract expenditures from April 1, 1962, to June 30, 1965, totalled \$736,489, including funds for construction of a new library, purchases of research-related equipment (about three-fourths of equipment budget) and teaching aids.

The Rockefeller Foundation made considerable contribution to Kasetsart University in terms of equipment grants and assistance in the research program. The Agricultural Development Council provided assistance in the field of economics.

UNIVERSITY OF IDAHO

Host Country: Ecuador

Host Institutions: (1) School of Agriculture and Veterinary Medicine, University of Quito, located at Quito;
(2) School of Agronomy and Veterinary Science, University of Guayaquil, located at Guayaquil

Type of Project: Degree-granting institutions (colleges of agriculture)

Effective Dates of Project: November 17, 1954, to November, 1957

Project Objectives:

General contract objectives were to strengthen the agricultural instruction and research programs at the two Universities of Quito and Guayaquil,

through assistance in improving teaching methods, in curriculum planning, and in research.

Project Development:

At each host institution, emphasis was placed on development of programs and laboratories for practical instruction and research in the subject fields represented by the team members, on purchase of specialized teaching aids and research equipment, on improving and re-vitalizing the universities' experimental farms, and on advising secondary vocational agriculture schools near the two campuses on improvement of curricula and practical instruction.

All Idaho staff members were involved to some degree in both teaching and research. Altogether, six U.S. team members served on a long-term basis in the fields of horticulture, agricultural education, and soils at Quito, and in the fields of veterinary medicine, poultry husbandry, and irrigation at Guayaquil. Two short-term consultants in the fields of entomology and poultry were used. A six-man team was authorized.

Four participants were trained in non-degree programs in the U.S. in the fields of veterinary science, horticulture, agricultural chemistry, and soil chemistry.

A total of \$400,000 was budgeted for the contract. The Rockefeller Foundation made a grant of \$10,000 to each host institution for scientific equipment and books.

UNIVERSITY OF ILLINOIS

Host Country: India

Host Institution: Uttar Pradesh Agricultural University (UPAU), located at Pant Nagar in the State of Uttar Pradesh

Type of Project: Degree-granting institution (agricultural university)

Effective Dates of Project: June 26, 1952, and continuing (1952-55, Allahabad program; 1955-59, regional assistance program; 1959-UPAU program)

Project Objectives:

The contract objective is to assist in development of the new Uttar Pradesh Agricultural University with coordinated programs of teaching, research, and extension serving the State of Uttar Pradesh. UPAU was developed as an entirely new institution located on the U.P. Tarai State Farm.

Project Development:

From 1952-1955 the University of Illinois worked solely with the Allahabad Agricultural Institute in Uttar Pradesh. Between 1955 and 1959, Illinois assisted five agricultural and veterinary colleges in the State of Uttar Pradesh in the improvement of their curricula, research programs, and general quality of performance.

The first Indo-American team to review agricultural education and research recommended establishing agricultural universities in India with coordinated programs of teaching, research, and extension. The U.P. Assembly passed enabling legislation for such a university in 1958, and the University of Illinois agreed to assist with the development of the new Uttar Pradesh Agricultural University in November, 1959. UPAU was the first such agricultural university in India.

UPAU was started as an entirely new institution. Illinois thus advised on campus planning, construction of physical facilities, administration and organization, curricula, research programs, extension programs, and recruitment of staff. UPAU opened in July, 1960, with 250 students enrolled in the Colleges of Agriculture and Veterinary Medicine, and a School of Basic Sciences and Humanities. The College of Agricultural Engineering and Technology, the Agricultural Experiment Station and the Extension Service were established in 1962. A College of Engineering was established in 1967, and a College of Home Science is to be added.

Fourteen long-term staff members served at UPAU from 1959 to 1967 in veterinary medicine, agricultural engineering, administration, research, land and water resources, extension, farm management, agronomy, and student training. Short-term consultants for UPAU during the same period totalled 15 in administration and various agricultural fields. The annual contract calls for about eight regular overseas staff members and up to four consultants and three graduate students as research assistants.

The total number of participants to 1967 under the UPAU program was 37 in several agricultural fields. Of these, 21 had returned to UPAU and 16 were still being trained at the end of 1967. Nearly all of these participants enrolled in masters or doctoral degree programs.

The contract budget for the UPAU program (November, 1959--June 1967) was \$1,695,700, including \$483,200 for books and equipment and \$164,800 for participants. In addition, about ten percent of the \$1,860,000 expended under the Allahabad and regional assistance programs (June, 1952--October, 1959) for U.S. staff members, participant training, and commodities was of direct value to UPAU.

UPAU has also received substantial grants of funds from (1) the Rockefeller Foundation in the development of the Agricultural Experiment Station, in support of research, and in the development of an International Maize Breeding Station on University land; (2) the Ford Foundation to support graduate teaching and research in farm management; (3) ARS/AID grants for the support of research in microbiology; and (4) a PL 480 grant of 21.6 million rupees for buildings, etc.

UNIVERSITY OF ILLINOIS

Host Country: India

Host Institution: Jawaharlal Nehru Agricultural University (JNAU),
with the central campus located at Jabalpur, State
of Madhya Pradesh

Type of Project: Degree-granting institution (agricultural university)

Effective Dates
of Project: October 1, 1955, and continuing (1955-64, regional
assistance program; 1964- , JNAU program)

Project Objectives:

The contract objective is to assist in the development of an agricultural university with coordinated programs of teaching, research, and extension serving the State of Madhya Pradesh. Jawaharlal Nehru Agricultural University, with headquarters at Jabalpur, was organized to incorporate eight existing agricultural and veterinary colleges on seven widely separated campuses. The constituent units of JNAU include six Colleges of Agriculture at Jabalpur, Raipur, Gwalior, Rewa, Sehore, and Indore, and two Colleges of Veterinary Medicine at Jabalpur and Mhow.

Project Development:

With the exception of the College of Agriculture at Raipur, the constituent colleges of JNAU were assisted by the University of Illinois between 1955 and 1964 under the regional assistance program. This regional program was aimed at the improvement of the colleges' curricula, research programs, and general quality of performance.

The Madhya Pradesh Assembly passed legislation in February, 1963, providing for the establishment of Madhya Pradesh Agricultural University (now known as Jawaharlal Nehru Agricultural University). In November, 1964, a new contract was signed restricting Illinois assistance in M.P. to JNAU.

The contract provides for about eight regular overseas staff, plus up to four short-term consultants and three graduate students as research assistants. As of mid-1967, six long-term staff members and ten short-term consultants had assisted JNAU. Five of the consultants were members of a team rotating to fill the position of Advisor on Research. In addition to the chief of party, five team members have been concerned with research, and one each with dairy, animal science, veterinary medicine, extension education, agricultural engineering, farm management, agronomy, campus planning, and admissions and records.

Fifty participants from Madhya Pradesh were trained under the regional assistance program (1955-1964), and 30 others have been trained or were in training specifically for the JNAU program (1964 to mid-1967). Most of these participants enrolled in masters or doctoral degree programs in various agricultural fields.

The contract expenditures for the JNAU program (November, 1964, to June, 1967) were about \$515,500, of which about \$78,000 were earmarked for books and equipment, and about \$103,000 for participant training. In addition, about 50 percent of the \$1,860,000 expended under the regional assistance program for U.S. staff members, participant training, and commodities was of direct value to Jawaharlal Nehru Agricultural University.

UNIVERSITY OF ILLINOIS

Host Country: Sierra Leone

Host Institution: Njala University College, located at Njala

Type of Project: Degree-granting institution (agriculture, home economics, and teacher education) and certificate program; also a primary school

Effective Dates of Project: August 16, 1963, and continuing

Project Objectives:

Njala University College (N.U.C.) was formed in 1964 as a new educational institution. The facilities of four former organizations were turned over to Njala University College--an agricultural experiment station, the Njala Oil Palm Station, a teacher training college, and the Rice Research Station located at Rokupr. The College offers two-year certificate programs in agriculture, trades and crafts, and home economics, and four-year degree courses have been organized in agriculture, education, and home economics. The primary school formerly operated by the teacher training college is being continued as a teacher training facility. Long-range plans call for establishing a secondary school as a teacher training adjunct. In 1967, Njala University College became a constituent college of the University of Sierra Leone along with Fourah Bay College.

The purpose of the contract is to assist in developing an institution with integrated research, instruction, extension, and teacher training programs. More specifically, the Illinois team was to assist the College in (a) developing plans and programs to improve the country's agriculture and production, (b) to conduct soil surveys, (c) to develop appropriate plant varieties and livestock strains suited to local conditions, (d) to conduct livestock nutritional studies, (e) to develop methods of resisting and curing plant and animal diseases, (f) to improve the quality of the food supply, (g) to develop better processing and marketing methods and equipment for foods and fibers, (h) to engage in agricultural economics and farm management research, (i) to conduct a comprehensive extension program, and (j) to conduct educational programs to train secondary teachers, vocational, technical, and home economics teachers, extension leaders, and specialists in the biological and physical sciences.

Project Development:

Top priority was initially devoted to instruction, but a beginning has been made in developing a research program for the College. The work of the Rice Research Station has been continued. Extension has taken lower priority because of the shortage of trained personnel. Curricula were prepared for the certificate and degree programs. Considerable equipment, books and supplies have been ordered with contract funds. The team prepared a comprehensive long-range requirements analysis report and is helping the firm of Associated Consultants in Education, Inc., with a long-range campus development plan for physical facilities.

During the term ending in mid-1967, 134 students were enrolled in degree programs and 67 were enrolled in certificate programs. Twenty certificate students had already been graduated. Of the degree candidates, 82 were in agriculture, 7 in home economics, and 45 in education. The projected student body for the next year was 300 students in all programs.

The senior staff of N.U.C. in 1967 consisted of 11 in administration and 52 in various professional areas, including five persons funded under the OES/AID program. Ten other staff members were on study leave.

Team members have generally acted in an advisory capacity. However, because of lack of trained counterparts, the advisers to the Principal and to the Director of Teacher Training served for a time as Acting Deans of Agriculture and of Education. Several team members have taught and have conducted some research.

By mid-1967, 19 Illinois staff members had served or were serving as long-term advisers in teacher and science education, agricultural education, agricultural shop, animal science, experiment station and college administration, English, soils, home economics, tropical crops, and extension. Seven short-term consultants in the areas of campus planning, accounts and records, teacher training, printing, animal science, and college administration had been used.

U.S. personnel are also being provided by AID and Overseas Educational Services on a salary supplement arrangement. Five positions at N.U.C. have been filled in this manner.

Twelve contract participants had begun training in the U.S. by September, 1967; three had returned to N.U.C. by that time. Their programs are: one, bachelors degree; five, masters degree; two, doctoral degree; and four, non-degree. Fields represented are science education, admissions and records, soils, English, home economics, plant pathology, extension education, and mathematics.

Total contract expenditures through June, 1967, were \$1,416,567, of which \$357,417 were for books and equipment, and \$25,400 were for participant training.

UNIVERSITY OF ILLINOIS

Host Country: Jordan

Host Institution: Ministry of Agriculture (Agricultural Extension Department), located at Amman

Type of Project: Government Ministry (extension)

Effective Dates of Project: September 6, 1963, to June 30, 1966

Project Objectives:

The main objective was to assist the Extension Department in the Jordanian Ministry of Agriculture to establish an effective Agricultural Information Office, staffed with trained information specialists, to provide the following information services: (a) assist the staff of the Extension Department as well as other departments of the Ministry to maintain a continuous flow of production, management, and marketing information from the various sources to farmers and farm leaders via all available communications channels, including newspapers, radio, publications, displays and exhibits; (b) to provide training in communication methods for the staff of the Ministry of Agriculture and (c) to provide information support for the various programs and activities of the Ministry.

Project Development:

The project focused on extension activities and the development of an information service which would transmit information available in the Research Department to the farmers of Jordan through the Extension Department. An experimental feature of the project involved the selection of four participants, sending them as a team to the University of Illinois for three months, and then having three of the U.S. university staff members who assisted in their training go to Jordan as short-term consultants to work with them. The training program included special seminars, course work, field trips, and special projects.

One contract staff member served in Jordan for 26 months as chief of party and general advisor in agricultural communications. Three short-term contract staff members who served for four to five months were specialists in graphic arts and visual aids, radio, and photography.

Total expenditures for the project were \$129,000. About \$17,200 was spent for equipment and teaching aids.

In addition to the services of the University of Illinois contract staff, the U.S. AID Mission employed an extension advisor, an irrigated farming advisor, an agricultural engineer, and a chief agricultural officer who also assisted the Agricultural Extension Department of the Ministry.

IOWA STATE UNIVERSITY

Host Country: Peru

Host Institutions: (1) Directorate of Agricultural Economics, Ministry of Agriculture
(2) Sectoral Office of Agricultural Planning, Ministry of Agriculture
(3) National Planning Institute
Team headquarters are at Lima, Peru.

Type of Project: Government ministry (research)

Effective Dates of Project: September, 1962, to date

Project Objectives:

Iowa State was originally asked to assist with planning and developing an agrarian reform and credit program for Peru, with special emphasis on Southern Peru, for the purpose of achieving a significant increase in agricultural production and in the standard of living of the rural population. The principal contact agency was the Institute of Agrarian Reform and Colonization.

In 1964 emphasis was shifted from the agrarian reform program to assistance in planning, economic studies, and program analysis to six agencies of the Peruvian government--the Directorate of Agricultural Economics, Sectoral Office of Agricultural Planning, National Planning Institute, National Food Corporation, National Fertilizer Corporation, and the Office of Agrarian Reform. The intent is to help these agencies become more effective and actively-used sources of concrete information and technical counsel for policy makers, and other interested agencies.

Project Development:

Iowa's work has concentrated in the area of agricultural economics. During the initial two years, Iowa team members worked primarily with the Institute of Agrarian Reform and Colonization (now the National Office of Agrarian Reform) on the preparation of initial national and regional program plans and financing arrangements for agrarian reform, as well as enabling legislation. The team provided some technical guidance in developing the substance of the Agrarian Reform Law adopted in May, 1964, and assisted also in developing technical regulations for implementing the new law.

Iowa activities now center on direct consultation and training, on leadership and guidance in basic research studies on development planning, and on sponsoring participants for training in agricultural economics. Current activities include research studies and advice on planning of national economic policies underlying agriculture, design of basic structures and institutions directly related to agriculture, planning programs for stimulating agricultural production, and improvement of local program implementation and coordination procedures.

A total of 17 long-term staff members had served between 1962 and 1968 in the fields of growth economics, resource economics, agricultural law, food economics, agricultural marketing, and agricultural production. In addition, three research associates worked on dissertation topics in conjunction with the team efforts. By early 1968, 13 short-term consultants had been used in the fields of marketing, agricultural law, econometrics, statistics, and growth economics. A 14-man team is authorized.

By 1968, 30 participants had begun U.S. training in agricultural economics, agricultural statistics, general economics, and sociology. All but five were degree candidates; two were working toward a bachelors degree, 19 were working for masters degrees, and four are working toward a Ph.D.

The contract budget for the year from September 1, 1966, to August 31, 1967, was \$494,365. The overall budget from September 1, 1962, to December 31, 1967, was \$2,038,741. Provision for equipment is included.

The University of Iowa College of Law is assisting Iowa State University in staffing the contract in the area of law.

IOWA STATE UNIVERSITY

Host Country: Uruguay

Host Institutions: (1) Faculty of Agronomy, University of the Republic of Uruguay, located in Montevideo
(2) La Estanzuela Agricultural Research and Extension Center, located at La Estanzuela
(3) The Work University (UTU)

Type of Project: Degree-granting institution (college of agriculture); and government ministry (research; secondary level agricultural schools)

Effective Dates of Project: November 29, 1962, to date

Project Objectives:

The contract was aimed at improving Uruguay's agricultural production through assistance to teaching, research, and agricultural extension programs. Specifically, Iowa State was to assist the host institutions in curriculum development, teaching methods and departmental organization, and in design and development of improved research programs in soils, animal husbandry, crop production, and management of natural resources.

The Faculty of Agronomy of the University of Uruguay offers a five-year program leading to the "Ingeniero Agronomo" degree.

The Agricultural Research and Extension Center is a Ministry-operated national agricultural experiment station with research in cereals and oil crop production, animal industries, agricultural economics, and soil studies.

The Work University (UTU) is a complex of over 70 vocational training and agricultural educational institutions at the secondary level, including the seven specialized trade high schools in dairy industry, horticulture, poultry husbandry, livestock, forestry, and farm machinery, with which Iowa State has worked.

Project Development:

Iowa State team members worked in each of the three host institutions, with primary emphasis on research projects, curricula improvement, and procuring equipment and commodities. Two contract staff members worked with the Faculty of Agronomy, two with the Experiment Station, and four with each of four separate specialized high schools in the UTU system. About 28 percent of the contract budget was spent in the Faculty of Agronomy, 10 percent at the Experiment Station, and about 62 percent in the UTU system. Of the total contract budget of \$1,682,692 between November 29, 1962, and June 30, 1968, about 33 percent was utilized in purchasing equipment and commodities.

By early 1968, 11 long-term staff members had served in Uruguay in the areas of dairy industries, animal science, phytopathology, horticulture, poultry, agricultural engineering, soil science, and agronomy. Twelve short-term consultants had been used by early 1968 in the fields of fruits and vegetables, poultry and dairy industries, animal science, agronomy, agricultural economics, and animal biochemistry.

By 1968, 30 participants had begun training in the U.S., 10 in academic programs (masters degree) and 20 in non-academic programs. Fields represented were animal science, poultry science, dairy science, dairy industry, agricultural engineering, and agronomy.

The Experiment Station has been assisted since 1961 by an FAO-U.N. Special Fund program involving nearly a dozen foreign agricultural researchers.

KANSAS STATE UNIVERSITY

<u>Host Country:</u>	India
<u>Host Institution:</u>	Andhra Pradesh Agricultural University, with the central campus at Rajendranagar in the State of Andhra Pradesh
<u>Type of Project:</u>	Degree-granting institution (agricultural university)
<u>Effective Dates of Project:</u>	March 23, 1956, to date

Project Objectives:

The central contract objective currently is the development of a land-grant type university for Andhra Pradesh bringing together six constituent colleges, including three agricultural colleges at Rajendranagar, Bapatla, and Tirupati, two veterinary colleges at Tirupati and Hyderabad, and a home science college at Hyderabad.

Project Development:

Originally Kansas was given the responsibility for technical assistance to agricultural and veterinary colleges in the States of Andhra Pradesh, Gujerat, and Maharashtra. Sixteen advisers in extension methods, agronomy, grass conservation, dairy science, home science, horticulture, poultry, plant pathology, agricultural economics, rural sociology, and veterinary medicine worked with 11 agricultural and veterinary science colleges and government institutions. They taught courses and participated in development of course outlines, curricula changes, and teaching methods. They helped organize a regional seminar on teaching, in-service training school for extension workers, a soil and water conservation school, a state-wide seminar in research, and a number of youth clubs.

A project amendment in 1958 provided for technical assistance in veterinary science to any cooperating college irrespective of region. Under this provision staff members were posted at the Veterinary College, Mhow, M. P., and at the Indian Veterinary Research Institute, Izatnagar, U. P.

On December 27, 1963, Andhra's Governor approved the legislation providing for an agricultural university, and the contract revision of November 1, 1964, specified that the Kansas State team would work only with Andhra Pradesh Agricultural University. Six team members are presently authorized.

Altogether 21 long-term staff members serviced the Kansas contract (1956-1965). In addition to the subject matter areas mentioned above, assistance was given in youth work, vocational training, food technology, bacteriology, administration, animal science, and non-academic procedures. There were four short-term consultants for campus development, admissions and records, budgeting, campus planning, and home economics.

For the period ending December, 1966, 127 participants had received training at Kansas State University in agronomy, dairy, animal science, veterinary medicine, agricultural engineering, agricultural economics, extension education, and other fields of study. Seventy-three of this number were from the State of Andhra Pradesh.

The total contract budget from March 23, 1956, through October 31, 1965, was \$2,717,545, of which \$710,330 were budgeted for equipment and \$50,000 for books. The largest single commodity grant went to the Indian Veterinary Research Institute (\$150,000). One commodity innovation tried was a textbook rental plan. The budget from November 1, 1965, through October 31, 1966, totaled \$350,205.

KANSAS STATE UNIVERSITY

Host Country: Nigeria

Host Institution: College of Agriculture and Home Economics and College of Veterinary Medicine, Ahmadu Bello University, located at Zaria in Northern Nigeria

Type of Project: Degree-granting institution (colleges of agriculture and veterinary medicine)

Effective Dates of Project: October 1, 1963, to date

Project Objectives:

Ahmadu Bello University was established by legislation of the Northern Government in 1962 as an autonomous university in the pattern of U.S. land-grant universities. As the nucleus and campus site of the new university, the federal government transferred to the University the Zaria branch of the Nigerian College of Arts, Science and Technology and the Institute for Agricultural Research located adjacent to the campus.

Kansas State University is to assist in overall development of the two new Colleges of Agriculture and Home Economics, and Veterinary Medicine, including (a) planning and equipping the physical plant, and providing for future expansion, (b) developing and implementing agricultural and veterinary medicine curricula and research programs, (d) carrying out individual teaching and research programs at the Colleges, and acting as administrators (deans or department heads) when necessary, (e) training Nigerians as counterparts or participants to assume major roles in the University as soon as possible, and (f) helping to establish an effective research-extension liaison between the University activities and related host government agricultural activities. Ahmadu Bello University is the only AID-assisted Nigerian institution which will grant the D.V.M. degree (six year program).

Project Development:

Kansas State staff members have served in "operational" roles where needed. They carry out teaching and research activities and have provided Acting Deans for the Faculties of Agriculture and Veterinary Medicine. By early 1966, 15 staff members had served in Nigeria. These included two chiefs of party; seven veterinary medicine staff; one each in agronomy, animal science, agricultural engineering, and agricultural economics; an extension-research liaison specialist; and an administrative assistant. The contract authorized a 17-man team.

Three participants were sent under the contract, one in soil science and two for an observation tour, the Vice-Chancellor and the Permanent Secretary of Ministry of Animal and Forest Resources. Thereafter, participants were to be funded directly by USAID.

The total budget between October 1, 1963, and July 31, 1965, was \$810,879, of which \$747,839 was budgeted for August 1, 1964--July 31, 1965.

Teaching aids, books and journals, teaching and research laboratory equipment, and farm and field equipment are provided under the contract (\$260,034 to July 31, 1965).

Great Britain has made a grant of approximately 1½ million dollars for the development of Ahmadu Bello University, which will probably be used for engineering or general administration rather than specifically agriculture or veterinary medicine.

UNIVERSITY OF KENTUCKY

Host Country: Indonesia

Host Institution: Bogor Agricultural Institute (formerly the Faculties of Agriculture and Veterinary Science, University of Indonesia), located at Bogor

Type of Project: Degree-granting institution (agricultural university)

Effective Dates of Project: July 19, 1957, to June 30, 1966

Project Objectives:

The general objective was to strengthen the instructional, research and extension programs at the Colleges of Agriculture and Veterinary Medicine, by assisting in the improvement of administration, staff training, curricula, course content, teaching methods, research and extension projects, libraries and equipment, laboratories and classroom facilities, audio-visual aids and publications, and an overseas education program.

About 1964, the two faculties of agriculture and veterinary medicine were separated from the University of Indonesia to form one independent agricultural university, the Institut Pertanian Bogor, containing the six different Colleges of Agriculture, Veterinary Medicine, Animal Husbandry, Fisheries, Forestry, and Agricultural Technology.

Project Developments:

The Kentucky team was primarily occupied with assisting in strengthening instruction, in faculty training, and with purchasing basic teaching and laboratory equipment. The team members initially did a good deal of teaching, while in the last few years more emphasis was placed on working with ex-participant counterparts in research, laboratory development, extension, and publications. Some team members were involved in research projects with Indonesian staff members, and extension activities received lower priority.

The contract called for a 17-man team. Between 1957 and 1965, 39 long-term U.S. staff members had served in the areas of general agriculture, agricultural engineering, agricultural extension, agronomy, plant sciences, animal husbandry, chemistry and physics, horticulture, home economics, veterinary science, animal sciences, rural sociology and marketing, forestry, food technology, and fisheries. In addition, there were three administrative assistants and five secretaries. Animal husbandry, veterinary science, and fisheries contract staff totalled 13; plant science, agronomy, horticulture, and forestry totalled ten; home economics and food technology were six; basic physical sciences, four; agricultural economics and sociology, three; and one each in general agriculture, agricultural engineering, and agricultural extension.

To September, 1965, a total of 200 participants had been trained in the U.S. Of this number, 98 came from the Faculty of Agriculture, 21 from Forestry, eleven from Fisheries, 51 from Veterinary Medicine, and 19 from Animal Husbandry. By September, 1965, nine had obtained Ph.D. degrees, 65 had obtained masters degrees, and 92 had non-degree training for one year. About 34 were still studying.

The contract budget amounted to \$5,542,676, including provision for equipment purchase.

UNIVERSITY OF KENTUCKY

Host Country: Guatemala

Host Institution: Faculty of Agronomy, University of San Carlos, located at University City

Type of Project: Degree-granting institution (college of agriculture)

Effective Dates of Project: September 11, 1957, to June 30, 1963

Project Objectives:

The Faculty of Agronomy of the University of San Carlos grants a degree of Ingeniero Agronomo, based on six years of study.

The project's general objective was to assist the University of San Carlos in improving its program in higher agricultural education. More specifically, Kentucky was to assist in the formulation of plans and specifications for the Faculty laboratories and the library; to assist in appraisal and improvement of the curricula, course content, teaching methods, and use of laboratories in terms of scientific and practical aspects of agriculture; to assist in appraising the administrative structure of the Faculty and its relationship to other University units and to outside agencies; to advise in the organization and needs of the library; to provide for graduate or specialized participant training; to provide for some scholarships to selected undergraduate students in the Faculty; and to provide books and specialized scientific equipment in support of the advisory teaching programs.

Project Development:

The contract program was heavily oriented toward assistance to the teaching program, through consultation on laboratory plans and equipment; recommendations concerning curricula, teaching methods, and use of the laboratories; advice on library needs and list of books to be purchased; and participant training.

One long-term Kentucky staff member served as Administrative Advisor and Chief of Party for five years. His efforts were supplemented by a series of six short-term consultants in the fields of library, biometry and statistics, forestry, soils, entomology, and animal science.

A total of 18 participants were trained for varying periods of time. Five were trained for periods from six months to 18 months in the fields of library, biometrics, bacteriology, plant genetics, and soils and irrigation. Thirteen others had one-month observation tours in the fields of administration, agricultural extension, agricultural engineering, genetics, entomology, chemistry, horticulture, nutrition, plant pathology, and soils. Some 34 undergraduates in the Faculty were awarded 54 one-semester AID scholarships.

The contract budget amounted to \$236,835, including provision for purchase of scientific equipment and books.

UNIVERSITY OF MASSACHUSETTS

Host Country: Japan

Host Institution: Faculty of Agriculture, Hokkaido University, located at Sapporo

Type of Project: Degree-granting institution (college of agriculture)

Effective Dates of Project: November 18, 1957, to August 31, 1961

Project Objectives:

The ultimate objective of the program was to improve agricultural production and marketing in Japan, through assisting in the further development of the Faculty of Agriculture, and in the development of closer relationships between Hokkaido University and the Japanese Ministry of Agriculture in agricultural research and extension programs. The program was to develop the role of the university in the total community, and to help integrate agricultural instruction, research and extension.

Project Development:

A total of five Massachusetts staff members served in Japan in an advisory capacity in the areas of forage crops, food technology, poultry, home economics, and agricultural marketing. All gave lectures and seminars and conducted

research in their subject fields. The programs in forage crops, agricultural marketing, and food technology were largely completed by termination of the contract, while additional work remained for completion of the poultry and home economics programs.

Altogether 40 participants were trained in non-degree programs for up to one year each in the U.S. Fields represented included agricultural chemistry; dairy, poultry and animal science; agricultural engineering; agronomy; marketing; food technology; horticulture; forestry; plant pathology; wildlife; veterinary science; and university farms administration.

The total budget from November 18, 1957, to August 31, 1961, was \$541,658, including provision for purchase of reference materials, and demonstration and research equipment.

UNIVERSITY OF MASSACHUSETTS

Host Country: Malawi

Host Institutions:

- (1) Colby Agricultural Training Center, located near Lilongwe
- (2) Bunda College of Agriculture, located at Bunda
- (3) University of Malawi, located at Blantyre

Type of Project: Government Ministry (extension, technical agricultural training, and diploma level school)

Effective Dates of Project: January 17, 1963, to date

Project Objectives:

The contract is aimed at improvement of agricultural extension and extension training activities in Malawi. Specifically, the Massachusetts team is to assist in developing and improving the curriculum and teaching methods at the Bunda and Colby schools in conducting in-service training for agricultural extension workers, and in conducting training courses in agricultural cooperative organization and management. Extension activities include assistance in improving agricultural information, demonstrating extension techniques, and developing rural youth organizations. The team is also to help establish pilot credit areas in the Ministry's intensive extension areas, to train credit supervisors for these and other areas, to help establish courses in agricultural credit at the Colby and Bunda schools, and to assist in short courses on agricultural credit for extension workers.

The Colby Agricultural Training Center provides technical pre-service and in-service training for agricultural extension agents. The newly opened Bunda College of Agriculture provides a three-year diploma level curriculum aimed at pre-service training of agricultural extension agents. Eventually the Bunda school will be upgraded into a four year degree-granting institution as part of the University of Malawi.

Project Development:

Massachusetts activity has focused on extension work and agricultural credit and on development of the Bunda College of Agriculture. U.S. staff members have worked with pre-service and in-service extension training at the Colby and Bunda schools, with a Ministry supervised credit program, and have had teaching assignments at the Bunda College of Agriculture.

By the end of 1966, seven long-term U.S. staff members had served in the areas of agricultural extension, agricultural credit, agricultural science, and agricultural biology. A six-man team is authorized, including two positions funded partly by USAID and partly by the host government under the "topping-off" administrative arrangement. A short-term consultant in agricultural curriculum was utilized also.

Participants are funded both under the contract and by USAID directly. By 1966 there had been eight short-term participants in the fields of extension supervision, agricultural information techniques, and extension education. A total of nine participants with degree-level training has been planned as additions to Malawi's trained manpower pool; these persons may be used for future staff.

The contract budget from January 17, 1963, to November 30, 1966, totalled \$387,526, of which \$193,686 was budgeted for the period of December 1, 1965, to November 30, 1966. A token amount is included for equipment under the contract.

The United Kingdom, FAO, and the U.S. Peace Corps have also supplied teachers at the Colby and Bunda schools.

MICHIGAN STATE UNIVERSITY

Host Country: Colombia

Host Institutions: Two Faculties of Agriculture of the National University of Colombia, located at Palmira and Medellin

Type of Project: Degree-granting institution (colleges of agriculture)

Effective Dates of Project: December 12, 1951, to March 31, 1959

Project Objectives:

Michigan State was to advise and assist the two colleges of agriculture in developing, operating and evaluating their programs of teaching, research and extension in agriculture, animal husbandry, forestry, farm management, and related fields.

Project Development:

During the first few years of the program, chief contract attention was given to instruction--improvement of the curricula, revision of courses and organization of new courses, preparation of teaching aids, and improvement of teaching methods. Later in the program, emphasis was shifted to extension activities--stimulating an organized program of short courses, farm demonstrations, field trials, and extension work in cooperation with other agencies.

Although the team members acted principally as advisors, they did some teaching themselves. A total of 24 long-term staff members served between 1951 and 1959 in the fields of agricultural engineering, animal science, soils, poultry, agricultural economics, forestry, and crops. In addition, one short-term consultant in forestry was used. A seven-man team was authorized.

Thirty-one participants were trained under the contract (one-half from each Faculty). Fields represented were animal husbandry and dairy, forestry, soils, plant pathology and physiology, agricultural engineering, agricultural economics, home economics, horticulture, agronomy, and entomology. Three completed bachelors degrees, eleven completed masters degrees, and one finished a Ph.D. The remainder were trained in short-term programs.

Contract expenditures (December 1, 1951, to April 21, 1959) totalled \$914,031.

The Rockefeller and Kellogg Foundations also provided substantial support to the two Faculties of Agronomy. Kellogg funds were utilized for research, agricultural engineering buildings, a library, and dormitory equipment. Rockefeller support was concentrated principally at Medellin in the area of research; in 1958 the Faculty at Palmira received a large grant for installation of the dormitory equipment and modernization of laboratories.

Upon termination of AID funding, the Kellogg Foundation financed a continuation of the Michigan State project at both institutions until 1962.

MICHIGAN STATE UNIVERSITY

Host Country: Nigeria

Host Institution: University of Nigeria, located at Nsukka and Enugu in the Eastern Region

Type of Project: Degree-granting institution, to assist some units of the University of Nigeria (colleges of engineering, education, agriculture, science, business administration; the Divisions of General Studies and Extramural Studies (Continuing Education); and the Economic Development Institute)

Effective Dates of Project: March 18, 1960, to date

Project Objectives:

The overall objective of the project was to help develop a total University of Nigeria which would serve the specific economic, social and cultural needs, problems and goals of Nigeria. Michigan State was to assist in planning the organizational structure, administration, facilities, curricula, research, equipment requirements and staff training requirements necessary for the University to reach a projected enrollment of 6,000 students in 1972. Specific focal subject areas of the contract were the Faculties of Engineering, Education, Agriculture, Science, and Business Administration; the Divisions of General Studies and Extra-Mural Studies (Continuing Education); and the Economic Development Institute. Assistance was to directly relate to instructional, research, extension, and administrative activities, as well as to training Nigerians to assume all responsibilities through in-service and participant arrangements. Michigan State was also to give attention to an analysis of the social and economic problems of Nigeria and to help establish a University Research Program.

The University of Nigeria was an entirely new institution which opened in October, 1960. Michigan State representatives thus were involved with the early planning.

Project Development:

As indicated above, agriculture was only one facet of contract operations. While agriculture was a very small part of contract operations for the first three years, by fiscal year 1965 agricultural staff members included about one-third of the total U.S. contract staff. Contract staff members in agriculture have filled both advisory and operational roles. The Senior Agricultural Advisor served also as the Dean of the Faculty of Agriculture during the early years. Staff members have done some teaching and have conducted some research. By mid-1967, 18 long-term Michigan State staff members in agriculture had served in the areas of animal science, agricultural engineering, veterinary science, University Farm management, poultry pathology, plant pathology, home economics, soil and plant science, rural sociology, agricultural economics, and agricultural administration. Twelve short-term staff members had been utilized in agricultural engineering, veterinary medicine, animal science, plant and soil science, food technology, land use, and home economics. The authorized nine-man team strength in agriculture included five in agriculture, three in veterinary science, and one in home economics.

By 1967, 57 participants had begun training or had completed training in the U.S., including four short-term non-degree participants. One enrolled in the bachelors degree program, 38 in masters programs, and 18 in doctoral degree programs. Agricultural fields represented include agricultural economics, plant and soil science, agricultural engineering, agricultural chemistry and bio-chemistry, botany, forestry, horticulture, plant pathology, animal science, and veterinary science. A substantial number have been enrolled in agronomy or plant science or related fields.

Total contract expenditures from March 18, 1960, to March 31, 1968, were \$8,001,633. Provision for equipment is included.

Several agencies in addition to AID have contributed substantial amounts to the development of the University of Nigeria. AID contract support to the University has been closely coordinated with appropriate United Kingdom agencies since its inception. A Joint University Advisory Committee, composed of two representatives from the University of London, two from Michigan State University, and two from the University of Nigeria, has met annually to review the University's development and to advise its governing body. In addition to their role in planning and guidance, the British have provided \$3,500 for books and \$53,500 for equipment to the University of Nigeria. Other donors of major grants and their areas of interest include the Netherlands Government (College of Engineering), UNICEF and FAO (Home Economics and Agriculture), and the Peace Corps (provided several volunteers to teach in various fields).

With the outbreak of the Nigerian civil war in 1967, the Michigan State advisers were evacuated to the U.S. and contract activities were temporarily suspended.

MICHIGAN STATE UNIVERSITY

Host Country: Republic of China (Taiwan)

Host Institutions: (1) College of Agriculture, National Taiwan University (NTU), located at Taipei, and
(2) Taiwan Provincial Chung Hsing University (TPCHU), located at Taichung. TPCHU was formerly the Taiwan Provincial College of Agriculture.

Type of Project: Degree-granting institutions (two colleges of agriculture)

Effective Dates of Project: July 25, 1960, to July 31, 1964

Project Objectives:

The general contract objectives were to assist in developing and strengthening the total college program of agricultural education at the two universities. This was to be accomplished through contract assistance in developing and improving curricula, course content, and teaching methods; assistance in developing coordinated agricultural research and agricultural extension programs; assistance in planning for procurement and utilization of equipment and materials; assistance in selecting participants for U.S. training; and assistance in the improvement of administrative organization and procedures.

Project Development:

Michigan State team members advised on general administrative questions; assisted with curricula improvements in all areas; helped organize in-service training courses, seminars, and summer sessions; consulted with various government and private agencies on Taiwanese agricultural problems in a number of fields; surveyed graduates of the colleges of agriculture and vocational agriculture schools; helped develop research programs; helped provide for some new

departmental building facilities; consulted on a study of the future role of the Colleges of Agriculture in Taiwan, sponsored by the Ministry of Education; helped involve the agricultural education department of TPCHU in the in-service training and practice teaching for vocational agriculture teachers; and helped to formulate an experimental extension specialist project for TPCHU, involving both research and extension activities and designed to serve as a link between the college of agriculture and the field extension program.

A Michigan State team member worked at one time or another with every department except one in the two colleges of agriculture. Eight long-term staff members participated in the contract program, five of whom were located at NTU and three of whom were located at TPCHU. Those at NTU included two Chiefs of Party (both agricultural engineers), two agricultural extension advisors, and one economic entomologist. Those at TPCHU included two agricultural education advisors and one animal husbandry advisor. Five Michigan State staff members served as three-month consultants. A plant physiologist and an agricultural economist worked at NTU, and a forester and two soil scientists worked at TPCHU.

A total of 14 participants were trained in the U.S. Two received Ph.D.'s, nine received masters degrees, and three undertook academic non-degree programs. Fields represented were agronomy, animal science, agricultural engineering, entomology, forestry, horticulture, plant pathology, and veterinary medicine.

The contract budget totalled \$662,013 (July, 1960, to July, 1964).

The Agricultural Development Council provided some assistance in the field of agricultural economics at both NTU and TPCHU.

MICHIGAN STATE UNIVERSITY

Host Country: Argentina
Host Institution: Balcarce Agricultural College, located near Balcarce
Type of Project: Degree-granting institution (agricultural university)
Effective Dates of Project: February 15, 1965, to date

Project Objectives:

Balcarce Agricultural College, a private institution, was formed in 1960 and located on the grounds of the National Institute of Agricultural Technology (INTA) Experiment Station in 1962. The College was created with the specific objective of integrating teaching with the research and extension activities of INTA.

Michigan State's objective is to advise and assist in the development of the Agricultural College-INTA complex into a land-grant type college of

agriculture, with full integration of teaching, research and extension. The project includes the development of the Balcarce College of Agriculture in terms of staff, buildings, equipment and curriculum. Some participant training is to be provided both for College-INTA staff members to do graduate work in specific fields of agriculture, and for some staff members to receive specialized training in the administration and operation of a land-grant institution.

Project Development:

The Michigan State project is unique in several respects: (1) it is one of the few AID technical assistance projects in Latin America that is tied to a private institution; (2) the host institution is one of the few Latin American agricultural education institutions that is physically and administratively integrated with a government research and extension agency; (3) the Michigan State project is the only one in Latin America where AID has directly contributed to a fund-raising program for the host institution.

A four-man team from Michigan State University visited Argentina during April and May, 1965, to prepare a comprehensive "Economic Analysis and Feasibility Study of Balcarce Agricultural College." This study was conducted to gather data to be used in support of a request for a large USAID loan for buildings and equipment.

Contract efforts have focused on assistance with institutional organization rather than with specialized subject areas. One long-term Michigan State adviser has been assisting with organizational and administrative questions, with the critical needs of the College for fund-raising, and with ways to link the College and Experiment Station to the country's agriculture. Two other long-term advisors have served in the areas of curriculum development and development of modern biology courses. Three short-term advisors during 1966 and 1967 provided support in areas of biological science, soil science, and plant pathology curriculum development and teaching methods. A specialist from the U.S. was called upon twice for short periods to provide advice on a promotional program in Argentina to raise funds for the College. The contract now provides for five long-term staff plus four short-term consultants per year to assist with special problems such as curriculum development, research activities, and administrative integration at Balcarce.

Two participants had been selected as of January, 1968, for study in the U.S.

The budget from February 15, 1965, to February, 1968, totals \$411,400, including a minimal amount for equipment and teaching aids.

FAO and the U.N. Special Fund carried out a five-year cooperative project between 1962 and 1967 with INTA Experiment Station for purposes of staff training and research. Seven FAO technical experts were on board by June, 1965, in the fields of animal fertility, animal biochemistry, animal production, animal pathology, plant biochemistry, and soils. Required laboratory equipment was also supplied. Some of these FAO experts and their counterparts taught in the Agricultural College program.

UNIVERSITY OF MINNESOTA

Host Country: Korea (Republic of)

Host Institution: Seoul National University, located at Seoul. The College of Agriculture is located at Suwon

Type of Project: Degree-granting institution (colleges of agriculture, engineering, medical sciences, and public administration)

Effective Dates of Project: July, 1954, to June 30, 1961 (public administration extended to June, 1962)

Project Objectives:

The University of Minnesota was to assist in the rehabilitation of Seoul National University and in raising the standards of teaching, research and administration of the university in the fields of agriculture, engineering, and medicine. Public administration was added later.

Project Development:

Agriculture was only one phase of contract operations. The relative magnitude of the agricultural component is indicated by the following figures. Forty-five of 286 participants were in agriculturally related fields. Ten of 55 U.S. staff members were in agriculture. Approximately one-sixth of the equipment and books purchased went to the College of Agriculture, while close to one-half of the facilities' rehabilitation money went to the College of Agriculture.

An unusual feature of the College of Agriculture segment of the project was its reliance on short-term U.S. personnel. One of the ten staff members in agriculture served in an advisory capacity in the area of agronomy for four years; nine short-term advisors served in the fields of administration, agricultural engineering, library, forestry, soils, entomology, plant pathology, and animal husbandry. These advisors worked with college and department staff members in their respective disciplines on matters of administration, curricula, selection of participants, and physical plant and equipment. Practical teaching-research programs were encouraged.

College of Agriculture participants were trained in the fields of agriculture, forestry, animal science, agricultural engineering, agricultural chemistry, agricultural economics, agricultural biology, sericulture, home economics and administration. By 1961, 15 had received an M.S. degree, four a Ph.D. degree, and 12 were continuing their studies. The rest were non-degree.

The budget for the entire contract operation from 1954-1961 was approximately \$9,494,009. Of this amount, roughly \$2,100,000 was spent for teaching, classroom, and laboratory equipment and library materials, and roughly \$2,700,000 was spent for rehabilitation of physical facilities.

The Agricultural Development Council also assisted the College of Agriculture at Suwon in the field of agricultural economics.

MISSISSIPPI STATE UNIVERSITY

Host Country: Brazil

Host Institutions: Ministry of Agriculture and State Secretariats of Agriculture. Team headquarters are in Rio de Janeiro.

Type of Project: Government ministry ("Action" program)

Effective Dates of Project: March 10, 1964, to date

Project Objectives:

The broad contract objectives are to develop a corps of trained Brazilian seed technologists and seed certification specialists, and to promote enactment and enforcement of effective legislation and organizational procedures which will stimulate the development of a private commercial certified seed industry in Brazil.

In addition, Mississippi is to assist in planning accelerated seed production programs, establishing an efficient and effective seed distribution program, developing effective seed certification programs, establishing seed testing laboratories, and performing research on seed problems of major importance. Mississippi personnel are to conduct a seed testing and seed processing training course on a national level, which can serve as a model for future training courses.

The project concentrated initially on South and Central Brazil, with Northeast Brazil added in 1965.

Project Development:

The Mississippi team has assisted with both technological aspects and policies and organizational procedures relating to the seed program, on the philosophy that technological development is more meaningful when carried out within the framework of a total legislative and organizational plan. Much team effort has gone into training and discussion conferences with federal and state committees which drafted proposed seed legislation for the federal government and for five states. A federal seed law was passed. Development of a private seed industry and development of effective federal-state relations in the seed program have been encouraged.

The team has also sponsored and participated in a large number of training and extension projects in several states. Numerous seed appreciation short courses have been given throughout the country. One of the principal short courses given was the "International Training Course on Seed Improvement for Latin America" held at Campinas, Sao Paulo, in November, 1964, and co-sponsored by the International Seed Testing Association.

By 1966, six Mississippi State long-term staff members in seed improvement and technology had served in Brazil. Their efforts were supplemented by

six short-term consultants in the areas of seed testing, seed legislation, laboratory evaluation, program planning, seed processing, and vegetable seed. Team headquarters were in Campinas, Sao Paulo for the first two years and were then shifted to Rio de Janeiro. Staff have also served in Recife and Salvador in Northeast Brazil.

By 1967, two participants had begun masters degree programs in agronomy-seed technology.

Contract expenditures from March 10, 1964, to December 31, 1967, were \$776,675. Several thousand dollars' worth of seed testing, processing and storage equipment have been ordered for use by state and federal agencies.

UNIVERSITY OF MISSOURI

Host Country: India

Host Institution: Orissa University of Agriculture and Technology, located at Bhubaneswar in the State of Orissa

Type of Project: Degree-granting institution (agricultural university)

Effective Dates of Project: March, 1957, to date

Project Objectives:

The central objective currently is the development of a land-grant type university for the State of Orissa. The University includes the present College of Agriculture organized in 1954, the 800 acre college farm, the Orissa College of Animal Husbandry and Veterinary Science, and a new College of Agricultural Engineering.

Project Development:

Up to 1964 the University of Missouri was engaged in supplying technical assistance to five colleges of agriculture and four colleges of veterinary science in the States of Orissa, West Bengal, Bihar, and Assam.

Fourteen staff members worked with the nine cooperating colleges from 1957 to 1964, introducing improved seeds, researching garden tractors, assisting with farm management at Assam Government Dairy Institute, putting on demonstrations, advising new colleges, and helping with irrigation developments. Laboratory equipment associated with extension blocks was set up at the colleges; equipment for experiment stations was acquired; open shelf libraries were installed at seven of the colleges; postgraduate training was initiated, and an agriculturally-oriented university in West Bengal (Kalyani University) was established in 1960.

Orissa University of Agriculture and Technology was inaugurated in August, 1962. The constituent colleges were transferred to the new university in February, 1963. A college of basic science and humanities opened in 1965. Since 1964 Missouri has assisted only this university. The present contract calls for a maximum of six long-term and three short-term positions.

All but one of the 112 participants (up to 1966) trained at the University of Missouri. There were 58 from Orissa, 19 from Bihar, 18 from Assam, and 17 from West Bengal. Fields of study included veterinary medicine, field crops, extension, animal husbandry, soils, horticulture, dairy, poultry, entomology, agricultural chemistry, agricultural economics, agricultural engineering, and botany. Seventeen had completed the Ph.D. and 73 the Master of Science degree by early 1967.

The contract budget provided for the period March 7, 1957, through October 31, 1965, was \$2,032,968, of which \$828,620 were earmarked for equipment. The budget from November 1, 1965, through October 31, 1966, was \$196,540, including about ten percent for acquiring equipment.

MONTANA STATE UNIVERSITY

Host Country: Jordan

Host Institution: Ministry of Agriculture

Type of Project: Government ministry (extension). Team headquarters were at Amman.

Effective Dates of Project: September 29, 1954, to June 30, 1957

Project Objectives:

Montana State University was to assist the Government of Jordan in developing and implementing a program to train Jordanians in (1) agricultural extension methods, (2) home economics, (3) agricultural marketing, and (4) other fields of agriculture as agreed upon.

Project Development:

Two contracts were signed by Montana State University. The first contract called for the contractor to work with the Cooperative Department. The second contract called for assistance to the Joint Fund in developing programs in irrigation, forest and range resource management.

Under the first contract, contract staff members assisted in establishing an extension service in agriculture and home economics, in training Jordanians in subject matter and extension methods, grading and marketing of agricultural products, and in establishing demonstration research programs.

Under the second contract, contract staff worked closely with the U.S. Operations Mission and assisted with operation of government forest nurseries, training local government employees in nursery operation, establishing a tree distribution system, and supervising the land development terracing program.

Seven Montana State staff members were assigned for two-year tours in Jordan. The Suez Crisis in October, 1956, resulted in evacuation of some of the staff a few months before the completion of their two-year tours. An eighth staff member who arrived in the spring of 1956 served for less than a year.

There were no participants under either contract.

The total expenditures under the first contract were \$123,000. The budget for the second contract was \$200,000.

MONTANA STATE UNIVERSITY

Host Country: Paraguay

Host Institution: Faculty of Agriculture and Veterinary Science,
National University of Asuncion, located near
Asuncion

Type of Project: Degree-granting institution (college of agriculture)

Effective Dates
of Project: September 30, 1960, to June 30, 1963

Project Objectives:

The basic contract objective was to assist in upgrading the instructional program at the Faculty of Agriculture and Veterinary Science, through improved curricula and teaching methods and aids. Priority was to be given to plant science, livestock, agricultural economics, and agricultural engineering. Montana State staff members were also to advise and assist in strengthening the practical aspects of the Faculty teaching program, in developing short-term refresher training programs for agricultural workers, and in providing on-the-job training for the Faculty staff.

Project Development:

Contract efforts focused on the instruction program. The team advised on curriculum improvement and method and scope of examinations. Some physical plant improvements were begun, including a shop, a machinery repair center, and laboratories and classrooms. Three long-term Montana staff members in the fields of range management, agricultural economics, and agricultural engineering served in Paraguay between 1960 and 1963.

Participants were funded directly by USAID. Four participants were sent to the U.S. for further training in animal production, agrostology, agricultural economics, and soils.

The projected contract budget from September, 1960, to June 30, 1963, was \$190,068, including \$87,778 actually spent from 1960-1962. Final figures are not available. A small provision for commodities is included.

UNIVERSITY OF NEBRASKA

Host Country: Turkey

Host Institutions: (1) Ataturk University, located at Erzurum, and
(2) Ankara University, located at Ankara (fields of agriculture, veterinary science, and home economics)

Type of Project: Degree-granting institution (agricultural university)

Effective Dates of Project: March 28, 1955, to date

Project Objectives:

The general objectives of the project were to up-grade and expand agricultural training at Ankara University and to establish and develop Ataturk University into an agricultural institution with resident instruction, research, and extension functions. Early efforts were centered at Ankara University while plans were being made for the new Ataturk University to be located in eastern Turkey. Ataturk University was established by law in 1957, and the first class of 128 students was matriculated in the fall of 1958.

Project Developments:

Beginning in 1955, the emphasis at Ankara University was in strengthening programs in agriculture, home economics, and veterinary medicine. The contract work in agriculture and veterinary medicine was phased out in mid-1963 and the work in home economics was phased out in July, 1965.

With the establishment of Ataturk University in 1957, Faculties of Agriculture and Sciences and Letters were set up. Departments of agricultural economics, agricultural engineering, animal science, plant science, and soil science were organized in the Faculty of Agriculture. Four language departments were initially established in the Faculty of Science and Letters with economics, business and social science work offered to students at a later date. A Faculty of Medicine was added in 1966.

Student enrollment increased to 1,700 students by 1967, with about 75 in medicine and the remaining 1,625 about equally divided between the two Faculties of Agriculture and Science and Letters.

A Research Institute was established in the Faculty of Agriculture and research projects have been developed in the several departments. A university-wide Extension Institute was started in 1966.

Forty-five University of Nebraska staff members served long-term assignments between 1955 and 1967. In addition to a wide variety of specialists in agriculture, medicine, and home economics there were staff members in architecture, engineering, library, biological sciences, chemistry, English, physics, and mathematics. Authorized team strength reached a peak of 20 in 1959, and has since been gradually reduced to nine in 1965. With the shortage of Turkish staff members at Ataturk, contract staff members assume many operational duties and responsibilities in addition to their advisory roles.

There were 176 participants trained in the U.S. by the end of 1966, with roughly two-thirds of them from Ankara University and one-third from Ataturk University. Participants were trained in many disciplines with six or more from each of the following fields: agricultural economics, animal science, agronomy, agricultural engineering, dairy science, horticulture, home economics, veterinary medicine, food technology, and soil science.

Four of the participants studied for a bachelors degree, 35 for a masters degree, and five for a doctoral degree under contract auspices.

The firm budget for the period from March 28, 1955, to June 30, 1966, was \$3,447,000, and the projected budget for the year beginning July 1, 1966, was \$327,600. The budget for commodities was \$220,500 to June 30, 1966, and \$2,500 for the 1967 fiscal year.

The University of Nebraska program of assistance to Ataturk University will phase out as of June 30, 1968, by which time all Nebraska personnel will have departed.

UNIVERSITY OF NEBRASKA

Host Country: Colombia

Host Institutions:

- (1) National University Schools of Agriculture and Veterinary Medicine, located at Bogota, Medellin, and Palmira;
- (2) Colombian Institute of Agriculture (ICA), headquartered at Bogota

Type of Project: Degree-granting institutions (colleges of agriculture) and government agency (research and extension)

Effective Dates of Project: March 7, 1966, to date

Project Objectives:

ICA was organized in 1963 as an autonomous government agency to stimulate, coordinate, and carry out agricultural and livestock research, teaching and extension. ICA prepared a five-year General Development Plan designed to (a) improve and expand the National University agricultural student body and faculty at the undergraduate and graduate levels, (b) improve and expand the agricultural experiment stations and agricultural extension service in Colombia, and (c) coordinate and integrate these three basic functions.

The contract is designed to improve the quality of agricultural education at the host institutions in instruction, research, and development, and to help the ICA in implementing its General Development Plan. Specifically, Nebraska is to assist ICA and the National University in determining targets for numbers of graduates and the plans needed to realize the targets; in reviewing and improving course content and curricula, particularly in the areas of animal science, veterinary medicine, socio-economics, agricultural engineering, and agricultural information and development; in encouraging faculty and student participation in extension and research activities; in faculty in-service and participant training; and in improvement of teaching methods, student selection and counseling, and administrative procedures.

Project Development:

The Nebraska project is unique in two respects:

(1) While the University of Nebraska is the contractor, other institutions in the Mid-America State Universities Association (MASUA) are cooperating in reassigning members of their staff to the project. MASUA department chairmen, college administrators, and university administrators visited Colombia early in 1966 to assist in developing the program. These consultation visits continue as an integral part of program development.

(2) Three U.S. agencies--AID, the Ford Foundation, and the Kellogg Foundation--are cooperating closely in financing Nebraska activities. AID is principally interested in improving Colombian agricultural education in the priority fields of animal science, veterinary medicine, socio-economics, agricultural engineering, and agricultural information and development. Staffing projections as of mid-1967 show a total of 41 long-term staff. The contract budget from March 15, 1966, to April 1, 1967, was \$534,000, including provisions for participants and equipment.

The general objective of the Kellogg Foundation program is to develop Colombian competence in extension information and development. Kellogg plans to finance three long-term staff members in extension and 25 participant trainees for a total cost of about \$578,786 over a three-year period.

The general objective of the Ford Foundation program is to develop Colombian competence in agricultural economics. Ford plans to finance three long-term staff in agricultural economics (production economics, agricultural marketing, and agricultural policy), three U.S. graduate students to carry out thesis research on a Colombian problem, and a total of 60 participant trainees (40 for masters degree and 20 for Ph.D. degree in agricultural economics) at a total cost of about \$1,370,000 over a five-year period.

In addition to these agencies, the Rockefeller Foundation and several international organizations are also assisting ICA in implementing its development plans.

NEW MEXICO STATE UNIVERSITY

Host Country: Paraguay

Host Institution: Faculty of Agriculture and Veterinary Science,
National University of Asuncion, located near
Asuncion

Type of Project: Degree-granting institution (college of agriculture)

Effective Dates
of Project: June 22, 1964, to present

Project Objectives:

New Mexico is to assist in developing the Faculty of Agriculture through improvements in the areas of college administration, training of teaching staff, curricula, teaching and laboratory facilities, Faculty cooperation with the rest of the university, and agricultural research.

Project Development:

Contract staff have encouraged reorganization of teaching departments at the Faculty, an inventory of programs and resources, and changes in curricula. They have worked with Faculty staff members in developing research programs, curricula, and laboratories in the subject areas listed.

The contract relies heavily on short-term consultants. One resident staff member, Chief of Party and Educational Advisor, serves as liaison and programmer for the authorized short-term consultants (12 man-months per year) and participants. Through 1967, 13 short-term consultants had visited Paraguay in the areas of agricultural economics, statistics, agricultural engineering, veterinary parasitology, veterinary medicine, biology, horticulture, animal husbandry, weed specialist, and animal nutrition.

No provision for participants is included in the contract. The budget from June, 1964, to June 30, 1968, was \$406,000, including a substantial provision for equipment and teaching aids.

NORTH CAROLINA STATE UNIVERSITY

Host Country: Peru

Host Institutions: (1) Servicio Inter-Americano de Produccion de Alimentos (SIPA), Ministry of Agriculture, Lima
(2) National Agrarian University, located at La Molina

Type of Project: Government ministry (research and extension agency and "action" programs); and degree-granting institution (agricultural university)

Effective Dates of Project: November 15, 1954, to present

Project Objectives:

The North Carolina program in Peru has gone through three principal phases since its inception. Between 1954 and 1961, the contract objective was to strengthen Peru's agricultural research programs through work with SCIPA (predecessor agency to SIPA), the national agency for research, extension and promotion of agriculture. A major component was the training of research staff both in the U.S. and in specialized and post graduate programs at the National School of Agriculture (now the National Agrarian University). Beginning in 1962, the North Carolina program was greatly expanded in size and scope to include assistance both to SIPA in agricultural research and extension programs and to the National Agrarian University in development of construction plans, organization, curriculum, and staff training. Emphasis was to be placed on plant and animal sciences, agricultural economics, and social sciences. In addition, North Carolina was to encourage coordination in research, extension and teaching activities between SIPA and the Agrarian University.

Beginning in 1967, the contract objectives focus more closely on creating a maximum impact on the level of food production and improving marketing efficiency within Peru. The new program orientation, termed the "Commodity In-depth Program," features concentration of resources in the five high priority commodity areas of potatoes, livestock, fruit, beans, and rice. The Commodity In-depth Program is based on coordinating production and marketing components of these commodities through a closely integrated research, extension, and fomento program. Although some of the North Carolina staff will continue as general advisors to SIPA and the Agrarian University, over 70 percent of the contract budgetary support will be allocated to these commodity programs.

Project Development:

Emphasis between 1954 and 1961 centered on development of agricultural research programs. Between 1962 and 1967, the program was expanded to include assistance to agricultural extension and instruction. Contract long-term staffing was increased from about seven to 24. North Carolina has given and will continue to give general advisory assistance to the Agrarian University in (1)

Social Science Faculty development jointly with the foundation grant, (2) architectural and engineering services for the new physical plant, (3) university administration and organization, and (4) concentration on total program development in the Faculties of Agronomy and Animal Sciences.

The new Commodity In-depth Program gives the North Carolina staff member joint responsibility for program planning and implementation along with his Peruvian counterpart, thus representing a shift from advisory roles to more operational roles. An unusual feature of the new program is the "Campus Co-operators," staff members on the North Carolina State University home campus who are funded part-time by the AID project. These Campus Cooperators serve as a continual technical resource to the overseas staff, pursue joint research projects with overseas counterparts, and serve as faculty advisors to participants to help channel their thesis research into lines pertinent to the Commodity Program objectives.

By the end of 1965, 49 long-term staff members had served in the areas of research and administration (7), plant related sciences (15), animal related sciences (12), extension (3), agricultural engineering (1), agricultural economics (7), home economics (1), and non-agricultural fields. Through mid-1966, 56 different short-term consultants had advised in plant sciences (25), animal sciences (11), administration and research, extension, agricultural engineering, agricultural economics, home economics, and other fields.

To mid-1966, 72 degree candidates and 91 short-term participants had begun study in the U.S. Of the 72 degree candidates, 3 were working on a bachelors degree, 61 on a masters degree, and 8 on a Ph.D. Thirty-two of these persons had completed their degrees by mid-1966. Fields represented by five or more degree candidates were plant related sciences (28), animal related sciences (10), agricultural economics and rural sociology (14), and agricultural engineering (5). The Agrarian University supplied 68 percent of the degree candidates, and 75 percent of the short-term participants came from SIPA.

Contract expenditures from November, 1954, to June, 1966, were \$4,282,731, including over \$180,000 for equipment. The projected budget for the 1966-67 year was \$1,038,725.

In addition to AID financing, the Agrarian University and SIPA have received closely coordinated support from the Ford and Rockefeller Foundations. These two foundations are cooperating to finance 3-4 economists and sociologists on the North Carolina team who work with the Department of Economics and Social Science at the Agrarian University, and they have sponsored a large number of participants in degree programs.

THE OHIO STATE UNIVERSITY

Host Country: India

Host Institution: Punjab Agricultural University, with the central campus located at Ludhiana, State of Punjab

Type of Project: Degree-granting institution (agricultural university)

Effective Dates of Project: November 1, 1955, to date

Project Objectives:

The contract objective is to assist in the development of an agricultural university with an integrated program of academic instruction, research and extension to serve the states and territories of Punjab, Haryana, and Himachal Pradesh. The three campuses and the constituent colleges at each are: (1) Ludhiana, Punjab - Colleges of Agriculture, Home Science, Agricultural Engineering, and Basic Sciences and Humanities; (2) Hissar, Haryana - Colleges of Agriculture, Animal Science, and Veterinary Science; and (3) Palampur, Himachal Pradesh - College of Agriculture. A number of experimental farms are being developed in the area.

Project Development:

The Ohio State University began to provide technical advice and assistance to five cooperating agricultural and veterinary institutions in Punjab, Rajasthan, Himachal Pradesh, and Delhi states in 1955. The group leader, and specialists in poultry, farm management, rural sociology, and extension were headquartered at Punjab Government Agricultural College, Ludhiana; the dairy scientist, agricultural engineer and agronomist were stationed at Rajasthan College of Agriculture, Udaipur; the veterinary anatomist and veterinary surgeon were located at Rajasthan College of Veterinary Science, Bikaner; and a dairy technologist worked at the National Dairy Research Institute, Karnal.

In 1961 legislation was completed to establish the Punjab Agricultural University with two campuses, one at Ludhiana and the other at Hissar. With this development the Ohio team began to concentrate its effort at Ludhiana in the Punjab and at Udaipur in Rajasthan. There was active cooperation with the Indian Agricultural Development efforts in these areas also. The Ohio State contract continued to serve the two states under a single contract until November 1, 1964, when a separate contract was signed to provide assistance to the University of Udaipur with a separate team to be located in Rajasthan.

Thirty-seven long-term staff members have served in India in the fields of rural sociology, agricultural economics, animal science, agricultural extension, plant science, agricultural engineering, administration, entomology, soils, dairy technology, food technology, poultry, publications, veterinary surgery, veterinary anatomy, veterinary science, education, home economics, and research. Seven short-term advisors have assisted with college

administration, admissions and records, animal nutrition, dairy engineering, horticulture, veterinary administration, citrus virology, soils and water, and agricultural engineering. The current contract authorizes five long-term staff members and seven short-term consultants.

The Ohio State contract has provided for 138 participants through June, 1968, 123 of whom were trained at Ohio State University. Seventy were from the Punjab, 66 from Rajasthan, and 2 from Himachal Pradesh. About 100 obtained or are working on graduate degrees, including Ph.D.'s. Fields of study include animal science, agronomy, plant pathology, agricultural economics, agricultural engineering, botany, bacteriology, biochemistry, dairy, extension, entomology, horticulture, library science, microbiology, poultry, and veterinary medicine.

The total contract budget for the regional assistance program (September 21, 1955, to October 31, 1964) was \$2,817,836, of which \$762,811 were for commodities. The budget for the Punjab Agricultural University program from July 1, 1967, through June 30, 1968, was \$343,699.

The Ohio State University Department of Agricultural Engineering, supported by the Ford Foundation, is helping to develop the College of Agricultural Engineering at the Ludhiana campus, and has had at least one Ohio State faculty member located there for this purpose.

THE OHIO STATE UNIVERSITY

Host Country: India

Host Institution: Udaipur University, with the central campus located at Udaipur in the State of Rajasthan

Type of Project: Degree-granting institution (agricultural university)

Effective Dates of Project: November 1, 1964, to date (Regional contract 1955-1964)

Project Objectives:

The Ohio State University provided technical advice and assistance to an agricultural college and a veterinary college in Rajasthan between 1955 and 1964 as a part of a regional contract including Punjab State. A separate contract written in 1964 provided for assistance in developing an agricultural university with integration of teaching, research and extension for the State of Rajasthan. The University of Udaipur has three campuses at Udaipur, Jobner, and Bikaner. The constituent colleges are: (1) Agriculture, including School of Home Science, (2) Veterinary and Animal Science, (3) Technology and Agricultural Engineering, and (4) Basic Sciences and Humanities (M.B. College).

Project Development:

Three to four Ohio State staff members have been working with Rajasthan's cooperating institutions since 1957 (see Punjab Agricultural University project description). An act to establish a university under the name of Rajasthan Agricultural University was passed by the Rajasthan Assembly and approved by the Governor in June, 1962, with the principal seat of the University to be at Udaipur. On October 26, 1963, this was amended for a change in name to the University of Udaipur.

Sixty-six participants from Rajasthan have received training, principally at Ohio State University, between 1957 and 1968.

The Ohio State team currently includes six long-term staff members and four consultants. All of the Ohio State staff members are located at Udaipur except the Veterinary and Animal Science specialist, who is located at Bikaner.

The budget total for the year July 1, 1967, through June 30, 1968, is \$328,830, of which \$25,000 is earmarked for commodities and \$62,100 for participants.

THE OHIO STATE UNIVERSITY

Host Country: Brazil

Host Institution: Escola Superior de Agricultura Luiz de Queiroz (ESALQ) of the University of Sao Paulo, located at Piracicaba in the State of Sao Paulo

Type of Project: Degree-granting institution (college of agriculture)

Effective Dates of Project: March 19, 1964, to date

Project Objectives:

The basic objective is to assist in the development of the College of Agriculture of the University of Sao Paulo with an integrated program of teaching, research, and extension. In addition, Ohio State is to help in development of graduate level courses, short courses, and workshops, in development of a School of Home Economics, and in planning and conducting economic research for the guidance of the state and federal government.

Project Development:

Team effort has been concentrated in the areas of instruction and research. A graduate program was started in 1965 and in 1968 about 100 graduate students at the masters level are enrolled in agricultural economics, animal science, rural sociology, plant pathology, plant nutrition, soils, genetics, mechanics, statistics, entomology, and field crops. Ohio State faculty members are helping to develop courses and graduate programs, and are working with the Brazilian

faculty on research. They have also assisted in setting up special laboratories and in developing the library.

By early 1968, 12 Ohio State long-term staff members and one research associate had served in the areas of agricultural economics, agricultural extension, plant pathology, food technology, animal science, agronomy, entomology, agricultural engineering, and home economics. Three short-term consultants have served in agricultural education, agricultural engineering, and poultry.

Twenty-five participants had begun training in the U.S. by early 1968, 21 for graduate work and 4 for special short-term training.

Contract expenditures from March 16, 1964 to December 31, 1967 were \$881,542 and the budget for the year from January 1, 1968 to December 31, 1968 was \$499,607. Provisions for special equipment and books and participant support are included.

OKLAHOMA STATE UNIVERSITY

Host Country: Ethiopia

Host Institution: (1) College of Agriculture, Haile Sellassie I University, located at Alemaya
(2) Jimma Agricultural Technical School, located at Jimma
(3) Various Ethiopian government agencies

Type of Project: Degree-granting institution (college of agriculture); government ministry (secondary level agricultural school, research, and extension)

Effective Dates of Project: May 16, 1952 to date

Project Objectives:

Oklahoma State University was to assist the Government of Ethiopia in the establishment, development, and operation of the College of Agriculture, Haile Sellassie I University (formerly known as the Imperial Ethiopian College of Agriculture and Mechanical Arts) and the Jimma Agricultural Technical School. Oklahoma was also to assist in development of an effective national extension and home economics service and an agricultural research program. The College of Agriculture was to be patterned after the U.S. land-grant college system including instruction at the bachelor's degree level, agricultural research, and agricultural extension programs. The Technical School was designed both to prepare students to enter the College of Agriculture and to provide terminal secondary education for some.

Project Development:

Contract activity has focused on the College of Agriculture and its research station located at Debra Zeit, and on the Jimma Agricultural Technical School.

Because of the lack of trained Ethiopian personnel, Oklahoma State staff members initially assumed operational roles in all aspects of these institutions. Contract assistance was instrumental in construction of the physical plant, development of the curricula and course content, recruitment and training of Ethiopian staff, and development of research projects of an applied and demonstrational nature. Assistance was also given to the development of an extension program as part of the college. Responsibility for the extension program was transferred from the college to the Ministry of Agriculture in 1963. By 1964 contract activities with the extension service had been phased out. Contract activities with Jimma Agricultural Technical School were phased out in 1966.

The termination date for this contract has been established as 1968. Accordingly, Ethiopian personnel were scheduled to assume operational responsibility in most positions in July, 1966. At this time, the Oklahoma staff members began functioning in an advisory capacity, with exceptions requested by the host institution.

Between 1952 and 1965, 118 long-term U.S. staff members had served in the areas of administration (president, dean of agriculture and directors of research, extension, and instruction); plant-related sciences (including botany, horticulture, agronomy and soils, forestry, and plant sciences); animal sciences (including poultry, zoology, veterinary science, and animal science); basic arts and sciences (mathematics, general science, library, P.E., English); agricultural economics; extension and agricultural information; architecture; farm and station management; agricultural engineering; and secondary school instruction. Team strength between 1952 and 1965 averaged 33 persons per year, with a high of 42 persons and an authorized strength in 1965 of 30 persons. Altogether 18 short-term consultants in the areas of architecture, animal science, agricultural extension, home economics, agronomy, education, administration, agricultural economics, agricultural engineering, and dairy science served from 1952-1965.

Participants were funded directly by USAID at a cost of \$486,000 as of June 30, 1966.

Contract expenditures for the period from May 16, 1952 to June 30, 1966 totalled \$10,500,000, of which \$7,744,000 were for the projects at Alemaya, Debra Zeit, and Jimma. The budget for the 1967 fiscal year was \$661,395. Provision for equipment is included.

OKLAHOMA STATE UNIVERSITY

Host Country: Guatemala (ROCAP)

Host Institution: College of Veterinary Medicine and Zootechnics, San Carlos University, located in Guatemala City

Type of Project: Degree-granting institution (college of veterinary medicine)

Effective Dates of Project: June, 1965 to date

Project Objectives:

The College of Veterinary Medicine of San Carlos University was designated in 1963 as the regional Central American training school for veterinary medicine by the Council of Superior Universities in Central America. The AID Regional Office for Central America and Panama (ROCAP) is sponsoring the contract.

The basic objective is to assist in development of the College of Veterinary Medicine and in development of the College as a regional institution for veterinary medicine. Assistance is to be given in several aspects of institution building, including the physical plant, equipment, administration, faculty, curriculum, instruction, research, and extension.

Project Development:

Architect's line drawings of floor plans for a veterinary medicine building have been prepared and San Carlos University is obtaining financing for construction. The college curriculum has been completely revised. Essential basic items of equipment have been purchased.

One long-term staff member has served in Guatemala, assisted by five short-term Oklahoma State consultants in the areas of public health, physiology and pharmacology, surgery, and veterinary anatomy. Four San Carlos University staff members worked as participants at Oklahoma State during their summer period in early 1966.

Contract expenditures in fiscal 1966 were \$76,489 and in fiscal 1967 were \$109,977.

OREGON STATE UNIVERSITY

Host Country: Thailand

Host Institution: Kasetsart University, located at Bangkok

Type of Project: Degree-granting institution (agricultural university)

Effective Dates of Project: October 14, 1954 to September 30, 1960

Project Objectives:

Kasetsart University has a total of six degree-granting faculties: Agriculture, Forestry, Cooperative Science and Economics, Fisheries, Veterinary Science, and Irrigation Engineering. It is the only institution in Thailand that is oriented primarily toward higher education in the several phases of agriculture.

The general objective of the contract was to strengthen the educational, research and extension programs of Kasetsart University, in some or all of the various departments. More specifically, the contract was to assist the University in upgrading the teaching staff, improving curricula and teaching methods, improving administrative practices, and improving physical facilities (laboratory and classroom facilities, teaching and research equipment, books, and teaching aids.)

Project Development:

Activities tended to focus on resident instruction, staff training, and physical facilities and equipment. Kasetsart University had only a small research program and virtually no extension program.

A total of 17 contract staff members, including three short-term persons, served in advisory capacities in the fields of agricultural education, forestry, soils, business administration, home economics, agronomy, plant pathology, agricultural economics, experiment station administration, agricultural engineering, physics, and chemistry. A six-man team was authorized in the contract.

The Agricultural Development Council supported four additional U.S. staff members in agricultural economics.

A total of 59 participants were trained in the U.S. Fifty-six of these received a degree during the period of the contract, of which six were Ph.D.'s. Several fields were represented, including home economics, entomology, plant sciences, agricultural economics, agricultural engineering, business administration, economics, basic physical and biological sciences, education, animal sciences, English, forestry, fisheries, and library.

Total budget for the contract was \$800,129.

PURDUE UNIVERSITY

Host Country: Brazil

Host Institution: Rural University of the State of Minas Gerais, (UREMG), located at Vicosa, Minas Gerais

Type of Project: Degree-granting institution (rural university)

Effective Dates of Project: June 27, 1951 to date

Project Objectives:

Purdue's work with the Rural University has been carried out in two phases. The first phase (1951-1958) provided for two staff members to assist the Rural University in the development of its agricultural extension program (1951-1953) and its School of Home Economics (1951-1958.) The second phase began in July, 1958 with the continuation and expansion of the home economics program and expansion of Purdue assistance to the Rural University in agriculture and forestry. Purdue was asked to assist in developing the Rural University in instruction, research, and extension along the lines of a land-grant college with the aim of increasing the effectiveness of Rural University services to the state's agricultural development. Purdue was also to assist the Rural University in coordination of its activities with other state extension and research organizations.

Contract staff members were to develop and conduct workshops, short courses and seminars, to assist Rural University professors in teaching graduate courses, to assist in the execution of research projects, to provide advisory services to state and federal government agencies, and to assist in selection, translation, and publication of research and teaching materials of relevance to the program.

In 1963, Purdue assistance was broadened to include the "Candido Tostes" Dairy Institute, a state secondary-level school specializing in dairy industries training, located at Juiz de Fora.

Project Development:

Contract efforts have concentrated principally on development of a graduate program in agriculture, undergraduate programs in home economics and forestry, and research and extension programs. The graduate program has been operating since 1960 in the areas of agricultural economics, plant sciences (formerly called horticulture and plant pathology), animal sciences (formerly called animal nutrition), and special agriculture.

Purdue assistance in development of the School of Home Economics lasted from 1951 to 1965 when it was phased out. Work with the Dairy Institute's curriculum and research program began in 1963. While the Rural University had been conducting research and extension activities for some time, in 1965 the Research Service and the Extension Service were formally organized.

Contract staff members work not solely as advisers but as regular professors within the various Rural University departments. They have participated in graduate level teaching, in advising graduate students, in research and extension projects, and in departmental committees and seminars. The team has been involved in undergraduate teaching in forestry, home economics, and in areas in agriculture where a graduate program is not offered.

By early 1966, 35 Purdue long-term staff members had served in the areas of home economics, agricultural extension, agricultural engineering, horticulture, soil science and technology, animal nutrition, forestry, agronomy, agricultural economics, rural sociology, animal breeding, plant breeding, farm credit, range management, dairy technology, and animal physiology. A 19-man team was authorized in 1965. Between 1951 and 1965, 16 short-term consultants served in the areas of home economics, forestry, agricultural engineering, horticulture, agricultural economics, botany and plant pathology, dairy technology, agronomy, animal science, veterinary medicine, plant physiology, and agricultural extension.

By 1965, 54 participants had come to the U.S. under contract auspices, 41 for academic study and 13 for observation and consultation tours. About half of the participants who undertook academic degree or non-degree programs were in home economics. Other fields represented include agricultural economics, animal science, agronomy, dairy technology, economics, irrigation, research and teaching methods, rural sociology, statistics, and veterinary medicine. By 1965, five had completed bachelor's degrees, nine had finished master's degrees, and three had completed Ph.D.'s. In addition, a large number of UREMG staff members have received graduate and specialized training under non-contract funding from such agencies as the Ford and Rockefeller Foundations and the Organization of American States.

The contract budget from June 27, 1951 to June 30, 1964 totalled \$2,505,757, and the budget from July 1, 1965 to June 30, 1966 totalled \$752,859. Provision for equipment was included.

Other agencies have assisted the Rural University. The Rockefeller Foundation made several grants to the School of Home Economics to buy large equipment. The Ford Foundation made a grant of nearly one million dollars to the Rural University in 1964 to support the University's general development, with emphasis on research and extension. Included in this grant were funds for construction of a library, laboratory equipment, staff training and support, and establishment of an Extension and Research Center in the western part of Minas Gerais.

STATE UNIVERSITY OF NEW YORK (SUNY) - - College of Forestry at Syracuse

Host Country: Philippines

Host Institution: College of Forestry, University of the Philippines. The College is located at Los Banos in the province of Laguna.

Type of Project: Degree-granting institution (college of forestry)

Effective Dates of Project: June 20, 1960 to June 19, 1965

Project Objectives:

The assistance program for the College of Forestry of the University of the Philippines began in 1957 under a contract with Cornell University. With the termination of the Cornell University contract in 1960, responsibility for the program was shifted to the State University College of Forestry at Syracuse University. Although there were two contractors, each concerned with a particular period of time, the programs were consistent in objectives, methods and standards. All of the U.S. university staff members, except one, were from the Syracuse staff.

The SUNY contract was aimed generally at strengthening and expanding the forestry education program of the University of the Philippines in order to meet the rapidly increasing needs and demands for professional foresters and to permit the University to provide those services which are expected of a major center of forestry education and research. Specific objectives included modernizing the curriculum; training faculty members; improving teaching methods; improving student recruitment and increasing the number of professional graduates; developing effective programs of graduate education, research, and public information; enlarging the physical plant and purchasing teaching and laboratory equipment and supplies; improving college organization and administrative procedures; and strengthening and expanding cooperative relationships of the College with organizations both within and outside the University of the Philippines.

Project Development:

Emphasis was placed initially on developing a sound undergraduate program, expanding and training the College faculty, establishing adequate facilities and a library, and acquiring, installing and training Filipinos in the use of appropriate equipment. Public information and extension service programs in forestry were also developed. It was felt that attainment of these objectives should precede the development of effective research and graduate education programs. All the College faculty were trained to the B.S. or M.S. levels, and it was felt that the graduate program should wait until more staff were trained at the Ph.D. level. Research had to be largely postponed because of the heavy teaching load borne by the faculty.

A total of ten SUNY staff members worked in an advisory capacity with College staff members and administrators in the areas of wood technology, wood

products, forest economics, forest information, photogrammetry, forest zoology, forest pathology, forest management, and administration. Each staff member also taught one course per semester for demonstration purposes.

Participants were funded directly by USAID. During the period of the SUNY contract, 22 persons received U.S. graduate training, one for a Ph.D. and the rest at the master's degree level. Seven others were sent abroad for short-term non-degree training.

Total expenditures under the SUNY contract amounted to \$545,849, including provision for teaching aids, laboratory and research equipment.

UNIVERSITY OF TENNESSEE

Host Country: India

Host Institution: Mysore University of Agricultural Sciences, with the central campus located at Hebbal in the State of Mysore

Type of Project: Degree-granting institution (agricultural university)

Effective Dates of Project: March, 1956 to date

Project Objectives:

The current objective is to assist in the development of a land-grant type university serving the State of Mysore, comprising the Colleges of Agriculture at Hebbal and Dharwar, and Mysore Veterinary College at Hebbal (Bangalore.)

Project Development:

Tennessee was initially responsible for technical assistance to nine agricultural and veterinary colleges in the States of Mysore, Madras, and Kerala. Beginning in 1964, contract efforts concentrated on assistance to the Mysore University of Agricultural Sciences.

Enabling legislation for Mysore Agricultural University was passed in April, 1963. The first Vice-Chancellor was appointed in June, 1964. The University began with an enrollment of 825 (one-half of which were at Hebbal) and a staff of 70.

Fourteen long-term staff members advising in agronomy, dairy, agricultural economics, administration, organization of research, education, home science, veterinary science, extension education, education methods and administration, and agricultural engineering served with the Tennessee project. Three short-term consultants assisted the registrar, controller, and buildings and grounds superintendent. The present contract authorizes one short-term and six long-term positions.

Participants trained under the University of Tennessee contract through 1966 number 124. Four were trained at Annamalai, India. States represented

are Madras with 37, Kerala with 25, and Mysore with 60. Thirteen have received or are working toward a Ph.D. and 94 have completed or are working on a master's degree. Fields of study include agronomy, horticulture, home science, animal husbandry, entomology, bacteriology, veterinary medicine, agricultural extension, agricultural engineering, dairy, plant pathology, agricultural economics, and poultry.

The total contract budget from March 23, 1956 to October 31, 1965 was \$1,971,478. Of this, \$463,794 was earmarked for commodities. The budget from November 1, 1965 through October 31, 1966 was \$219,750.

TEXAS A & M UNIVERSITY

Host Country: Pakistan

Host Institutions: (1) East Pakistan Agricultural University, located at Mymensingh
(2) East Pakistan University of Engineering and Technology, located at Dacca
(3) University of Dacca, located at Dacca

Type of Project: Degree-granting institutions (agricultural university; fields of engineering and commerce)

Effective Dates of Project: June 24, 1954 to present

Project Objectives:

Beginning in 1954, the major objective was to provide assistance in agriculture, engineering, home economics, and teacher training at the University of Dacca and affiliated colleges in East Pakistan.

Beginning in 1962, work was focused at East Pakistan Agricultural University, and at the East Pakistan University of Engineering and Technology. Limited assistance to the University of Dacca was continued. Contract staff members were to aid and advise these institutions in developing and strengthening instruction, research, and extension programs.

Project Development:

The Texas A & M project in East Pakistan has developed in a pattern similar to the Washington State Project in West Pakistan. From 1954 to 1962, contract staff members assisted the University of Dacca and eight affiliated colleges.

In 1959 the Pakistani Commission on National Education recommended the establishment in each half of Pakistan of an agricultural and a technological university. The Texas Chief of Party served on the committee to help develop

plans for the new agricultural university that was located at Mymensingh around the old East Pakistan College of Veterinary Science and Animal Husbandry. The new East Pakistan Agricultural University and the new East Pakistan Engineering and Technological University were opened in 1961. Assistance to the University of Dacca was phased out in June, 1965.

Texas A & M staff members have advised on departmental, faculty and institutional organization, demonstrated teaching, research, and extension techniques, trained counterparts individually and in groups, and assisted with equipment procurement.

Through 1966, 48 long-term staff members had served under the contract, including 27 in agricultural fields. In addition, five staff members in agriculturally related fields had served as short-term consultants. At the end of 1965, the contract had 14 authorized positions.

Between 1954 and 1965, 141 participants received U.S. training in agriculture, home economics, and veterinary medicine (90); education, engineering, general business, and architecture. Of the total number, all but three were working on or had received undergraduate or graduate degrees by 1966.

The contract expenditure and firm budget through June 30, 1967 totalled \$4,701,917. Contract expenditure from 1954 through June 30, 1966 was \$4,205,429 and the firm budget from July 1, 1966 through June 30, 1967 was \$496,488.

TEXAS A & M UNIVERSITY

Host Country: Mexico

Host Institution: Antonio Narro Superior School of Agriculture, located near Saltillo in the State of Coahuila

Type of Project: Degree-granting institution (college of agriculture)

Effective Dates of Project: December 15, 1954 to December 31, 1956

Project Objectives:

Texas A & M was to assist the School of Agriculture in improving teaching methods and curricula, and in organization, administration, and development of research, extension, and demonstration programs.

Project Development:

Contract emphasis was placed in the areas of administration, extension, and research and education. The extension plan called for development of an organized extension service at three centers, each staffed with one extension agent and one home economics agent. The research plan called for short

courses in principal fields, studies of curricula, and development of research oriented to solving the state's agricultural problems. Two short courses were held. Some fruit and vegetable experimentation was initiated.

A total of six long-term staff members in the areas of animal science, range and pasture management, accounting, home economics, and poultry served in Mexico, assisted by two short-term consultants in poultry.

Contract expenditures amounted to \$94,047 for the two-year period. No provision was made for participants. A small provision for commodities was included.

The project was terminated March 31, 1956 because of internal administrative disagreements involving finances for the institution.

TEXAS A & M UNIVERSITY

Host Country: Ceylon

Host Institution: Faculties of Engineering and Agriculture, University of Ceylon. The Faculty of Agriculture was located at Peradeniya, and the Faculty of Engineering was located at Colombo.

Type of Project: Degree-granting institution (colleges of engineering and agriculture)

Effective Dates of Project: June, 1957 to 1961

Project Objectives:

The project was to provide assistance to the Faculties of Agriculture and Engineering in all appropriate aspects of teaching, extension and research, and in selection, installation, and use of laboratory equipment and library books. More specifically, the contract called for assistance in improvement of the curricula and teaching methods, the development of close working relationships between faculties and with outside agencies, the training of university faculty members, and the development of adequate physical facilities.

Project Development:

Engineering received a greater emphasis than did the agricultural component of the project, in terms of numbers of field staff, participants, and amount of equipment purchased. Four long-term U.S. team members served as advisers in the field of engineering while one long-term staff member served in agriculture. The long-term agricultural team member served for most of his tour in an operating role as Acting Head of the Agricultural Department. In addition, he taught animal husbandry courses and started a poultry improvement program. Three agricultural consultants were utilized in the areas of

poultry science and horticulture. The team gave some advisory assistance in curricula and in research.

Some 14 participants were trained in non-degree short-term programs under the contract, eight in engineering, and six in agriculture (horticulture, poultry, general agriculture, soils, and entomology).

The total expenditures under the contract amounted to \$761,263, including a large expenditure for agricultural and engineering equipment.

TEXAS A & M UNIVERSITY

Host Country: Tunisia

Host Institution: Chott Maria Agricultural College, located near Sousse

Type of Project: Government Ministry (agricultural secondary school)

Effective Dates of Project: September, 1962, to date

Project Objectives:

The Texas contract involves two principal phases: (1) the establishment and development of an agricultural secondary school, and (2) the development of an associated college of agriculture to provide training to the bachelors degree level. This new land-grant type agricultural education college is to include research and extension services, and will also provide for combined practical and secondary levels of agricultural training.

Specifically, Texas A & M is to assist in developing appropriate curricula and course contents; providing classroom instruction; developing an experimental farm; advising on the administration, organization, and operation of the College; and training of College faculty members. Some attention was to be given to helping develop programs of applied research and extension.

Project Development:

As Chott Maria Agricultural College was completely new when the contract began, the development of physical facilities and campus plans was necessary.

The first phase of the project was still underway in 1967. Although the ultimate goal is college level training, the scarcity of qualified students with rural background to enter college necessitated prior development of a seven-year agricultural school. When the second phase of the project is completed upon development of a four-year college curriculum, the three lowest levels of the secondary agricultural school will be eliminated. Chott Maria Agricultural College plans to continue to offer both secondary and college level agricultural training.

The team members have been occupied primarily with teaching courses and developing curricula. In addition, the experimental farm has been developed, teaching aids, supplies and equipment have been put into use, and a program of agricultural extension education involving some local farmers has been initiated.

By the end of 1965, 14 long-term U.S. staff members had served in Tunisia in the areas of animal science, horticulture, agronomy, agricultural economics, cooperatives, English, agricultural engineering, rural sociology, and agricultural extension. A ten-man team was authorized.

A total of 56 participants had begun training in the U.S. by 1966, of which 44 were candidates for the bachelors degree and one for the D.V.M. degree. The remainder were involved in short-term non-academic programs. Fields represented were animal husbandry, range management, agricultural economics, sociology, horticulture, veterinary medicine, soil science, agronomy, entomology, agricultural engineering, agricultural education and extension, plant pathology, home economics, zoology, nuclear engineering, chemistry, and English.

Up to October 31, 1966, a total of \$1,051,390 had been budgeted for the project, including provision for teaching aids and equipment.

TEXAS A & M UNIVERSITY

Host Country: Argentina

Host Institution: National Institute of Agricultural Technology (INTA), with headquarters in Buenos Aires

Type of Project: Government ministry (research and extension)

Effective Dates of Project: February 1, 1964, to date

Project Objectives:

The National Institute of Agricultural Technology (INTA) was established in 1961 as an independent agency of the federal Secretariat of Agriculture and charged with the responsibilities for national agricultural research and extension programs. Extension and research are integrated at each of some forty INTA experiment stations scattered throughout the country.

The general objective of the Texas A & M project is to establish a comprehensive National Agricultural Economic Service within INTA. This is to be accomplished through offering graduate training courses for INTA Economic Research staff, supervising and organizing research and extension programs in agricultural economics, and consulting on the organizational structure and functioning of the National Agricultural Economics Service. Specific attention is to be given to review and evaluation of the INTA agricultural economics research program, to assistance in research problem delineation and development of research projects, and to development of useful research

results. While the contract provides for extension assistance as resources permit, primary emphasis is placed on INTA's research program and field research training of the agricultural economics staff.

Project Development:

During the initial two-year program, Texas established the priority activity to be the training of a core of Argentines for work in agricultural economics. About three-fourths of INTA's professional agricultural economics staff were given special research, production economics and marketing training in a three-semester graduate level technical training program. The Texas team concentrated on teaching these classes.

Beginning in 1966, renewed emphasis was to be placed on institutionalization of a National Agricultural Economics Service. Accordingly, the team size was expanded from three advisors to eight staff members plus two research associates.

In the initial two-year period, three long-term staff members served in the areas of agricultural marketing and agricultural economics. The expanded team includes a Chief of Party to be concerned with organizational, administrative and liaison activities, one specialist in agricultural marketing, one specialist in production economics, one general agricultural economist who will also coordinate the participant training program, and four specialists in farm-ranch management and production economics who will be located in four different regions. The contract also provides for two research associates to assist the regional specialists. This new eight-man team was scheduled to arrive in Argentina about October, 1967.

As of February, 1966, four participants were working toward a masters degree in agricultural economics at Texas A & M. Participants are to conduct thesis research on Argentine agricultural problems, coordinated with the overall INTA agricultural economics research program. Upon completion of degree programs, team members will provide special assistance to each participant in their integration into the on-going INTA research and extension programs.

The contract budget from February 1, 1964, to September 30, 1966, totalled \$270,333, and the budget for the period from October 1, 1966, to November 15, 1967, was \$424,517. A small provision for equipment is included.

TEXAS A & M UNIVERSITY

<u>Host Country:</u>	Dominican Republic
<u>Host Institution:</u>	Ministry of Agriculture, with headquarters in Santo Domingo
<u>Type of Project:</u>	Government ministry (research, extension, and "action" programs)
<u>Effective Dates of Project:</u>	April 1, 1965, to date

Project Objectives:

The basic contract objective is to assist the Ministry of Agriculture in planning and developing an institutional framework for agricultural development, with the aim of substantially increasing agricultural production and income in the Dominican Republic.

This objective is to be accomplished through assistance in preparation of a long-range agricultural development plan for the Dominican Republic; assistance in establishing production priorities and development objectives; establishment of coordination between the several agencies involved in agricultural planning, research, training, extension and community development, credit, marketing, and agrarian reform; assistance in strengthening and decentralizing local agricultural services; assistance in performing adaptive research to test known varieties and practices under local conditions; and assistance in establishing an assembly and processing facility for horticultural products to be exported.

Project Development:

Texas contract staff members have assisted with programs in the areas of research and extension, and with direct efforts to increase food production. By mid-1966, 25 long-term staff members had begun serving in the areas of transportation and farm equipment, livestock, soil science, provincial agricultural development (extension advisors located in the countryside), horticulture, seed technology, pasture and forage, entomology, agronomy, rural youth, home economics, and agricultural extension. Twenty-one short-term consultants had been used by 1966 in marketing, agricultural extension and provincial agricultural development, soils, livestock, poultry, rodent control, agricultural economics, agricultural planning, irrigation, agronomy, rural sociology, agricultural engineering, veterinary pathology, and transportation. A 32-man team was authorized in 1966.

By 1966, 36 participants had begun study in the U.S. toward a bachelors degree in agriculture. Thirty others received U.S. short-term, non-academic training in 1966.

The contract budget from April 1, 1965, to March 31, 1966, was \$319,896, and the firm budget from April 1, 1966, to March 31, 1967, was \$1,225,275, including provision for equipment.

UTAH STATE UNIVERSITY

Host Country: Iran

Host Institution: College of Agriculture of the University of Tehran (usually referred to as Karadj College), located at Karadj

Type of Project: Degree-granting institution (college of agriculture), and government ministry (extension)

Effective Dates of Project: June 21, 1951, to June 30, 1964

Project Objectives:

Assistance in strengthening the work of Karadj College was one of the objectives of the 1951 Utah State University contract in Iran. However, aid to Karadj College was a small part of Utah State's broad program of technical assistance to the Ministry of Agriculture in agricultural extension. Early work with Karadj College placed emphasis on planning for the expansion of the teaching and research work. In 1958 a separate contract was signed providing for assistance to Karadj College. The 1958 contract had as its general objective the training of leaders in agriculture with specific goals as follows: (1) establishment of objectives and scope of work of the college; (2) expansion of the physical plant; (3) improvement of administrative organization and business management; (4) revision of the curriculum and modernization of subject matter; (5) development of student seminars and extracurricular activities; and (6) initiation of research programs.

Project Development:

After the assignment of a Utah State University contract staff member to Karadj College in 1954, definite plans were made for expansion of the physical plant and student enrollment and a four-year curriculum was adopted to replace the former three-year curriculum.

A master plan for College development was prepared, new courses were introduced permitting greater specialization, and a course credit system was initiated. An applied training program for students was established and land was developed for a college farm to be used in the training program and for research and demonstration purposes. Research work was organized on a project basis.

Eighteen Utah State staff members served long-term assignments in the fields of administration, agricultural economics, horticulture, crops, soils, animal science, agricultural engineering, agricultural information, library science, and business management. Six to eight staff members served during the period from 1958 to 1961 with the number reduced to four from 1962 to 1964.

There were 16 Karadj College faculty members who came to the U.S. for participant training, six for masters degrees, one for a Ph.D., and nine for

short-term, non-degree programs. Nine separate fields were represented in their agriculture and basic science training programs.

FAO assistance was provided to Karadj College to expand the Department of Forestry and Range Management and a FAO soil scientist assisted with teaching and research.

UTAH STATE UNIVERSITY

Host Country: Bolivia

Host Institution: Ministry of Agriculture, headquartered at La Paz, Bolivia

Type of Project: Government ministry ("action" program)

Effective Dates of Project: July 13, 1965, to date

Project Objectives:

The overall objective is to improve Bolivian agriculture, including marketing and production. More specifically, the program is to assist in the development of agricultural research, extension, and rural programs resulting in improved economic, social and cultural conditions, in developing a supply of trained manpower; in developing institutions required for improved agricultural production; in developing local products to replace imported commodities, and thus improving the Bolivian balance of payments; in increasing exports by improving the quantity and quality of commodities for export; and, in developing economic resource data required for the planning and execution of agricultural and rural development projects and for feasibility analysis of production and marketing alternatives.

Highest priority is to be given to the altiplano region, with special emphasis on programs designed to increase the quantity and quality of wool harvested from sheep, alpaca, and llama as a means of increasing incomes for many Bolivians. The program will also stress improved wool marketing to private industry and government. Programs to improve health, reproduction, nutrition, and management of livestock will be initiated, as will simultaneous programs to improve forage production on the altiplano on both cultivated and ranch lands.

In addition, the Utah State team is to assist the Bolivian national director of extension in strengthening community development and promoting the adoption of improved farming practices by the campesinos.

Project Development:

This contract program is one of the few in Latin America with emphasis on "action" programs designed to attack immediate problems of agricultural production and marketing. A number of public and private agencies have

worked with the Utah team--the national Agricultural Extension Service, agricultural experiment stations, the Ministry of Agriculture, private wool plants and cooperatives, universities, the Peace Corps, artisan organizations, some church organizations, and various wool committees.

Utah State staff members serve in an advisory capacity. The contract provided for a four-man team, including a Chief of Party and Extension Advisor, an Agricultural Resource Economist, a Livestock Specialist, and a Forage Crops Specialist. These positions were filled by September, 1965. By September, 1966, three short-term consultants had conducted a wheat survey, a sociological study, and a wheat economics study.

Six participants had begun study in the U.S. by September, 1966. Fields represented were dairy, soils, agricultural economics, extension programs, and sheep management.

The contract budget from August 1, 1965 - August 1, 1966, was \$234,187. Equipment furnished under the contract included such items as seeds and specialized shearing and forage equipment.

WASHINGTON STATE UNIVERSITY

Host Country: Pakistan

Host Institutions: (1) University of the Punjab and affiliated colleges (1954-62)
(2) West Pakistan Agricultural University, located at Lyallpur

Type of Project: Degree-granting institution (fields of agriculture, engineering, home economics, education, business administration)

Effective Dates of Project: June 24, 1954, to present

Project Objectives:

Beginning in 1954, the major objective was to provide assistance in a broad range of subjects including agriculture, engineering, animal husbandry, home economics, rural sociology, and technical education. Contract staff members worked with eight different colleges at Lahore and Lyallpur in West Pakistan.

Beginning in 1962, the West Pakistan Agricultural University was formed and contract staff efforts concentrated at this institution. The amended contract set forth a wide range of assistance to be rendered to the new institution in teaching, research, extension, administration, and campus facilities and services.

Project Development:

From 1954-59, Washington State staff assisted in the establishment of Departments of Sociology and Social Work, assisted in improving teaching methods in Business Administration, taught classes in education and teacher training, helped revise the agricultural curriculum and teaching methods, established research in animal nutrition, helped launch a new College of Home and Social Science, helped establish a Department of Mining Engineering, and assisted in equipment development and repair.

From the College of Agriculture at Lyallpur, Washington State staff helped develop the West Pakistan Agricultural University. A campus master plan was completed, old buildings were remodeled and new construction took place. New departments were established.

Washington State staff members have engaged in teaching, research, and extension projects as though they were regular staff members of the West Pakistan Agricultural University. As visiting professors, their teaching and other activities are scheduled to fill specific needs and to train local faculty in various responsibilities.

Washington State sent one short-term and 51 long-term staff members through 1966. More than one-third of the staff members served a second two-year tour. In May, 1966, ten staff members were still on duty in Pakistan.

A total of 150 participants were sent for training, of which 128 earned a degree or were still working on one in 1966. Among this group, 26 had completed Ph.D. degrees and 56 had completed masters degrees.

The total amount spent through December, 1964, was \$4,424,336. The firm budget from January, 1965, through December, 1966, was \$1,135,535, making a total budget of \$5,559,871.

WEST VIRGINIA UNIVERSITY

Host Country: Kenya
Host Institution: Egerton Agricultural College, located at Njoro
Type of Project: Diploma school (an autonomous college)
Effective Dates of Project: September 25, 1962, to date

Project Objectives:

Egerton College is the only agricultural institution in Kenya which prepares men for government service at the field officer level and provides agriculturally trained personnel for agri-business. Egerton's three-year curriculum now includes diploma courses in general agriculture, animal husbandry, range management, agricultural engineering, dairy husbandry, and forestry. Plans are underway to add home economics in the near future.

The contract is aimed at expanding and upgrading Egerton Agricultural College. Specifically, the team is to advise in the improvement of instructional standards, in the development and implementation of an integrated curriculum, in the training of persons in agricultural engineering, zoology, forestry, and range management, and in the development and conducting of research activities as needed in these and other agricultural fields.

Project Development:

A two-man team from West Virginia University conducted a survey in December, 1963, and developed comprehensive recommendations for the long-range development of Egerton Agricultural College.

Team activities have focused on instruction. By February, 1968, 12 West Virginia staff members had served in the fields of agricultural engineering, forestry, zoology, and range management at Egerton.

By 1966, 18 participants in the fields of agronomy, animal science, agricultural economics, agricultural chemistry, biology, forestry, and plant pathology had begun study in the U.S. Sixteen of these participants were working on the bachelors degree; two had received both a bachelors and a masters degree.

The total contract budget from September 25, 1962, to September 30, 1965, was \$320,097, while the budget for the period from October, 1964, to September, 1965, was \$142,395.

WEST VIRGINIA UNIVERSITY

Host Country: Tanzania

Host Institution: Tanzania Agricultural College, located at Morogoro

Type of Project: Government ministry (diploma level school)

Effective Dates of Project: October 19, 1962, to date

Project Objectives:

The West Virginia team is to assist in developing, operating, and equipping the new Agricultural College at Morogoro. Specifically, it is to assist in preparing the site plan and architectural design of the College, to develop a teaching farm to assist the College in defining its relationship to Tanzania's overall agricultural program and existing educational institutions in East Africa, to develop courses of study providing practical instruction, to assist in determining College staff requirements, and to purchase specialized instructional materials, books and equipment. West Virginia is to provide staff members as College faculty and staff who will perform research and extension work during school vacations, and to train 30 Tanzanians through a special two-year diploma of agriculture course at the West Virginia University campus.

Project Development:

West Virginia has aided in the development of the Tanzania Agricultural College since the early stages of planning. The team has helped with site and building plans, advised on construction of the new College, developed curricula and projected staff needs, acquired equipment, and trained participants at the degree and diploma levels. The first group of students enrolled in January, 1965. A Working Party on Agricultural Education in Tanzania was constituted in March, 1966, to consider the role of the College in Tanzania's overall agricultural education needs. Their report is intended to serve as the long-range program for development and operation of the College. One USAID and one West Virginia representative were members of the Working Party.

Nine staff members have served since 1963 in the fields of agronomy, biology, agricultural engineering, animal husbandry and zoology, and farm management. A short-term consultant for commodity purchases has also been utilized. Nine staff members were authorized for 1966.

A total of 28 participants were trained by 1965 in the special two-year diploma of agriculture course at West Virginia University and a special group of students have also been sent to West Virginia-assisted diploma schools in Uganda. Four other participants have received a masters degree in agricultural economics, dairy, and agronomy, while three are currently working toward a masters degree in biology, agronomy, and agricultural economics. Most of the degree candidates were financed directly by USAID.

The total contract budget to August 31, 1965, was \$505,844, while that for fiscal year 1965 was \$272,729. Commodity procurement through the contract has concentrated on books and teaching aids while an additional direct USAID grant was utilized for equipment.

Several other agencies are assisting in the development of the Tanzania Agricultural College. Those with substantial grants are the Rockefeller Foundation (\$300,000) and the Government of the Netherlands (\$700,000).

WEST VIRGINIA UNIVERSITY

Host Country: Uganda

Host Institutions: (1) Bukalasa and Arapai Agricultural Colleges, located at Bombo and Soroti, respectively
(2) Veterinary Training Institute, located at Entebbe

Type of Project: Government ministry (three-year diploma level program)

Effective Dates of Project: May 28, 1963, to date

Project Objectives:

The overall objective is to train an increased number of extension workers for Uganda. This is to be done through in-service training of present extension field staff and the teaching of extension methods and new subject matter developments at the Agricultural Colleges, and through the development of an extension-oriented livestock and veterinary assistance staff at the Veterinary Training Institute.

Project Development:

Emphasis has been placed on development of the curriculum, use of teaching aids, and on encouragement of practical work to better train the students as extension workers. West Virginia has supplied teachers who develop and teach courses in their respective fields, and who assist in training courses for extension personnel. The contract calls for 12 teachers in the fields of dairy husbandry, animal husbandry, agricultural chemistry, extension methods, veterinary medicine, vocational agriculture, agricultural engineering, and agricultural economics. As of July, 1967, 20 long-term staff members had served in these fields, plus one short-term consultant in biology. Four of the 12 contract staff were to be stationed at Arapai, four at Bukalasa, and three at Entebbe, with the chief of party at Kampala.

Participants have been funded directly by USAID. Six have completed masters degrees at West Virginia University, and early in 1967, four more were studying for bachelors degrees. Fields represented were agricultural engineering (2), animal husbandry (5), agronomy (2), and agricultural economics (1).

The total contract budget to May 31, 1966, was \$658,138, while the fiscal year 1966 budget was \$332,480. Books, teaching aids, and farm shop and laboratory equipment are being supplied under the contract.

WEST VIRGINIA UNIVERSITY

Host Country: Kenya

Host Institution: Kisii Secondary School, Njoro Secondary School, Bungoma Secondary School, Narok Secondary School, Embu Secondary School and Rapogi Secondary School

Type of Project: Government ministry (secondary level agriculture training)

Effective Dates of Project: July 11, 1964, to date

Project Objectives:

The contract team is to assist in the teaching and further development of courses in vocational agriculture and practice in six rural secondary schools in Kenya. The objective is to help make a rural secondary education in Kenya more practical and more responsive to Kenya's developmental needs, and to serve as a model for the initiation of similar courses in other rural secondary schools. The chief of party is also to act as a consultant to the Ministry of Education on vocational agriculture matters and to assist in developing an effective system for training vocational agricultural teachers.

Project Development:

The team members have concentrated on teaching secondary school level vocational agriculture. Vocational agriculture teachers are being trained both at Egerton College in Njoro and as participants for two years in the U.S. (four per year starting with fiscal year 1966, funded directly by USAID). Between arrival of the first team in September, 1964, and July, 1967, ten staff members in vocational agriculture served in Kenya. The contract calls for seven staff members, one at each secondary school plus the chief of party stationed at Nairobi.

The total contract budget to June 30, 1967, was \$505,940, with a July, 1966--June, 1967, budget of \$259,511. Commodity purchase (farm shop equipment and books) has been handled largely by USAID directly.

WEST VIRGINIA UNIVERSITY

Host Country: East Africa Regional (Kenya, Uganda, and Tanzania)

Host Institution: Faculty of Agriculture, Makerere University College, located at Kampala, Uganda. Makerere University College is a constituent college of the University of East Africa.

Type of Project: Degree-granting institution (agricultural college)

Effective Dates of Project: December 15, 1964, to date

Project Objectives:

The objectives of the project are to develop the capability and capacity of the Faculty of Agriculture, Makerere University College, to increase the output of undergraduate and graduate students, and to reorient agricultural research activities and classroom instruction.

Makerere University College is the only faculty in East Africa providing degree training in agriculture at the bachelors degree level. The curriculum lasts three years. A prime need is for graduates with additional subject matter specialization. The need for specialization is to be met by (1) strengthening and broadening the undergraduate course work with specialization

in crop and animal husbandry, and (2) development of an in-residence program of post-graduate specialization in crop and animal husbandry, agricultural economics and agricultural engineering.

Project Development:

A two-man team from the University of Minnesota visited Makerere in April, 1965, to prepare a comprehensive requirements analysis for the development and expansion of the Faculty of Agriculture. The Chief of Party, a specialist in Agricultural Education, arrived in July, 1965. By January, 1968, seven additional team members had served in soil conservation (1), crops (2), and animal husbandry (4).

Participants are being funded directly by the USAID Missions at the rate of three per year. The total contract budget to November, 1966, was \$137,488.

UNIVERSITY OF WISCONSIN

Host Country: Brazil

Host Institution: School of Agriculture and Veterinary Medicine, University of Rio Grande do Sul, located in Porto Alegre in the state of Rio Grande do Sul

Type of Project: Degree-granting institution (college of agriculture)

Effective Dates of Project: December, 1963, to date

Project Objectives:

The University of Rio Grande do Sul operates under the control of the Federal Ministry of Education.

The contract's principal objective was to assist in development and strengthening of the University along the pattern of a U.S. land grant college, through integration of teaching, research and extension. Specific activities include developing a graduate program in agriculture and the rural social sciences, and planning and developing a new agricultural experimental farm. Wisconsin was also to assist the University in development of coordination between related state and federal agencies in order to further agricultural development.

Training of Brazilian personnel through special courses, research in cooperation with American counterparts, and study in the U.S. was to be emphasized. Team members were authorized to teach graduate courses, initiate research projects, conduct short courses and workshops, and to assist in the selection, translation and publication of research and teaching materials of relevance to the program.

Project Development:

The Wisconsin team has engaged primarily in the areas of teaching and research, through development of a graduate program in soils, forage crops and animal nutrition. Team members have taught some short courses, assisted in graduate courses, and initiated research projects in cooperation with Brazilian staff and graduate students. Wisconsin has also encouraged the development of closer relationships in research and extension between the University and state and federal agencies by assisting part-time professors who may work also for another institution.

By early 1966, 13 Wisconsin long-term staff members, including two research associates, had served in the areas of poultry science, veterinary science, agricultural journalism, agricultural economics, agronomy, agricultural extension education, soils, and animal nutrition. By early 1966, 11 short-term consultants in the fields of veterinary science (5), soils, rural sociology, horticulture, and agronomy (3) had been used. A ten-man team plus two research associates is authorized.

By early 1966, one participant had been sent to the U.S. for a masters degree in biochemistry.

The project budget from December, 1963, to March 31, 1966, was \$726,768. Provision is made for research and teaching supplies, vehicles, and equipment.

The Ford Foundation made a grant to the economics research institute (IEPE) for a graduate program in economics and agricultural economics.

UNIVERSITY OF WISCONSIN

Host Country: Nigeria

Host Institution: Faculty of Agriculture, University of Ife, located at Ife (Western Region of Nigeria)

Type of Project: Degree-granting institution (college of agriculture)

Effective Dates of Project: December 15, 1964, to date

Project Objectives:

The University of Ife was established by the Government of Western Nigeria in June, 1961. Originally it was located at Ibadan on the campus of the College of Arts, Science and Technology; the main campus is on a 16,000 acre tract of land near the city of Ife.

The University of Wisconsin is to assist in developing a land-grant type college of agriculture as a component part of the University of Ife. This is to include advising in the organization and development of the College and supporting facilities, assisting in the design, conduct, evaluation and coordination.

of the agricultural research program, participating in actual teaching and research programs at the College, and in administration where necessary, and training Nigerians to assume major roles in the University as quickly as possible. Coordination of college teaching, research, and extension is to be achieved as rapidly as feasible.

Project Development:

In April-May, 1964, a team from the University of Wisconsin conducted an educational and economic feasibility study of the University of Ife. Under a grant financed by the Rockefeller Foundation, the University of Wisconsin sent an interim five-man team (prior to signing the contract) to assist the College of Agriculture in the areas of agricultural engineering, animal science, entomology, plant pathology, and soil science. As of early 1966, ten long-term and four short-term staff members had served in Nigeria. Fields represented were agricultural engineering, plant pathology, rural sociology, entomology, dairy science, animal science, agronomy, soils, and agricultural economics. They have participated in actual teaching and research programs. The contract authorizes a 13-man team.

Participants are being funded directly by USAID. The budget from December 15, 1964, to December 31, 1965, was \$604,700, including \$300,000 for teaching aids, teaching and research laboratory equipment, and farm and field equipment.

The United Kingdom has made a grant of \$1,610,000 for construction of the administration building and library at the University of Ife. The Rockefeller Foundation has also made a small grant for books and periodicals for the Faculty of Agriculture.

UNIVERSITY OF WYOMING

Host Country: Afghanistan

Host Institution: Faculty of Agriculture, Kabul University, located at Kabul. (Earlier, also the Kabul Vocational Agriculture School; the Ministry of Agriculture; the Faculty of Engineering of Kabul University; and the Afghan Institute of Technology)

Type of Project: Degree-granting institution (colleges of agriculture and engineering); and Government ministry (research; secondary level vocational agriculture)

Effective Dates of Project: September 29, 1952, to date

Project Objectives:

The contract objectives have centered in three major areas. From 1953-61 the contract staff worked with the Kabul Vocational Agriculture school to provide agricultural training at the secondary level. From 1955-63, the contract staff assisted with the establishment of a long-range agricultural research

program within the Ministry of Agriculture. The University of Wyoming provided assistance to the Faculty of Engineering of Kabul University and the Afghan Institute of Technology up to 1962. Since 1956 Wyoming has assisted with the development of a Faculty of Agriculture at Kabul University to provide a four-year university level agricultural curriculum.

Project Development:

In the vocational agriculture program, Wyoming staff members served as school operators and administrators. The program is now handled by the Afghan staff with some direct-hire assistance.

Under the agricultural research program, research farms were established, varieties tested, and some new practices adopted.

In the program with the Faculty of Agriculture, the first freshman class enrolled in 1956 and graduated in 1960. Some of the graduates have been sent to the U.S. for further training and the remainder have gone to work in the Ministry of Agriculture or as vocational agriculture teachers. Contract staff members have assisted in teaching, curriculum development, research project development, and library development and organization.

For the vocational agriculture program, Wyoming provided 12 long-term staff members, two vocational agriculture specialists for the teacher training college, and four secretaries. Under the agricultural research activity, Wyoming provided 16 long-term staff members in horticulture, agronomy, livestock, irrigation, and seed increase, and a substation superintendent. For the Faculties of Agriculture and Engineering, from 1956-67 Wyoming provided 62 long-term staff members in the fields of agriculture, engineering, basic sciences, mathematics, and library science. Approximately 50 percent of the total of 92 staff members provided under all phases of the contract to 1966 were in agriculturally related fields.

Under the contract, 74 participants have engaged in long and short-term training. Fourteen had completed bachelors degrees; 25, masters degrees; and 3, Ph.D. degrees by 1966.

The expenditures as of December 31, 1965, were \$5,912,920, and the firm budget for 1966 was \$587,567. Provision for commodities was included.

UNIVERSITY OF WYOMING

Host Country: Somali Republic

Host Institutions: (1) Central Agricultural Research Station, located at Afgoi
(2) Bonka Farmers Training Center, located at Baidoa

Type of Project: Government Ministry (research and extension)

Effective Dates of Project: January 26, 1965, to date

Project Objectives:

The principal contract objective is to assist in developing the agricultural research and extension capabilities of the Ministry of Agriculture. Wyoming is to establish and operate the Central Agricultural Research Station and the Bonka Farmers Training Center. Other associated duties include conducting training courses for extension service personnel and for farmers, consulting on methods to strengthen the extension service, operating and maintaining demonstration plots and a poultry unit at the Station and the Center, and assisting in the selection of participants and in the selection and training of counterpart personnel at the Station and the Center.

Project Development:

The Wyoming team has worked in both the research and extension areas. The Research Station physical plant and field layout have been developed. Variety trials and soil analysis have been conducted, production practices tested, and demonstration plots established at both the Research Station and the Training Center. The team has advised on the organization of a functional extension service, has held demonstrations and farmer training programs, and has helped to distribute seeds and poultry to farmers. Wyoming staff members function in an operational role, with close coordination with appropriate Ministry of Agriculture officials.

By the end of 1966, nine long-term U.S. staff members had served in the areas of extension, agronomy, horticulture, agricultural economics, soils, and station administration. A 12-man team is authorized, including a chief of party, six Research Station staff, three extension staff, an administrative assistant and a secretary.

By the end of 1966, two participants had begun training in the U.S., one on an academic program in animal science and one on a short-term non-academic program in entomology.

The contract budget from January 26, 1965, to November 30, 1967, totalled \$1,502,480, including provision for equipment.

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